

Body InSight

Business Plan

Created by

Kavan McEachern
Balázs Pintér
Dávid Lányi

IT Entrepreneurship

AIT-BUDAPEST



AQUINCUM INSTITUTE OF TECHNOLOGY

2012.

Table of Contents

[Executive Summary](#)

[Overview](#)

[Problem: Costly, Ineffective Communication](#)

[Solution: Focus on Digital Modeling, Utilize Commercial Modelers](#)

[Business Model](#)

[Competitive Advantage](#)

[The Core Team](#)

[Mission](#)

[Objectives](#)

[Business & Products](#)

[What is Body InSight?](#)

[Products](#)

[What Makes Body InSight Different?](#)

[Sales & Marketing](#)

[Trends in the Market](#)

[Resources of Market Research](#)

[Profiling Customers](#)

[Research to Identify Niche Market](#)

[Cosmetic Surgeries](#)

[Pharmaceutical companies](#)

[Targeted Customer Groups & Pricing](#)

[Profiling Competitors](#)

[How Body InSight will improve on current offers](#)

[Managing Market Risks](#)

[Pricing](#)

[Prices Compared to the Competition](#)

[Reasons for Pricing Differences](#)

[Promotion and Advertising](#)

[Running the business](#)

[Staff](#)

[Organizational Structure](#)

[Kavan McEachern, Founder & Chief Executive Officer](#)

[Balázs Pintér, Founder & Customer Compliance Manager](#)

[Dávid Lányi, Founder & Project Coordinator](#)

[Management Team Gaps](#)

[Personnel Plan](#)

[Strategy & Implementation](#)

[Sales Milestones](#)

[Operational Risks](#)

[Communication](#)

[Software tool development](#)

[Premises & Equipments](#)

[Asset Management System](#)

[Modeling and rendering software & workstations](#)

[Finance](#)

[Start-up costs](#)

[Projected profit & loss](#)

[Investment needs](#)

[Exit strategy](#)

Executive Summary

Overview

Body InSight is a development stage venture based in Santa Monica, California, that will offer state of the art digital modeling services for medical practitioners in need of visual multimedia. Body InSight will offer two primary services:

- Customized digital modeling determined by specifications supplied by the customer
- A database of pay-per-use stock digital models

Body InSight will help doctors attract and retain patients by enhancing visual communication and reducing liability. It will also provide marketing media for pharmaceutical companies and informational media for research and education. By the end of year one, Body InSight will be ready to deploy its proprietary model viewing software and stock models database, at which point sales can begin. Body InSight's initial target market will be cosmetic surgeons and other medical doctors in the Los Angeles metropolitan area. The company will then target pharmaceutical companies and educational institutions, expanding into the rest of California and the United States by the end of year three. Thereafter, Body InSight will seek to expand into India's rapidly growing cosmetic surgery and healthcare industries.

Problem: Costly, Ineffective Communication

Doctors, particularly cosmetic surgeons, regularly face the hurdle of having to communicate complex processes to patients demanding ever more information before agreeing to procedures. Doctors end up spending an unnecessary amount of time trying to communicate with their patients and assuaging their fears, often losing patients in the process. Therefore, it is usually in a doctor's best interest to utilize powerful visual tools to enhance and accelerate the process of communication. With the advancement of the information age, people have come to desire and expect the advanced visual technology seen in cinema and other media. Equally important for doctors is the reduction of liability that comes with such an unambiguous form of communication. Unfortunately, current modeling solutions for the medical industry are either too costly or thinly spread across a range of multimedia, such as illustrations, plastic models and outdated animations. Plastic models are static and limited in their customizability. Illustrations are 2-dimensional and can only convey so much information. The problem of communication is similarly pertinent to education and to marketing in the pharmaceutical industry.

Solution: Focus on Digital Modeling, Utilize Commercial Modelers

Although other forms of visual media are still important in the medical industry, high-end doctors (particularly cosmetic surgeons) of the sort found in Santa Monica demand powerful, state of the

art visual media (both for patient communication and for visualization). By focusing exclusively on advanced digital modeling, Body InSight will be better equipped to meet this demand than most other medical multimedia services. As for our direct competitors, the primary reason that current state of the art modeling solutions for the medical industry are so costly is that they involve teams of dedicated *medical* modelers, who demand significantly higher pay for their rare expertise and require years of experience in the field. Body InSight will solve this problem by serving as a database and communication platform between medical practitioners and the large number of commercial modelers available, who will accept lower salaries and won't require much additional training. This will allow Body InSight to provide state of the art digital models at relatively low cost and with greater capacity for expansion.

Business Model

- Customized models will be made from detailed specifications provided by the client and sold as one-time purchases following a short development period (3 - 21 days) and product review.
- Stock models will continuously be added to Body InSight's proprietary database and sold via pay-per-use on an online marketplace.
- Some stock models will be made available to students for free to be used in presentations. This will increase visibility and essentially provide free marketing.
- In all cases, some version of Body InSight's model viewing software will be provided with the model. The package will be protected by DRM (Digital Rights Management) to limit piracy.

