



From Classroom to Community of Practice: The Case of HotAir Sounds

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Abstract. HotAir Sounds is a University spin-out venture set up to develop innovative inflatable speakers compatible with all portable music systems. The technology is based on a design invented by John Saxon in the final year of his undergraduate degree in Design and Technology at a UK University. The case study itself documents the history of HotAir, focusing on the development of the company in its early stages and the entrepreneurial transition made by John Saxon.

Keywords: university spin out, new technology venture, start-up, growth, portable speakers, community of practice.

1. Introduction

It is June 2000. John Saxon, a Design and Technology student at a UK University, is presenting his new concept of inflatable music speakers at his final-year Degree Show. The Show is a key event for John; students are expected to present the outcomes of final year projects on novel design concepts and products to the public for the first time. It has already been suggested by his department that his project has significant commercial potential – visitors have to sign a confidentiality agreement before they can see his prototype. John is hoping that the project will get a high mark and contribute to a good degree classification. He is also hoping that prospective employers will see his work and offer him a job – representatives of large companies usually visit the show looking to employ good graduates. He was expecting to get a job as a member of a design team in a large corporate employer and climb the career ladder in the traditional way; through internal promotion, he would eventually become head of his own design team. Although he has been doing the ‘interview rounds’ of large employers at the university, so far no offers have resulted, and he will be leaving the university in two months time.

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Things did not work out quite as John intended. A chance meeting with a local venture capitalist at the Show led to the start-up of HotAir Sounds, the University's first student spin-out company. Three years later, he was Design Director of his own company in the UK, with a manufacturing operation in China and marketing offices in Japan and the US. The case documents the early stages of the company's start-up and expansion to international markets and production facilities. It also highlights John's progression from classroom student to entrepreneur.

2. The History of HotAir

This section presents key events and personnel in the history of HotAir's development from concept to its status as a company in 2003. Firstly, an overview of the technological concept is presented. This looks at how John got the idea for his Degree project, by combining existing technologies to come up with a novel design that had commercial potential in the global electronics markets. Secondly, once he decided to form his own company, he had to develop a business plan to get the company underway. Summaries of HotAir's financial, marketing and organisational strategies show the company's position at the start of the venture; early stage growth is then described. Finally, as well as looking at the growth of the company, we also look at John's personal growth and development: his learning experience in becoming an entrepreneur. When he first got the idea for inflatable speakers, he was working in the classroom with his tutors to develop a prototype for his degree project. Three years later he had become an entrepreneur, taking a key role in creating and developing a company that was operating on an international basis, aiming for a share of a global market. He was now making strategic decisions as part of an experienced management team – quite a leap from his student days, and a long way from his initial plan to join a large company, where he would have been a junior member of a design team. The concluding part of this section identifies the challenges John faced during this period: how he learned to build a business and become part of a management team. An extract from an interview where he reflects on the learning process he went through during his transition from student to high-tech entrepreneur is also included. This illustrates the support network he built from the university's innovation support structures – how he learnt from the university's 'Community of Practice'. A summary of key areas for review follows.

2.1. The Product Concept

The product concept is easy to describe: inflatable loudspeakers for music systems. The speakers are quite distinctive compared with conventional designs. As well as providing high quality sound reproduction, they can be inflated and deflated like a balloon. This means that they are portable ideal for people on the move – plus they can be made in any size, shape or colour, which is great for matching design schemes, or for corporate promotions. John developed this concept when he was mulling over ideas for his third year undergraduate design degree project, a significant piece of work that counted quite a lot towards his final degree mark.

To start with, he was interested in music system design generally, and was therefore familiar with the company NXT, the inventors of flat loudspeakers. In 1997, NXT had demonstrated good quality reproduction when sound output directed through a small proprietary device known as an ‘exciter’ was attached to a 1 metre square flat panel with the thickness of cardboard: the first ‘flat’ loudspeaker. To demonstrate the versatility of their exciter technology further, NXT had at one time produced a car fitted out with door panels and headlining that acted as speakers for the radio. The sound was far superior to conventional speakers and received much media publicity. John began to wonder if this basic idea could be reworked for his degree project. Because NXT were keen to licence their technology into as many markets as possible, they were willing to let product developers experiment with demonstration exciters, to come up with new product concepts. These new combination products might themselves be patentable by developers, providing NXT received a licensing fee. Thus, one evening, John was wandering around his flat connecting his music system through his newly acquired exciter to all kinds of items, seeking inspiration. He found by chance that ‘exciting’ an inflatable chair in his flat produced high quality reproduction: the concept of HotAir speakers was born.

The speaker design is very simple: all the speakers contain a rigid panel at the base, attached to the NXT exciter. The inflatable component of the speaker can be produced in any shape or colour (see Figures 1 – 5 below), which means that novel exciting designs to suit any décor are possible, as are bespoke promotional items (for example, a speaker in the shape of a Budweiser can).

