

# VivaciousMe

The first portable human Potential Energy measuring system.



Better Energy Decisions = Better Life Decisions.

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## I. PRODUCT DESCRIPTION

*...Especially for people who aspire to the highest levels of physical wellness and emotional satisfaction, VivaciousMe is the first customizable, mobile biomedical device that optimizes an individual's biological resource utilization decision-making process. VivaciousMe continuously monitor's energy levels making real time energy use decisions achievable. This is possible through the latest in nanotechnology, understanding of biological processes, and the power of wireless technology. You can finally achieve coherency between your body's needs and capacities and the energy demands of any desired activity. To leave energy quantification out of the activity commitment decision making process would be just as erroneous as leaving money out of the financial decision making process. The is a quantum leap in self awareness support enabling humans to finally make healthy energy based decisions which is critical in the self determination process. The primary cause of all disease processes and unhealthy biological adaptation is inadequate energy reserves and utilization. Better Energy Decisions = Better Life Decisions!*

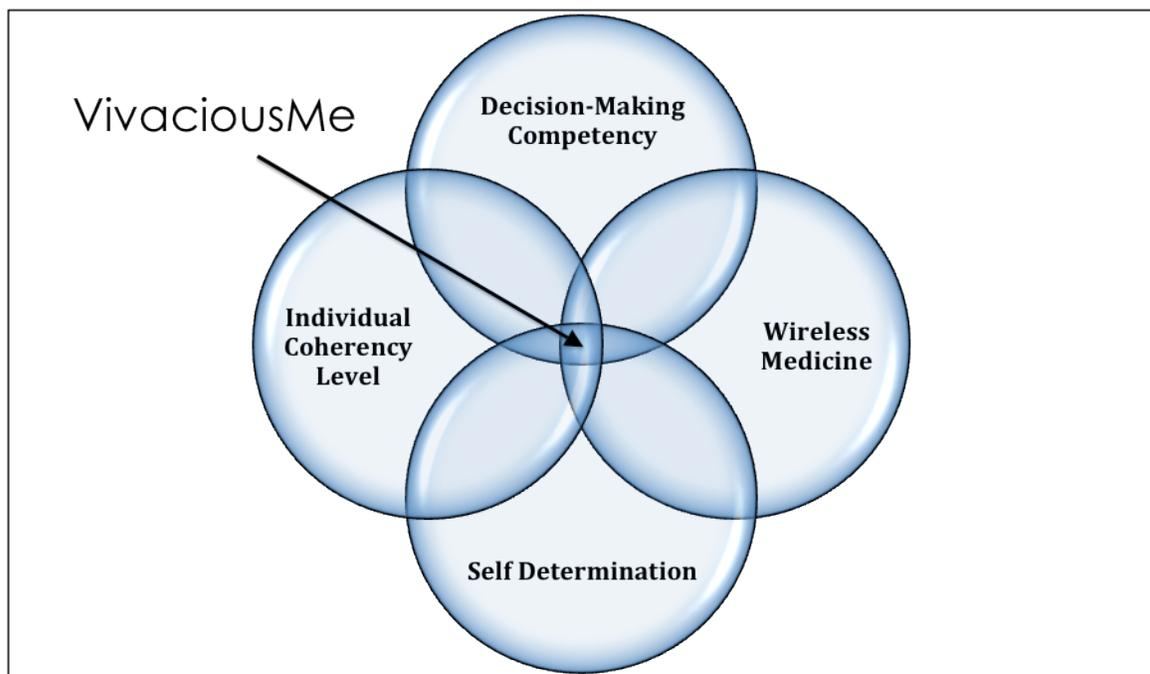


Figure 1: VivaciousMe, operating at the intersection of decision-making competency, wireless medicine, self-determination theory and an individual's coherency level.