Competitive Advantage

- Exclusive focus on state of the art digital modeling
- Core team of experts consisting of a former cosmetic surgeon, a medical modeler and a software engineer with over a decade of experience in their respective fields
- Intimate knowledge of Los Angeles medical community through Dr. McEachern's experience as a cosmetic surgeon in Santa Monica
- Core team will translate medical specifications into modeling specifications for (an initially small) team of commercial modelers
- Wide variety of pay-per-use stock models in database

The Core Team

- Dr. Kavan McEachern
 - Former cosmetic surgeon with 17 years of experience running a private practice in Santa Monica.
 - Certified by the American Board of Surgery and the American Board of Plastic Surgery.
 - Graduated *magna cum laude* from UCLA's David Geffen School of Medicine.
- Balázs Pinter, PhD

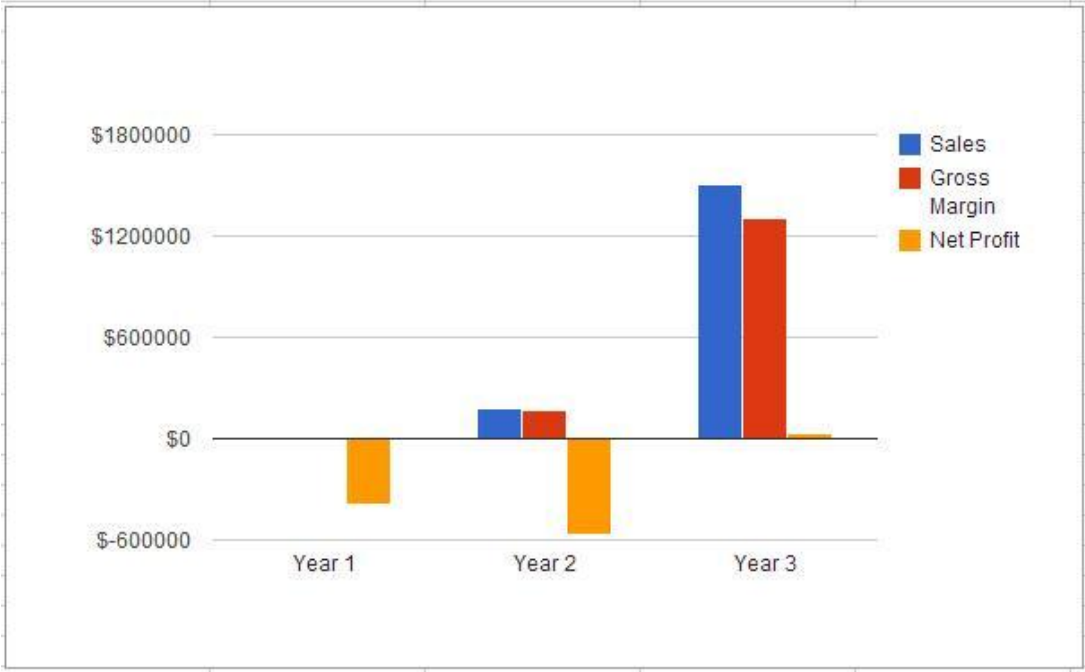
- 3D modeler with 12 years of experience as a medical modeler and 6 years as Creative Marketing Director for India's largest pharmaceutical company, Sun Pharmaceuticals, Bombay.
- Bachelor's degree in Computer Science and Engineering from India Institute of Technology, Bombay.
- PhD in software engineering from MIT.
- Dávid Lányi, PhD
 - Software engineer with 11 years of experience as a modeler and lead developer for Electronic Arts in Redwood City, California.
 - Bachelor's degree in Computer Science from University of Southern California's Interactive Media Division & Game Development.
 - PhD in computer science from Stanford University.

Mission

Body InSight seeks to propel the medical industry (and patient care in particular) fully into the age of digital multimedia. Considering what can now be done in movies and computer games, it's becoming reasonable to expect advanced digital modeling in medicine, where communication between doctors and patients is becoming increasingly important both for business and for patient satisfaction. Although Body InSight will begin by targeting cosmetic surgeons, our mission is to make state of the art digital modeling standard practice in medicine while securing our position as a market leader.

Objectives

- Provide modeling services that increase patient acquisition, compliance and retention for doctors by giving patients greater access to accurate information about their bodies.
- Become a digital modeling standard for doctors and pharmaceutical companies, as well as in education.
- Achieve positive cash flow and begin expansion into other parts of the United States by year three.
- Begin expanding to India in year four.
- See chart below. If our projected growth for years two and three continues into years four and five, we hope to achieve:
 - \$10 million in sales by the end of year four
 - \$50 million in sales by the end of year five



Business & Products

What is Body InSight?