Figure 1: C2 Clear

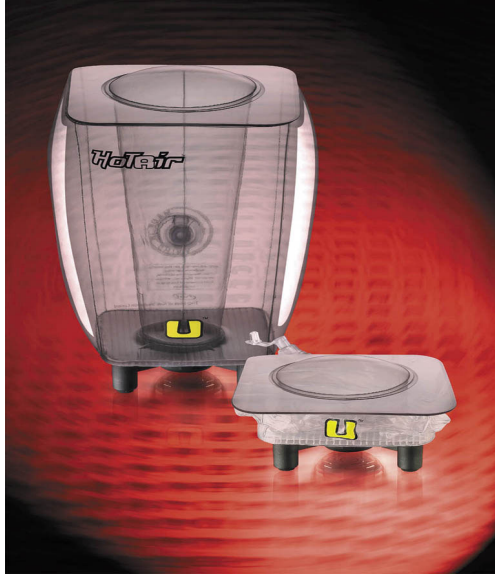


Figure 2: C2 Yellow



Figure 3: Budweiser Can



Figure 4: Revo Green



Figure 5: Subwoofer and Speaker Set



The sound is generated by the exciter, which converts an audio signal into vibrations and drives the sound into the inflatable. The rigid panel at the base of the inflatable provides not only balance and structure to the speaker, but is also employed to generate high frequency sound. The inflatable part itself is less rigid and has a large surface area. This part of the speaker generates bass sound. Sound is emitted from the whole surface of the inflatable. In comparison with a conventional speaker, which emits sound unidirectionally through a pistonic motion, the HotAir speakers produce multi-directional sound. This gives the advantage of 360° sound, that is, a consistent volume and frequency from any direction.

Even at this stage, the idea seemed like a very good one. When John discussed it with his supervisors in the Design and Technology department, as well as giving him the go-ahead to carry on working on the idea, they were enthusiastic about the commercial potential of the project beyond the Degree Show itself. Indeed, they were so enthusiastic, they suggested that the project was kept ‘under wraps’ at the Degree Show – in other words, you could only see the prototype if you signed a confidentiality agreement first, to protect the intellectual property rights. That was a good confidence booster for John, but it was not a unique event; usually, two or three projects per year were treated in this way at the Show. As far as John was concerned, he had a good idea under his belt and he was all set now to complete his degree project on schedule. After that, well, he expected to get a job with a large company in a design team. The project would give him

something to talk about during interviews – large companies were currently visiting the university on their annual ‘rounds’ and he expected to get a job through this process.

2.2. HotAir: From Concept to Company

So, once John got the go ahead from his supervisors, he spent the next few months working on his degree project. He needed a prototype for the actual Degree Show – something that was eye-catching, robustly constructed and also produced good sound. So, he spent quite a bit of time experimenting with different materials for the inflatable part of the speaker, different shapes, new colours. Plus, he also had to write the project report, to be assessed for his degree. This was an academic work on the theoretical background to the design – its mathematical qualities and character with respect to the sound produced – and in addition, justify the alternative materials and shapes he had considered and rejected along the way. Of course, the confidentiality of the project drew John’s attention to the commercialisation of the idea – and clearly, guarding the intellectual property was a key element in that prospect – but that would be later on. At the moment, his mind was mainly on getting the prototype to work and getting a good degree. At this stage, he never gave the thought of forming his own company serious consideration. He thought he might be able to sell the idea on to a product developer through a licensing/royalties deal perhaps? Or maybe, a large company would be so interested in the idea that they would make him a good employment offer to join them, bringing his idea with him. The thought of forming a start-up and producing the speakers himself never really occurred to him – he knew nothing about forming companies or running businesses – his degree course was in design, not business, and there was no culture of ‘start-up’ in the Design department. Nor had anyone in his family done anything like that.

In June, after a great deal of hard work and many failed experiments and blind alleys, the prototype was ready (just!) in time for the Degree Show. As the Degree Show was intended for the general public, John, like the rest of the students involved, was expected to be able to describe the design, and its purpose, without getting too technical. Thus, the heart of the concept was presented at the Show as ‘HotAir’, a portable battery and/or mains-powered inflatable music speaker set designed for people on the move (John’s student experience was an obvious influence here!). The ‘basic’ prototype – about 10 inches high and shaped like a football standing on its end – was used to demonstrate that the multi-directional speakers could be deflated to just 1 inch high for portability. Posters around the display stand showed that the speakers were compatible with all portable music systems, including personal CD and cassette players, MP3 and Minidisc players. The system could also be used with any computer – Macintosh, PC, laptop and a

range of games consoles via a connection kit, which had also been designed as part of the project.

As well as the basic prototype, a small number of other shapes, colours and sizes were presented at the show. This was to indicate the wider potential of the design, which could be used for public presentations, as well as personal music and sound enhancement. The possibility of promotional devices was also made clear.