Body InSight will provide state of the art digital multimedia (static and dynamic models) to the medical industry by serving as a vital communication platform between medical practitioners and commercial 3D modelers. Doctors, pharmaceutical companies and educational institutions will make generic purchases or give us specifications for modeling specific body parts (including internal organs) and dynamic processes, which our team then translates into digital modeling specifications for commercial 3D modelers. Our core team will consist of former surgeons, modelers and software engineers familiar with the challenges of translating medical specifications into specifications for digital modeling. Customers will be able to make one-time purchases of customized models as well as per-use payments for generic models.

Products

Customized Models

Primary Target Customers: Cosmetic surgeons, pharmaceutical companies, medical research institutes

Why: Being able to present true-to-life, patient-specific visual information is especially important for cosmetic surgeons, whose business revolves around personal, visual aesthetics that are unique to every patient. It has become an expected part of cosmetic surgery that the patient will be shown the outcome of the procedure prior to making a decision. Unfortunately for cosmetic surgeons, many patients facing cosmetic surgery are apprehensive about the outcome and often decide not to go through with the procedure. Having powerful visual tools to allay patients' fears and accurately represent the cosmetic changes they will undergo makes it much easier for cosmetic surgeons to attract and retain patients while reducing liability. Pharmaceutical companies also need visually appealing, customized dynamic models for marketing. Medical research institutes frequently rely on customized visual models to advance and present their research.

Implementation: In the case of cosmetic surgery, along with procedural specifications, we require that the surgeon provide us with a series of pictures of the patient in order for our modelers to create a 3D model of the patient's face (or other body part). Our core team then translates the specifications into modeling specifications, which our modelers then apply to the model. The model, along with an executable copy of our proprietary model-viewing software, is given to the surgeon in 3-5 business days, after which the surgeon can make a single request for adjustments to be made to the model. The final model is supplied 1-3 business days after initial feedback. Our models come equipped with a wide range of functionality, including camera transformations, multi-layer interaction, opacity settings and fly-throughs, all determined by the customer's specifications. In the case of research institutes and pharmaceutical companies, we will meet with the researchers or marketing team and build up a detailed description of the dynamic model (video) to be created. The model will be completed in 10-21 business

days, based on the size of the project. Feedback on the product will be continuous throughout its development.

Generic Models

Primary Target Customers: Surgeons (and other doctors), educational institutions

Why: Although most other doctors don't need customized models on a regular basis, some form of visual presentation is expected in most areas of medicine. In the past, plastic models and illustrations were the primary form of medical media. With the advancement of the information age, computer graphics and its proliferation in cinema and advertising, patients have come to want and expect more detailed, true-to-life visual information from their doctors. Doctors who use Body InSight's generic models will be better able to attract and retain patients while reducing liability. Educational institutions are relying more and more on visual communication through computer models, both in lectures to students and presentations to peers. For both doctors and educational institutions, buying a customized model might be too expensive for the sake of a generic surgery or occasional presentation, so paying for each use of a generic model is more reasonable.

Implementation: Generic models will be sold on a pay-per-use basis. Customers will be able to download a pared down version of our model viewing software as well as the desired model from our database, limited to a specified number of uses. We have already begun to build up a database of generic (static and dynamic) models that will be in high demand by doctors and educational institutions.

What Makes Body InSight Different?

- **Veteran team of technical translators:** Unlike other medical multimedia companies, such as Probiomedical and Zygote (which primarily consist of a dedicated medical modeling staff), Body InSight functions as a vital communication platform for medical practitioners, ensuring reliable and accurate translation of medical specifications into powerful digital models. Body InSight's founders and core team consist of a cosmetic surgeon, a 3D modeler and a software engineer with over a decade of professional experience in their respective fields.
- **We use commercial modelers:** Body InSight takes advantage of commercial 3D modelers instead of relying on a team of dedicated medical modelers. As the vast majority of commercial modelers have no knowledge of medicine or medical modeling in particular, this saves on costs while giving us access to a relatively much larger pool of modelers, thereby increasing potential throughput.
- **We use state of the art modeling:** Body InSight focuses on providing medical practitioners with interactive, high-definition, customizable digital models that draw from the latest expertise in medicine and digital multimedia. Many other medical multimedia companies, such as Probiomedical and Medical Multimedia Group, attempt to cater to a wide range of multimedia needs in medicine and education by utilizing a variety of media types, including animations, plastic models and illustrations. By focusing on state of the art modeling, Body InSight provides medical practitioners with the technology their patients and colleagues have become accustomed to in other areas of digital multimedia.

Sales & Marketing

Trends in the Market

Surgery, especially cosmetic surgery, is a fast growing market. From 1997-2011 the overall number of cosmetic procedures increased 197%. Nearly 9.2 million cosmetic procedures (surgical and nonsurgical) were performed in the United States in 2011. The number of cosmetic surgical procedures increased 1% in the past year, with over 1.6 million procedures in 2011. Surgical procedures accounted for 18% of the total numbers of procedure performed representing 63% of total expenditures. The top five surgical procedures for women were: breast augmentation, liposuction, tummy tuck, eyelid surgery, and breast lift. The top five surgical procedures for men were: liposuction, rhinoplasty, eyelid surgery, breast reduction to treat enlarged male breast, and facelifts. Visual communication in the form of digital modeling is becoming increasingly common in presenting all of these procedures to patients. All in all, Americans spent nearly \$10 billion on cosmetic procedures in 2011, \$6.2 billion of which was spent on surgical procedures.