As the prototype worked so well, it was obvious that the HotAir speakers really did have potential in both the retail and the corporate marketplaces. Outline markets identified so far included:

Retail:	Retailers selling home electronics, computer products, gifts and accessories.
Corporate:	Promotional gifts/premium incentives, e.g. computer and music industry, and other companies with strong brands.

Because the speakers were general purpose, it seemed like they could enter a wide range of portable audio system markets, leading to huge commercial potential. This potential had by now been recognised beyond the Design and Technology department. Just before the Degree Show, John had won the University Advanced Technology Initiative/ University Innovations Award for innovation. This was a university-wide competition organised on a yearly basis by the university's Technology Transfer Office (TTO), an organisation concerned with managing the business and intellectual property aspects of science and technology spin-outs. The TTO also provided a way in to the local 'innovation network' through a wide range of contacts, and provided advice on all aspects of marketing, finance, strategy and company law. The purpose of the competition was to provide student inventors with a small amount of funding to develop their designs towards the market if they wanted to do so. It also helped gain publicity for student inventors, and helped them build a 'track record' if they wanted to take their design forward into industry in some way. The competition was a new initiative and it was hoped that it might change the university culture a little, by encouraging students to form spin-out companies, rather than enter licensing agreements, as had usually occurred in the past with student design and technology projects. This potential culture change was in line with government policy, which saw spin-out companies as a mechanism for regional development. Though no student spin-outs had happened so far at the university, it was early days – and the university took care to publicise the event to local venture capital companies as well as corporations interested in licensing.

Local success led to national recognition later when the speakers won the prestigious award for Best Innovative Product at the UK's annual National Incentive Show, a showcase for new products supported by a range of industry associations and finance houses. But by then, things had started to move in a different direction for John. At the time of the show, although John was confident about the potential of his idea, he was quite naturally, like most students, still seeking employment by undergoing the rounds of large company interviews at the University. That changed when he met Alan Booth, a director of Gladiator Corporate Venture Capital House, (a small local company) who was visiting the Degree Show to seek out innovative ideas, with a view to funding their development to marketable products. Alan persuaded John that there were attractions in setting up his own company and that he might be able to work with John to obtain equity funding for that purpose. At this point, John had a range of options:

- He could carry on applying for design jobs with large companies, in line with his initial plans – but that seemed slightly less attractive now, after all the ‘buzz’ around the speakers, and talk of market share on a global scale – and no-one had made him an offer yet....
- If he went down the large company route, he could license his intellectual property, either to his own company or to another, for a stake in any eventual profits – but then he would lose ownership of the future development of the concept, and he was now very attached to the idea, having worked on it for so long and with so much positive feedback....
- He could go into production himself through a partnership alliance with a larger company – thus, he would remain involved with his product, but he felt he lacked the business experience to avoid getting ‘swamped’ in such an arrangement. – would he be able to cut a good deal....?
- He could take up Alan's suggestion and form his own company – that would be exciting and would allow him to keep ownership of the product concept – as well as a larger share of any potential profits. But this was a risky option – he had no knowledge or experience of setting up or running a company and he knew by now that failure rates for new technology start-ups were high. And although Alan was very reassuring that he would help him every step of the way from his own experience and contacts, he had not known him very long....

Well, John decided to hang on to his concept for now, but play for a little time before making his final decision to go ahead with his own company. There was no need to make a firm commitment to a company at this stage, as there was a lot of work still to carry out on the idea itself: further refinement of the design prototype, patent searches and registration, negotiation with NXT over licensing, due diligence procedures and business planning, around the key issues of the market, strategy and finance. These key issues are now considered in turn.

2.3. Business Planning

Clearly, estimations of the potential market share were paramount in the early stages of business planning. Some vital questions had to be answered:

- Did the speakers have the distinctiveness to stand out in a competitive market?
- Was the market ready to absorb a ‘novelty’ item?
- If so, was their intellectual property position strong enough to present a high barrier to second entrants?
- How big was the market likely to be overall?

Alan answered these questions in part through discussions with a business colleague, Ian Jones, who later came on the Board of the company; Ian had extensive experience in UK retail operations. In answer to the first question, the speakers produced good quality sound, comparable with systems at the lower end of the market. They would be cheap to produce because of the simplicity of the construction from readily obtainable materials. The key exciter component was very inexpensive in itself and the licensing fees suggested by NXT were not prohibitive. The downside was that there were many loudspeaker systems for computers and personal music systems on the market at the time. Alan had a strong gut feeling right from the start that they would be competing with all of them, not just one or two product lines: there were no inflatable speakers with 360 degree sound capable of producing interactive light and sound, and that would be attractive across a range of systems. So John and Alan developed a broad marketing strategy, producing the following analysis of the distinctive advantages of the HotAir system over other portable audio systems:

Table 1: Potential Marketing Opportunities

Product	Potential opportunities
Computer speakers (pairs)	Similar to what is available today, except can be made and marketed in any shape: manufacturers logo for example, or more generally, a licensed merchandising product. The latter would keep a company name on a client's desk for a long time at low cost, with space saving capability and novelty appeal.
Computer speakers (single)	As above – speakers are 'sound surround' and therefore, in reality only one speaker is needed not the two typical of stereo systems. This is ideal for limited space situations: for example one speaker could be packed into a laptop case.
Music speakers (pairs)	Different shapes and sizes easy to obtain and customise for outlets such as Habitat and IKEA, themed pubs and restaurants, as well as general retail hi-fi in chains such as Dixons.
Point of sale displays	Typically these rely on Vision only; HotAir can provide sound and light (through translucent materials) as well, at very low cost compared with existing systems.
Toys	This category could comprise many products, enhancing any toy with low cost interactive light and sound, such as a karaoke machine.