Resources of Market Research

The ASAPs Cosmetic Surgery National Data Bank, working with an independent research firm, compiled the 15-year national data for procedures performed 1997-2011. A paper-based questionnaire was mailed to 22,700 Board-Certified physicians (8,900 Dermatologists, 8,100 Otolaryngologists, and 5,700 Plastic Surgeons). Final figures have been projected to reflect nationwide statistics and are based on the Board-Certified Plastic Surgeons; Otolaryngologists; and Dermatologists. The findings have been aggregated and extrapolated to the known population of 24,650 active physicians who are Board Certified in these specialties.

Profiling Customers

- Our initial primary customers are cosmetic surgeons in the Los Angeles metropolitan area. We will be targeting high-end doctors who are working with celebrities and other wealthy patients. The cost of our modeling services will not be an unreasonable ratio of the total price, which, due to the socioeconomic context, is very high. Our modeling costs will be \$500-\$2,000 while surgeries average \$7,000, with a typical range of \$4,000-\$20,000. We will also be targeting other surgeons and types of doctors. Complex conditions and organ procedures can be much more clearly communicated with the help of digital modeling, and here the cost ratio is even lower, with the cost of coronary heart bypass surgery averaging over \$60,000.
- The next targeted market is pharmaceutical companies. They have huge budgets for advertising and do not cut corners on presenting visually appealing and effective advertisements. Pharmaceutical companies often spend millions of dollars on a marketing campaign, so the total cost ratio of using our services will be low.
- The final market we are currently considering is education. We are targeting universities and other educational institutions to get students and professors to use Body InSight's stock models, primarily for the purpose of increasing visibility (free advertising). They won't buy as regularly as the previously mentioned customers, but we consider them a long-term investment. Increasing Body InSight's presence in higher education will help

establish us as a standard in the medical industry at large, as every would-be doctor passes through higher education at some point.

Research to Identify Niche Market

Cosmetic Surgeries

In 2011, the top five surgical procedures were:

- Liposuction (325,332)
- Breast augmentation (316,848)
- Abdominoplasty (149,410)
- Eyelid surgery (147,540)
- Breast Lift (127,054)

Each of these procedures requires a high-degree of visual communication and establishing trust between the surgeon and patient, and thus benefits greatly from digital modeling.

Pharmaceutical companies

The U.S. pharmaceutical industry spends almost twice as much on promotion as it does on research and development. In 2011, the U.S. pharmaceutical industry spent 24.4% of the sales dollar on promotion (most of which was in the form of TV advertising utilizing digital modeling) versus 13.4% for research and development, as a percentage of US domestic sales of US\$235.4 billion (ASAPS Cosmetic Surgery National Data Bank).

Targeted Customer Groups & Pricing

After 2 years:

- Plastic surgeons: 70-90, average of 2 simulations each
- Other surgeons: 30-50, average of 4 simulations each
- Pharma company projects: 2-5

After 3 years:

- Plastic surgeons: 300-350, average of 4 simulations each
- Other surgeons: around 300, average of 6 simulations each (many generic users, fewer repeat users of custom simulations)
- Pharma company projects: 8-15

Pricing:

- Adjustable face model (custom made simulation): \$500-\$2,000
- Organ simulations: \$100-\$2,000 (generic = \$100, average customized = \$1,000)
- 3D simulation (movie) of static model for pharma projects: ~\$10,000

Profiling Competitors

| Competing Offer | Strengths | Weaknesses |
|--|--|---|
| Photo libraries | <ul style="list-style-type: none"> • Cheap • Easy to use | <ul style="list-style-type: none"> • Limited set of images • Non-customizable • Not easy to search |
| SoftAge Doctor's Presentation Tools | <ul style="list-style-type: none"> • Designed for medical use | <ul style="list-style-type: none"> • Non-3D imagery • Hard to use |
| Pro Biomedical | <ul style="list-style-type: none"> • 3D modeling | <ul style="list-style-type: none"> • Spread across multiple types of media |
| Solid-Ideas | <ul style="list-style-type: none"> • Real-life 3D models • Designed for demonstrations | <ul style="list-style-type: none"> • Static • Not specifically for the health care industry |
| Zygote.com | <ul style="list-style-type: none"> • Dedicated for medical use • 3D map of the body | <ul style="list-style-type: none"> • Only stock models • Non-customizable • Slow turnaround |
| Medical Multimedia Group | <ul style="list-style-type: none"> • 2D and 3D models videos • Designed for patient | <ul style="list-style-type: none"> • Basically for general surgeries • Expensive |

How Body InSight will improve on current offers

Body InSight will offer high-definition, interactive, 3D digital models to meet the specific needs of our customers. Due to our core team's unique expertise in the fields of cosmetic surgery and modeling, and our utilization of commercial 3D modelers, we will be able to provide fully customizable, state of the art modeling services at an affordable cost. Our ever-growing database of stock models will also contribute greatly to the accessibility and economy of our services.