In answer to the second question, in Alan's view these markets had consistently demonstrated the capacity to absorb novel products and services. This had happened so many times since the original portable cassette players had come on the market: first, systems had got smaller and smaller, then different technologies, such as CDs and minidisks had got in on the act. Alan was convinced that the precedent had been established so many times that the main market needs for this kind of penetration could be identified:

- 20% mark-up for wholesalers.
- 80-100% mark-up for the end-of-chain retailer.
- A product that has a smaller volume a factor of 10 smaller than existing speakers, aiding supply chain logistics as well as customer interest.
- Well packaged products from the promotional point of view.

- A simple product with low customer returns anticipated.
- A product with an extended life span through its adaptability: the potential to lend itself repeatedly to the changing merchandising and toy markets.

Thirdly, the barriers to entry for second entrants were high because HotAir had by now negotiated a unique intellectual property situation:

- An exclusive supply agreement with the only exciter that makes the inflatable speaker work; NXT is a large plc with strong IPR worldwide.
- The licensing rights to a patent that covers HotAir technology worldwide, registered in Europe, Japan and the US (that is, HotAir owned the combination of the NXT exciter with an inflatable device).

Finally, John and Alan had to admit that the actual market size for the product is difficult to estimate, as there are so many areas that the product can be sold into. As stated earlier, they were looking at an ‘across the board’ impact, rather than a competitive attack on one or two existing product lines. In one sense, that generated uncertainty, but on the other hand, the potential was huge. In any case, in order to come up with sensible projections for a business plan, they would have to come up with some estimated figures in the key product areas to generate a potential profit figure. So, again, they took a broad approach to the size of the market, based on published industry-wide statistical analyses.

Considering the PC market first, sales in the US alone in 2000 amounted to 194.8 million boxes, with increasing interest in PC acoustic capability; more and more speakers were being sold, as sound capability became a desktop norm. Many PCs had inbuilt speakers, but sound reproduction was usually poor, so there was room for an inexpensive, simple to use, portable add-on. Secondly, the audio market itself is vast; in 2001, the US market was worth over \$8.7 billion, and that in the UK, \$2.2 billion. The advent of Mini disc and MP3 provided a boost to the portable audio market that was growing exponentially. As these kinds of product became more affordable, they are turning into a ‘must have’ for many households. Thirdly, the games console market was estimated as likely to be around 88 million boxes for USA and Europe (combined) in 2003.

In the original business plan, it was estimated that the intended market for the above products totalled £14bn – 22bn globally, based on sources such as Compass, Kronus, One Source and KPMG sector reports. The market was not only huge, but also growing. The average growth across the sector was 6.5% per annum with two very positive exceptions, point of sale and computer peripherals having experienced year on year growth over the last 5 years of 9% and 12.2% respectively.

While it is easy to arrive at an estimated value for the size of the market based on published statistics, John wondered how much of that market might be available to HotAir – he did not want to get carried away by Alan’s enthusiasm. As a novelty product, HotAir were unlikely to make as big an impact as a design classic such as, say, the Sony Walkman. Although the speakers were innovative, they represented an incremental, rather than a revolutionary technological advance. As such, Alan and John came to the conclusion that HotAir, as a novelty concept, would make a small but significant market impact across a broad market sector. To provide a conservative figure on which to base financial projections, Alan and John agreed on a target figure of 0.1% of the total market (erring on the side of caution, they took the lower end figure of £14bn as a starting point) by the end of year 3, achieving gross sales value in the region of £14million in year 3. Well, John was starting to find this convincing – a share of that would certainly beat anything a large firm were likely to offer him!