Managing Market Risks

- Some of our more traditional target customers might not be comfortable with using new technology and will remain with old technologies (plastic models, 2D illustrations).
 - Dr. McEachern has close ties to many doctors in our initial target market, both inside and outside cosmetic surgery and will thus serve as a persuasive reference for the usefulness of digital models.
 - This represents a small portion of our target market, as it is usually lower-end doctors who are more old-fashioned.
- Potential customers who already use digital models may be comfortable with their current solutions and will be apprehensive about switching to a market newcomer.
 - Again, Dr. McEachern's close ties to many doctors in our initial target market will go a long way in validating Body InSight to potential customers.

- Body InSight's lower prices and singular focus on digital modeling will be an appealing alternative to more expensive options.
- As our solutions permeate education and advertising through pharmaceutical marketing, Body InSight will become more of a standard and will thus push pragmatists and conservatives to switch.
- Customers might attempt to pirate our models and viewing software.
 - Modeling packages (models and viewing software) will be protected by DRM
- Our competitors might begin to use commercial modelers as well and move into our exact niche (focusing exclusively on digital modeling).
 - We have a head start on the market and will continue to be advantaged by our exceptional core management team.

Pricing

Customized model: \$500 - \$2,000

Our most common product is the face model, built using a series of still images captured from a person in panorama angles. The modeling price is determined proportional to the complexity of the surgery, for which it is created. The average price of common cosmetic surgical processes lay between \$4,000 - \$6,000. The custom model creation's price is only a small ratio of the total price.

Generic stock model: \$100 - \$1,000 (generic outside view: \$100, generic with inside view and animation: \$1,000). This product can be used by anybody who needs a generic model of a body part. The creation doesn't require any scanning; it is done by modelers with professional supervision of medical staff.

3D simulation of custom or generic models for motion picture: ~\$10,000

This product fits the needs of pharmaceutical companies and other institution for advertising and research presentation. The simulation is made via close collaboration with the customer, therefore the pricing is performed completely on-case basis, and is usually significantly higher than our other modeling services.

Prices Compared to the Competition

| Product/service | Our price | Range of competitor prices (per unit) |
|-----------------------|--------------------|---------------------------------------|
| Adjustable face model | \$500 - \$2,000 | \$1,000 - 3,000 |
| Organ model | \$100 - \$1,000 | \$1,000 - \$2,000 |
| 3D movie | \$5,000 - \$15,000 | \$20,000+ |

Reasons for Pricing Differences

We maintain an extensive database containing previously created custom or generic stock models. We are thus able to drastically shorten the creation time of nearly any kind of custom modeling, as they become only the task of some smaller modification of existing models.

The professional mediation team between medicals and 3D technicians enables us to utilize commercial 3D modeler labor, whether in-house, or a contracted third-party. As we free ourselves from the need of specialized medical modelers, the production costs can be dramatically reduced.

Promotion and Advertising

Kavan, the CEO of the company, is well known in the market because of the 17 years during which he ran a private practice cosmetic surgery in Santa Monica. Early on, he will meet with doctors throughout Los Angeles to promote Bio InSight. This will help create strong connections with our target market. Kavan has extensive knowledge about the industry and understands the obstacles faced by doctors in communicating with patients.

Cosmetic surgeons:

- Set up meetings
- Demonstrate 3D facial reconstruction technology
- Demonstrate model viewer software and ease-of-use

Other doctors:

- Set up meetings
- Demonstrate stock model variety (requires existing database)
- Demonstrate model viewer software and ease-of-use

Pharmaceutical companies:

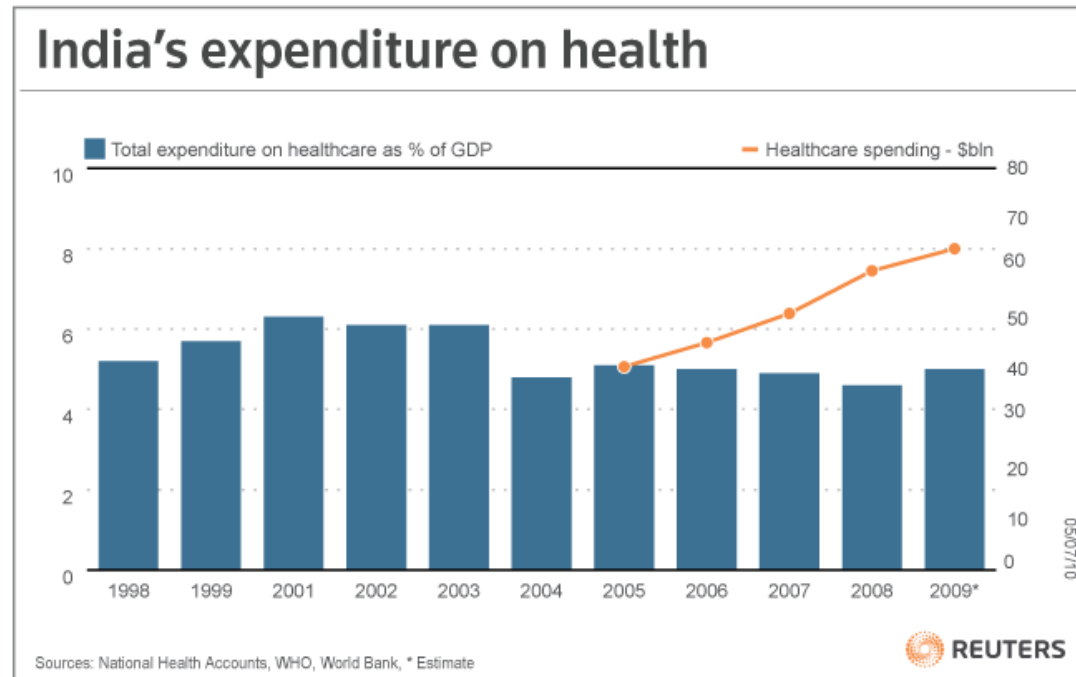
- Set up meetings and access through conferences
- Demonstrate video demos

Educational institutions:

- Set up meetings and access online and through conferences
- Demonstrate relevant products, particularly stock models
- Students will be provided free trial versions of the model viewing software as well as access to 10 stock models for a limited time (this will essentially provide us with free advertising)

After year three, we will seek to expand to India. India represents the 4th biggest market of cosmetic surgeries in the world after the U.S., China and Brazil. Healthcare in India is also a rapidly growing industry, expenditures increasing from \$40 billion to over \$60 billion from 2005 to 2009 (see chart below). Of exceptional importance is that one of our core team members, Balázs Pintér, worked for 12 years as a medical modeler and 6 years as Creative Marketing Director for India's largest pharmaceutical company, Sun Pharmaceuticals, in Bombay. Our marketing strategy will be the same as our initial marketing strategy in the U.S., taking advantage of Balázs' vast connections in the modeling and medical industries in India. Given his

experience and education in India, Baláz will head the India venture and will initially meet personally with high-end doctors in Bombay, Calcutta and New Delhi.



Running the business

Staff

The following are the current members of the Body InSight Team. The three founders will be in charge of the company until a strong management team is hired for certain key positions (see “Management Team Gaps” section).

Organizational Structure

The company is led by the CEO Dr. Kavan McEachern. The production of the 3D models will be supervised by project coordinator Dávid Lányi during the start-up phase. The professional medical supervision of the production will be carried out by Balázs Pintér, our Customer Compliance Manager. Some positions, such as sales and marketing personnel, will be filled during the second and third business years.

Kavan McEachern, Founder & Chief Executive Officer

Kavan did his undergraduate and graduate schooling in premed and medicine at UCLA, graduating *magna cum laude*. After becoming a Board certified surgeon, Kavan set up a private practice for cosmetic surgery in Santa Monica, California, which he ran for 17 years. During this time, he won numerous awards for excellence in cosmetic surgery and patient care, and was nominated for inclusion in the Southern California Super Doctors group for 11 consecutive years (top 5% of peer-reviewed doctors in the region). He is certified by both the American Board of Surgery, and the American Board of Cosmetic Surgery. Kavan’s medical and business experiences running a private practice make him an ideal CEO in the early phases of the venture.

Balázs Pintér, Founder & Customer Compliance Manager

Balázs has graduated at the India Institute of Bombay. His major was computer science he finished the university with excellent degree. Then he moved to the States and continued his studies in MIT as a software engineer. He had graduated again with an excellent degree. During the last years he was really interested in the latest health technology. That’s why he had completed some health engineering classes.

Then he moved back to India. He has worked for one of the leader pharmaceutical companies in India for the Sun Pharmaceuticals in Bombay. He was involved into projects with the marketing department. Here he has created 3D models and worked with modelers. After he became the leader of the modeling group and he has represented the modelers in business negotiations. He took part in many business meetings and conciliated with the modelers. He acquired not only the modeling but the business, and health industry’s terminology as well.

Balázs will lead the customer compliance management team, which is responsible for the understanding, and appropriate translation between the different professional terminologies of medical practitioners and 3d modelers.

Dávid Lányi, Founder & Project Coordinator

Dávid is a graduated computer scientist and game developer, having 11 years of experience in software development and 3-dimensional modeling for game software. He had been working at Electronic Arts, an industry leader game development company, leading 3D modeling teams of 15-20 people, and participated creating visual material for video games sold in several million

copies worldwide. Dávid is going to be in charge of the initial software development activities, as well as the 3D modeling team. Having competence in both team management and computer aided visual engineering, Dávid will lead the teams, until a suitable production management team is established.