So, the next question was, how much money would they need? Or more realistically, could they get the operation up and running for the funds that were available? Before that could be answered, they would have to come up with an overall strategy for the firm. In short, they were aiming for global markets with high margins for retailers and wholesalers. Alan had significant, but not unlimited, funds available. He did not want to commit more than £300K until there was some evidence in the first year of trading that the market potential was definitely there; if it was, then he would be in a position to provide a second tranche of funds. On that basis, he suggested a low-cost start-up strategy, keeping production costs down by manufacturing to order (at least 85%) in China. The company’s main emphasis in its early days would be on marketing in the UK. The ‘buzz’ around the speakers from the coverage of the award at the National Incentive Show had given them a foothold in the UK market, generating some pretty serious interest from some key High Street stores, such as the Gadget Shop and mainstream electrical/audio retailers like Dixons and Comet. Alan argued that if these orders were confirmed and fulfilled, some revenues would start to flow and at that point, a second round of funding would enable them to set up small offices internationally to target the much larger markets, first in the US and then in Japan. The marketing strategy sounded exciting to John, especially with talk of corporate deals with companies like Budweiser and Coca Cola, but he had concerns too – he knew next to nothing about manufacturing in China, plus there were the logistics of actually getting the products on the shelf in the UK. Alan persuaded him that one of his contacts, Kevin Larkin, was keen to join the company, and he had extensive experience in Chinese manufacturing and shipping operations. As to shipping, the collapsible nature of the speakers worked in their favour, in that these costs were low compared with other loudspeaker systems. This manufacturing operation was to be kept small, existing just to get the company off the ground; if orders really started to flow, they would outsource manufacturing through the granting of sub-licences. Both Alan and John felt it

was important to focus their energies on continuing research and development of new products in the UK, to maintain a competitive edge in the market, rather than on mass manufacturing. The real worth of the company was in the exclusive agreement with NXT and any future intellectual property development. And in about 5 years time, the exit strategy was to sell or float the company for a significant capital gain.

So, did they have enough money? In the early stages, they counted on becoming visible in the market through a 'standard' pair of speakers, perhaps in a few different colours, along with a connection kit to either a PC or an audio system (the 'Revo' system in Figure 4). Customisation and corporate promotions would be built on the success of this 'cash cow'. To meet the expected margins of wholesalers and retailers, they needed to set prices on this combination to provide an average 45% gross margin in the first year. The initial interest suggested they could count on sales of around 120,000 units per year. The main costs would be for manufacturing and distribution, UK marketing and NXT licensing agreements. Drawing on Kevin Larkin's manufacturing experience, Alan and John calculated that they could achieve these margins with a retail price, for the standard kit, of around £30. This was very competitive at the time with existing speaker systems, in terms of sound quality and size, let alone HotAir's additional features. Sales were projected to quadruple in 2002, due to a novelty effect and an aggressive global marketing strategy, then level off in 2003 (see Table 2), by which time it was expected that lucrative corporate deals might be in place.

Table 2: Three Year Profit Projections

£ 000s	2001	2002	2003
Sales	3,708	15,343	14,104
Direct costs	2,038	8,562	8,844
Gross Profit	1,670	6,781	5,260
<i>Gross Profit %</i>	<i>45</i>	<i>44</i>	<i>37</i>
Overheads	492	777	817
Net profit	1,178	6,004	4,443

Alan, the major financier, was now willing to put in his £300K. Smaller amounts were available from some other private individuals, plus the university was willing to contribute some pump-priming funds to its first student spin-out, plus continued intellectual property and public relations consultancy. The outline plan for the first year was to spend around 6 months converting existing market interest in the UK into orders, gaining new UK orders, and researching the China set up. As to the manufacturing operation, one of Alan's contacts, through Kevin

Larkin, had identified a manufacturer who probably had the right capacity and quality control expertise to take the project on. There was still a need though, to 'scale up' from a prototype to production quantities, which would require John's design expertise. To catch the all-important Christmas 2001 market, Kevin Larkin would need to be in place overseeing actual production by August. If the Christmas run was successful and they met their targets, Alan promised a second round of funding to set up marketing offices in the US and Japan. It was all up to John now, and he did feel that it was all a bit tight financially; but, Alan's enthusiasm was contagious, and he was far more knowledgeable about start-ups and business than he had been previously, not only through his discussions with Alan, but also through being involved with the TTO. They had introduced him, through monthly meetings of the Enterprise Club, to the local innovation community – entrepreneurs, other spin-out managers, financiers, business consultants, lawyers. John had gained a great deal of business know-how in this informal setting, plus more formal support and advice from the TTO staff.

"Let's do it!" said John. It was Christmas 2000, approximately 6 months after his degree show. He was about to become Design Director for HotAir Sounds.

2.4. Early Stage Growth

In February 2001, HotAir Sounds was registered as a company, receiving its first round of equity funding, £300,000, from Gladiator, plus small amounts from other sources. To widen the business expertise of the company, and to comply with UK law, Alan and John began to put the Board of the company together. Alan became the Managing Director and of course John became Design Director. Colin Davis, a long time contact of Alan's, joined soon after as Finance Director. As Alan intended to be very 'hands-on' with HotAir's, sales and marketing in the UK, he spread the workload a little by appointing his Gladiator colleague Ian Jones as a Director. Another of his contacts, Edwin Follett, one of the smaller shareholders and a local business angel, came on board as a Non Executive Director. In line with policy, the university took a small stake in HotAir and a seat on the Board: Gayle Harris of the TTO represented the University's interests. Gayle was keen to join HotAir, as she had spent a lot of time discussing the company with John and felt they really had a future. Plus, she was keen to be involved with the university's first student spin out.

The Board also included people who would probably join the company later on as full members of the management team, as the business developed. Again, these were business contacts of Alan's. Kevin Larkin came on the team right at the outset to establish the China operation. Alan handled most of the UK sales and marketing operation himself, but appointed Ian Jones, as non-Executive Director in support. Michael Norman and Oliver Pringle were also brought in to support the aggressive international marketing strategy in the US, firstly on the

Board, taking up full executive management positions later on. Quentin Rose was brought in to take on eventually the same role in Japan. All had high level experience in their relevant fields, as can be seen from the mini-CVs shown in Box 1.

Box 1: Management Team*Alan Booth – Chairman and Chief Executive*

Alan owns and manages his own company, Gladiator Corporate Ltd, which concentrates on spotting and developing emerging opportunities and then bringing them to market. In 1995 he founded a specialist safety simulation equipment and training company which is now listed on AIM. Before that, Alan strategically developed and grew five companies in different sectors, which he exited by either trade sales or MBO's. Alan also developed and currently chairs a medical plc. Alan is a highly experienced creator of businesses and will be developing the whole company strategy with special emphasis on global marketing and licence relationships. As well as international sales, Andrew has worked on the ground in much of Europe, the Middle East, and US and has vast experience of the Far East having worked in Japan, Hong Kong, Malaysia and Singapore.

Colin Davis – Finance Director

Colin is a finance professional (ICAEW) with extensive UK and international experience in managing both expansion and contraction whilst meeting stretching financial targets. Particular expertise has been gained within the pharmaceutical industry, including manufacturing, systems implementation and the effective management of multi-site finance functions. Stephen is responsible for the group's financial administration functions and the implementation of comprehensive IT and management reporting systems

John Saxon – Design Director

John has a Bachelor of Arts Degree in Industrial Design & Technology from a UK University, where he also took a work placement for a year in the field of point of sale design and development. Whilst at University John was commended for his high quality of work and innovation on a number of local and national design projects. John is responsible for all aspects of creative design including national and international product design, brand creation, exhibition design and customer concept generation.

Edwin Follett – Non Executive Director

Edwin joined the board from company inception. Edwin has held senior management positions in a number of high growth companies, in the computer and the sports industry. He was on the Main Board of a chemical company and later as CEO took a healthcare IT company, from start-up to a listing.

Gayle Harris – Non Executive Director

Gayle represents the University's interest on the board and by profession is an I.P.R. lawyer

Ian Jones – Non Executive Director

Ian is an experienced businessman having grown numerous retail distribution businesses in the UK, with global experience of product sourcing.

Kevin Larkin – Operations Manager

Kevin joined HotAir at the beginning of April 2001 as the Operations Manager. His prime objectives within the organisation are to oversee and instigate the manufacture of the product, which is wholly sourced from carefully selected manufacturers in China. Integrated within his roles and responsibilities is quality control and shipping of the product. Kevin's experience and background is in project and contract management spending much time in the cost critical world of the International Point of Sale industry. This has equipped him with the practical knowledge and the right negotiation skills to maintain budgets and delivery commitments. Kevin has undertaken extensive R&D and has spent a large amount of his time this year in China negotiating contracts to fulfil the order profile.

Michael Norman – US President

For the past 20 years, Michael has had his own sales, marketing and licensing company directing the marketing, licensing and sales efforts for several billion dollar US corporations. His strengths include direct sales efforts, negotiations and product design. Prior to this Michael was the Vice President of a large retail chain. Michael's focus is on developing different channels of distribution to serve the highly complex US retail environment. His ability to strategically segment the retail marketplace, develop new products for targeted markets and brand development has been a hallmark of his success. Michael and Alan share the same ideas and enthusiasm with respect to the marketing and exploitation of HotAir brand products in the US.

Oliver Pringle – US Vice President

Oliver joined the HotAir management team in early October 2002 as the Vice President of US Operations. He brings extensive experience in start-up, turn-around operations and change leadership. His background includes strategic analysis, marketing/sales management, supply chain management and organizational development. He has served in the manufacturing, distribution and the retail industries and has successfully raised funds for a variety of start-up and first stage companies. Oliver received an MBA from Columbia University in 1992.

Quentin Rose – Head of Business Development Japan

Quentin will establish and manage the Japanese and Asia-Pacific operation. Robert's career to date equips him well to achieve this having handled international logistics in the RAF for 7 years. Robert has also worked in Japan for 3 years before recently graduating in International business.

Now that the money was available, Joe, Alan and Kevin spent quite a bit of time travelling to and from China, meeting the manufacturer and tooling up his machinery to produce the speakers. There were one or two false starts where scaling up production of the prototype led to technical problems that had to be fixed – but by and large this was a fairly painless process. They also established offices in the UK as a base for research and development, as well as to look after the UK marketing and sales operation.