Management Team Gaps

We realize, that we have gaps in the management team, however, these gaps will be filled in the start-up phase with the current team members, until a suitable team of managers will be found. The team is currently in seek of the following managers:

Chief Finance Officer: responsible for the financial management of the company

Marketing Director: manages and implements the future marketing strategies of the company

Personnel Plan

The Personnel Plan presents the projected organizational growth in the first three business years. Expected growth is requiring the hiring of the whole management team until the third business year, while production and sales personnel start work on earlier times.

| Personnel Plan & Payroll | Year 1 | Year 2 | Year 3 |
|---|-----------------|------------------|------------------|
| General & Administrative Personnel | | | |
| CEO | \$60,000 | \$60,000 | \$65,000 |
| CTO | \$0 | \$0 | \$60,000 |
| CFO | \$0 | \$0 | \$65,000 |
| Administrative Staff (1-3) | \$22,000 | \$44,000 | \$66,000 |
| Subtotal | \$82,000 | \$104,000 | \$256,000 |
| Sales & Marketing Personnel | | | |
| Marketing Director | \$0 | \$40,000 | \$44,000 |
| Sales Reps (1-4) | \$0 | \$30,000 | \$120,000 |
| Sales Administrator | \$0 | \$0 | \$24,000 |
| Subtotal | \$0 | \$70,000 | \$188,000 |
| Production Personnel | | | |
| Customer Compliance Mnr. (1-2) | \$60,000 | \$60,000 | \$120,000 |
| Project Coordinator (1-3) | \$55,000 | \$55,000 | \$165,000 |
| 3D Modelers (1-6) | \$30,000 | \$90,000 | \$180,000 |
| Software and Web Developers (2-4) | \$88,000 | \$44,000 | \$66,000 |
| IT & Asset Assistant | \$0 | \$22,000 | \$22,000 |

| | | | |
|------------------|------------------|------------------|------------------|
| Subtotal | \$233,000 | \$271,000 | \$552,000 |
| Number of people | 8 | 12 | 26 |
| Total Payroll | \$293,000 | \$505,000 | \$997,000 |

Strategy & Implementation

The expansion strategy relies on the penetration of the visualization market for cosmetic surgeons, other surgeons and pharmaceutical companies, with different product focus for each market.

The main sales and marketing activities affect the United States in the first two business years, then after the third year on, an Indian expansion is considered by the help of Balázs's foreign connections.

The first business year is mainly about to create the business asset for the later production. In this year, no dedicated sales and marketing team is working, but CEO Dr. McEachern and Dr. Pintér are looking for early partnership opportunities with cosmetic surgeon private practices.

The first year, there is a smaller modeling team, while a stronger web and software development is performed. This is the year, in which the proprietary software is designed and implemented, which is later used to distribute visual content to end users, enabling the protection of the company's intellectual properties from abuse.

In the second business year the software development team is being cut to its half, while the scope of their tasks is moving from implementation to mainly support and maintenance. In this year, a stronger modeling team is being established, and extra administration and IT assistance is being hired. The production kicks off. The sales & marketing team is established, and starts to work on long-term marketing strategies.

The third year is about the US market expansion, with a doubled modeling team, enriched marketing and sales team, and a boosted project coordination and compliance management. The production is aided mainly by the in-house modelers, while the practice of outsourcing is being introduced by the project coordination, to serve on higher demand. During the year, a stronger management team will be established in preparation for expansion to India.

Sales Milestones

The sales strategy will consist of identifying three main customer groups, and addressing them with appropriate products and services.

Cosmetic surgeons are targeted, because as our marketing research shows, their patients tend to reward high-level technology applications, while the need of visualization in patient-doctor communication is vital. The product focus is on personalized face modeling from still images of a face.

Other surgeons are targeted with body and organ simulations for presentational purposes. The number of average orders show only a moderate increase through time, compared to the orders from cosmetic surgeons.

Pharmaceutical companies are addressed with custom 3D simulations for use in creative and PR-material, including TV-ads, or high-quality video animations.

| Customer group | Product Focus | Year 1 Cust. | Year 2 Cust. | Year 3 Cust. | Orders / Cust. |
|---------------------------------|------------------------------------|--------------|--------------|------------------------|----------------|
| Cosmetic surgeons | Adjustable face models from photos | | | | |
| | | | Year 2 | 70-90 | 2 |
| | | | Year 3 | 100-340 | 4 |
| Other surgeons | Organ models & simulations | | | | |
| | | | Year 2 | 30-50 | 4 |
| | | | Year 3 | 80-320 | 6 |
| Pharmaceutical companies | Custom moving 3-D simulations | | | | |
| | | | Year 2 | 2-5 (small contracts) | |
| | | | Year 3 | 8-15 (small contracts) | |

Operational Risks

Communication

One of the venture's key to successful market penetration is the ability to communicate the needs of customers, who are medical practitioners, physicians and surgeons, to the commercial 3D modelers. The main task is to create a workflow, in which the customers can specify their exact needs in their profession's terminology, and that it can be transformed into a technical specification. We see the following operational risks with the customer-production team communication:

- **Imperfect specifications:** the customer's specification is not including every details needed for the in-house professionals to create a commercial 3D modeling specification.
- **In-house communication flaws:** the "multi-hop" model for propagating client specifications holds the risk of the distortion of understanding the actual needs. This may lead to in-house stress between the customer compliance and the project coordination teams.