The first milestone was reached after a hectic six months – they hit the Christmas market for 2001. The first firm order to come through from the speculative enquiries they had received after John's success at the National Incentive Show, was for 1500 units from The Gadget Shop, usually a pioneer of upmarket novelty items in the High Street. These were delivered on time, August 2001, and retailed at around £30 per pair, as per the business plan costings. Other more mainstream High Street retailers also confirmed their initial interest by placing orders. The 'buzz' around the speakers now began to maintain momentum, with a slew of favourable press quotes in 2001/2 (Box 2 opposite).

There was also some prestigious national TV coverage: the product reached number 4 in the BBC's top 10 gifts for 2002. HotAir now had trading relationships with Dixons, Boots, Comet, Debenhams, Hamley's and Argos.

And so, HotAir's second milestone, the first year sales targets were met; Alan, as promised, now supplied the second round of funding, as promised, £485,000. This meant that the US office and sales/marketing team could be set up, with Michael Norman and Oliver Pringle running the show.

The US office was set up in June 2002 to develop the vast potential of this huge market. HotAir's products have made a successful impact on the market. HotAir have established trading relationships with Budweiser and Bloomingdales in the US, as well as to hundreds of independent retailers via agents. In October 2002, Bloomingdale's, recognised as one of the most prestigious department store chains in the US, sponsored the official US launch of the upmarket C-2 speaker at a party for local and national media. This product also featured in the store's highly anticipated Christmas catalogue, considered a benchmark for new, innovative, upmarket products. The mass market Revo speaker was launched in October 2002 at the Discovery Channel Stores, a chain of 175 stores known for cutting edge consumer products for the youth market. Total shipments to the US for the Christmas 2002 season exceeded \$150,000. A licensing deal with Budweiser in 2002 to develop retail merchandising and promotional products for its 500,000 outlets throughout the world, together with interests from major retail and mobile communication companies look set to promote HotAir to the world stage.

Throughout Europe, interest is high, with enquiries received offering distribution within the key European states, as well as a number of EU candidate countries. Although marketing effort here only began in July 2002, sales of

E140,000 have already been achieved and supplied. The launch of the Tokyo office is planned for 2003.

Box 2: Press Quotes

What Computer Feb 2002

"...Ideal for the traveller who likes their rucksack light, but likes to be entertained as they go..."

WIRED March 2002

"Portable CD players let you move without breaking your back, but headphones let only one person at a time enjoy the music. HotAir has a solution. Blow up these 10 Watt speakers like you would a beach ball and plug them into your player's headphone jack. Your harmonies will float across the surface of the thick plastic for all to hear..."

RETRA –Electrical retailer Association Magazine May 2002

"Essentially they are very portable, blow up speakers that give you a fantastic sound with your portable CD player etc. when you are enjoying the great outdoors.....I urge you to check them out for yourself..."

The Guardian June 2002

"I travel with a walkman, but listening through headphones is a bit anti – social. Any suggestions as to how to open up the music for pleasure? A good pair of compact speakers with a built in amplifier is one answer, but these can get heavy. And small speakers with no powered amplification sound rather too tinny. Why not try a pair of oversized Budweiser cans..."

FINANCIAL TIMES 2001 "...a highly marketable idea..."

TIME MAGAZINE 2003, "...The air-filled casings pack an audio punch..."

WHICH Computing Magazine 2003 March

"...Fed up with your computer's dull-looking portable speakers? Then check out HotAir's range of funky coloured inflatable speakers. The ultimate in portability..."

The New York Times

"Beneath the clever design, science is at work...HotAir Speakers emit sound in almost every direction, providing clarity and range that a listener sitting behind ordinary stereo speakers wouldn't get..."

John Walsh, Senior Editor, Gladiator Magazine

"This is one of the coolest products I've seen cross my desk in a while...they're just dynamite!"

Computer Games Magazine, "What aural dreams are made of!"

The Washington Post, "A couple of breaths of fresh air are all that's needed to get hopping"

BusinessWeek, "Hot air, cool sound!"

Disney Adventures, "Blow them up like a balloon and start your party"

Teen People, "Supercute!"

The Gadget Guru, Penthouse

"...Whether you're heading for the beach or the slopes, you can bring along speakers that deliver big sound, but are small enough to fit in a backpack..."

Detroit Free Press, "...Like nothing you've seen on the desktop before..."

GamePro, "...Groovy looking...perfect for Game Boy Advance road trips..."

PC Gamer, "...For gamers or music-lovers on the go...!"

Cinescape, "These things, while strange, are extremely cool"

Craig Crossman, National Newspaper Columnist

"Might literally blow you away...unlike any other speakers you'll see floating around the stores this year"

U.S. News & World Report

"Turn portable CD players, laptops, or any other gadget with a headphone output into a sound system..."

InStyle, Perfect for picnics

Gear, "A definite improvement over most laptops' built-in speakers..."