Software tool development

The end users of the 3D visualizations are using the company's proprietary software to open, view, transform and play the model and animations. This tool is a crucial part of the user interaction, as this is the primary interface through which the customers meet their purchased product. We see the following risks:

- **Delay of software production:** as the proprietary software is manufactured in-house, any delays can affect the time of actual production kick-off.
- **Dependency from standards:** the software renders the 3D models from industry standard file formats, as well as the output formats, it can produce, eg. video,

presentation, etc. Too frequent or unexpected changes in these standards may block the shipping of contents on time.

- **Abuses affecting intellectual property:** the 3D products are shipped as files, which are encrypted, and bound to the actual user account of the client. However, as with any software product, cracking or reverse engineering may result in the ability to spread a user's private key, and make purchased goods available to unauthorized users.

Premises & Equipments

The venture needs a rented office facility for the production, marketing, administrative and management staff. The office should be chosen to be expandable, in order to maintain the expected expansion. There needs to be enough space for 8-26 employees in the first three business years. The company needs appropriate rooms for customer meetings, and for in-house IT equipment.

Asset Management System

We need a system maintaining the database of the 3D models that our modelers or third party contractors create for customer orders.

The server will be hosted on **IBM xServe** hardware, and the database management is performed by **Alienbrain Asset Management Software** for visual artists.

Modeling and rendering software & workstations

For every in-house modeler there must be a workstation and licensed 3D modeling software available for production. The workstations must fulfill the hardware needs for 3D modeling.

The modeling workstations are **HP Workstations**, and the production software is **Autodesk 3ds Max Design**.

Finances

Start-up costs

| Start-up Costs | |
|--|-----------------|
| Premises | |
| Rent | \$20,000 |
| Equipments | |
| Asset Management System (Aleinbrain) | \$12,000 |
| Database and Render Server HWs (2x IBM xServe) | \$13,200 |
| Modeling Workstation HW (HP) | \$3,000 |
| Modeling SW (Autodesk 3ds Max) | \$3,500 |
| Developer laptops (4) | \$6,000 |
| Developer SW (4) | \$2,000 |
| Other IT + Office Eq. + Stationery | \$25,000 |
| Total | \$84,700 |

Projected profit & loss

| Projected Profit & Loss | Year 1 | Year 2 | Year 3 |
|----------------------------|-----------|-----------|-------------|
| Sales | \$0 | \$182,000 | \$1,504,000 |
| Third-party Labor Costs | \$0 | \$14,560 | \$150,400 |
| Gross Margin | \$0 | \$167,440 | \$1,306,050 |
| Gross Margin % | 0% | 92% | 90% |
| Expenses | | | |
| Payroll | \$293,000 | \$505,000 | \$997,000 |
| Sales & Marketing Expenses | \$0 | \$120,000 | \$120,000 |
| Equipment | \$47,200 | \$6,000 | \$9,000 |
| Licenses | \$19,000 | \$7,000 | \$10,500 |
| Rent | \$20,000 | \$20,000 | \$20,000 |

| | | | |
|----------------------------------|--------------------|--------------------|--------------------|
| Payroll Taxes | \$43,950 | \$75,750 | \$149,550 |
| Total Operating Expenses | \$423,150 | \$733,750 | \$1,306,050 |
| Profit Before Interest and Taxes | (\$389,250) | (\$566,310) | \$47,550 |
| Tax Incurred | \$0 | \$0 | \$14,265 |
| Net Profit | (\$389,250) | (\$566,310) | \$33,285 |
| Net Profit/Sales | - | -311% | 2% |

Investment needs

Based on the profit and loss projection above, the venture needs capital injection for the first three business years.

The operational expenditures in the first 3 years make a total of \$2,462,950.

A capital investment of **\$2.5 million** is desired to cover the expenses and to run the business in the start-up phase.

Exit strategy

- Our planned exit strategy is a management buyout after several years of operation. Our professional management team knows the real price of the company because they have been intimately involved with the details of building the company from its inception.
 - We are willing to pay some amount over the real market price in order to retain management.
 - With this exit strategy, investors can rest assured that their investment will result in a threefold return by no later than the end of year five.
 - Moreover, with this strategy in mind, the current management have a vested interest in making the business as smart and profitable as possible.
- By the end of year three we project a 2% profit earning. Although during the following years this profit is expected to increase dramatically, this could end up not being enough for financing a complete buyout. Therefore, we may seek the help of private equity investors as well. They will have some minority shares in the business but won't represent a deciding constituency. With this extra capital, the buyout will be ensured. Thus, VC investors will see a return of \$7.5 million (on an initial investment of \$2.5 million) by the end of year five.