2.5. The Entrepreneurial Transition

In June 2000, John was a final year student working on an individual project, interested mainly in getting a good degree and a job with a large company. By June 2002, he was a co-director of his own company, working in a team setting with the other directors who had considerable experience in their respective fields. He was operating on a global scale with widely dispersed manufacturing and marketing operations. He was working in a new field, involved in strategic decision making over a range of key areas: marketing, manufacturing, finance, IP and personnel. Clearly, John had been through a steep learning curve in his transition from student to entrepreneur. An extract from an interview with John reflecting on that experience is presented in Box 3.

Box 3: Interview with John Saxon – the Learning Process

“Everything I have done following the degree show and the design project has been completely new to me – it was a steep learning curve. Basically, I had to learn by doing – that is, problem solving through networks, developing my own experience and benefiting from the expertise of others. Key influences were Gayle Harris of University Enterprises Limited, especially in the area of intellectual property and company law; Alan Booth, in terms of general business mentoring, and Kevin Larkin, for the practicalities of export. Being near the University generally meant that I could call on a range of different expertises for help. The Enterprise Club there was good for networking, the Regional Business Innovation Centre were also helpful. It takes a while to learn the rules of the game, and more importantly, to build up trust and confidence (both ways) in your contacts, your partners and in your networks generally. There was a lot of information out there basic to starting a business that I could tap into quite easily. It was harder when I wanted to raise the game and get quickly into developing the company beyond start-up expansion and working overseas. You can teach the basic information, but the most important thing teachers can do is to get you into building and using your own networks effectively.”

3. Summary

A new technology-based firm has been established as a spin-out from a university student degree project. The company has done well in achieving significant amounts of cash in successive funding rounds for taking the initial idea through to a marketable product. Commercial success also seems imminent, with the product gaining orders and obtaining a high profile in the media; it is likely that breakeven will be achieved soon. The company’s core competences lie in the abilities of the UK-based staff, with manufacture operationalised and outsourced to China. International marketing offices have been established in New York and (soon) Tokyo. However, the company has grown very quickly, but is nowhere near stability or maturity. Two key areas can now be addressed. Firstly, what challenges will the company face in the near future and how might they be overcome? Secondly, John, in his own words, has been through a steep learning curve over the last three years. If you were a student wondering whether to set up a company, what can you learn from his experience and how can you apply it to your own professional development?

Key questions about the company:

- Was the decision to go ahead with company formation the right one?
- What future challenges does the company face as of 2003?
- Suggest possible solutions or strategies to anticipate and overcome these challenges.
- What do you see as the next stage of development of the company?

Key questions about John:

- Map out the changes in John's entrepreneurial learning network as he progresses from classroom to company.
- Analyse their own entrepreneurial learning network, identifying strengths and weaknesses in accordance with your own personal objectives.
- Create action plans to strengthen personal networks in accordance with the above.

References:

- Bhide, A. (1999), "The questions every entrepreneur must answer", in *The Entrepreneurial Venture*, Eds. W. A. Sahlman, H. H. Stevenson, M. J. Roberts and A. Bhide, US: Harvard Business School Press.
- Birley, S. (1985), "The role of networks in the entrepreneurial process". *Journal of Business Venturing* 1: 107-118.
- Brown, J. S. and Duguid, P. (1991), "Organizational Learning and Communities-of-Practice: Toward a unified view of working, learning and innovation", *Organization Science* 2(1): 40 – 57.
- Chell, E. and S. S. Baines (2000), "Networking, entrepreneurship and microbusiness behaviour". *Entrepreneurship and Regional Development* 12(3): 195-205.
- Churchill, N. and Lewis, V. (1983), "The five stages of small business growth", *Harvard Business Review* May/June: 30-50.
- Deakins, D. and Freel, M. (1998), "Entrepreneurial learning and the growth process in SMEs", *The Learning Organisation* 5(3): 144-155.
- Deakins, D. and Freel, M. (2003), *Entrepreneurship and Small Firms*, 3rd edition, Maidenhead, UK: McGraw-Hill.
- Flamholtz, E.G.(1991), *Growing Pains: How to Make the Transition From an Entrepreneurship to a Professionally Managed Firm*, San Francisco: Jossey-Bass.
- Flamholtz, E. G. (1995), "Managing Organizational Transitions: Implications for Corporate and Human Resource Management", *European Management Journal*, 13(1) pp. 39-51.
- Gibb, A. A. (1997), "Small firms training and competitiveness. Building up the small business as a learning organisation", *International Small Business Journal*, Vol. 15, Issue 3, pp. 13-29.
- Granovetter, M. (1973), "The Strength of Weak Ties". *American Journal of Sociology* 78(6): 1360-1380.
- Greiner, L. E. (1972), "Evolution and Revolution as Organisations Grow", *Harvard Business Review* July/August: 37-46.
- Kazanjian, R. K. and Drazin, R. (1990), "A stage-contingent model of design and growth for technology based ventures", *Journal of Business Venturing* 5(3):137 – 150.
- Scott, M. and Bruce, R. (1987), "Five Stages of Growth in Small Business", *Long Range Planning* 20(3): 45-52.