A well-designed life is the result of a series of informed decisions and choices that promote and demand coherency between the mind and body. In order to achieve this, we need additional expertise to act in our own best interest over the long-term while meeting short term commitments that are so characteristic of busy modern day living. This requires more evolved resource utilization thinking and capacity. The information you need is how much energy you have or can create to achieve a desired goal or outcome. Every activity demands energy use. The primary focus of self awareness devices in the past has been stress reduction which is after the fact. This device puts proactive and preemptive decision making regarding intelligent resource commitment in the hands of the average person. This is not something a doctor can tell you. This is the true definition of preventative self care. The atypical stress reactions from frustration to physical discomfort are due to overutilization of the body's limited physical resources. The road to personal fulfillment is powered by the autonomy to author your own self determination narrative which always includes resource use determination. It is a core competency in effectively accomplishing your goals. Self-determination requires the knowledge of what level of physical vitality and mental acuity is needed to achieve any goal effectively. To achieve self-determination and satisfaction, multiple goal priorities must be met in our modern complex world. Multiple goals mean multiple demands on biological resources. Most people determine what they will do by what they think they can do instead of what they are capable of. Through better energy management, the individual can avoid the negative consequences of excessive energy utilization to achieve a certain goal while making energy available for other higher priorities. This is the first effective tool that deals with the real source of stress burnout and loss of productivity and personal satisfaction, overutilization of energy. Any capability determination requires an empirical starting point, primarily a database of knowledge about that phenomenon. Energy is no different. Not only does this device enable the user to determine their energy states in real time but also constructs over time their own personal database of energy use based on their own activities. Differences in metabolic function and rate can cause huge variations in energy use with the same activity from person to person. This enables people to make energy determinations based on their specific physiology and activity based energy demands. Internally driven motivation to initiate and maintain proactive, purposeful and sustainable decision-making requires better resource determination and management. The process of internalizing and integrating life affirming choices takes the cognition of the resources required. People need the physical vitality to carry out all choices for the duration that is required or failure will occur.

The modern conversation surrounding “quality of life” is no longer based on collecting extrinsic symbols, but rather a desire for consumer’s to feel secure in their lifestyle choices. Self-worth is the new cultural currency and decision-making skills the requisite capital. Ironically, while the importance of strategic decision-making is increasing, advances in technology continue to complicate the process. With access to more data and less time to think through your options, technology is compromising the quality of independent decisions. As consumers search for tools to capitalize on the possibilities inherent to information technology, they are also seeking a decision-making matrix to guide them through their choices. Consumers need a bridge between their “Google Searches” and their personal goals. They are actively seeking a customizable communication device that facilitates their decision-making capacity while asserting their personal vision, a human-to-machine translator that optimizes individual self-worth.

The cure to this cultural “dis-ease” is now possible with the advancements made in wireless medicine. As we stand at the intersection of health and computing, nanotechnology and biomedical sensors offer us wearable, interactive devices with multiple sensors that can measure and track our physiological and emotional vigor while alerting us to stages of dissonance. This measure of an individual’s coherency is a vital ingredient in the decision-making process. Whether you label it emotional endurance, improved mental performance, increased vitality or possessing an active memory, it is all the same dynamic biomedically, a synchronized state of relaxation and revitalization. And, by monitoring and managing an individual’s coherency baseline, their energy level is elevated, their emotional resiliency is strengthened and their ability to think and act clearly engaged – all core inputs into quality decision-making.

We now have the capacity to achieve personal goals while optimizing our health. With a virtual personal assistant with us throughout the day to help us make the best choice possible at any given moment and an interactive coherency coach at home to review our performance and exercise our capabilities, we now have a continuous decision-making partner that enables our best life possible. We now have VivaciousMe.

VivaciousMe is a mobile, distributive biomedical device that measures physiological energy capacity via skin conductance, a form of electro-dermal activity that changes during states such as excitement, attention, anxiety, boredom and relaxation. Its unique ability to observe, record and inform wearers of their state of energy coherence, that space where an individual’s mental, emotional and physical fields are congruent and their heart, brain and nervous system are operating in a state of harmony, is the product’s core strength. It’s capacity to teach an individual how to achieve and maintain a state of energetic stability and vitality is the result of an accessible and portable metric

monitoring interface, a customizable easy-to-use software package that reads and records the sensors daily input and a community of experienced life coaches and a social network of supportive participants. Owners of VivaciousMe are posed to experience improved health, stamina and mental clarity by way of the product's convenience, accuracy, utility and reliability. These credible product attributes allow VivaciousMe to promote self-knowledge and enhance a person's competence and capability to proactively manage their overall wellness through energy management. The product also offers effortless operation, comfort, an understated wearability and a washable band to enhance a seamless integration into a user's daily routine. Simply wearing the VivaciousMe wristband, a user has access to an event button to mark times of significant experiences, a clock to easily synchronize with other systems, a three-dimensional motion sensor to indicate when and how they moved, a thermometer to control for environmental influences and a computer chip that can save up to 12-weeks of data before downloading the information onto a PC or MAC software package with a USB cord. Collectively, this synergist set of attributes, features and benefits enable the owner of a VivaciousMe to build decision-making competency through self-directed actions, confidence building competency and increased social collaboration.

### **Scenarios**

- Patricia is a 45-year-old working mother of two. She loves her family and enjoys her role as the primary “culture creator” of the family. Yet she also enjoys her career as a product manager and often finds herself stretched between her professional obligations and her family commitments. Unable to meet the demands of every day life has left Patricia tired and irritable and her relationship with her children and husband in peril. Her daily multi-vitamin has proven ineffective and she is searching for a more effective, proactive solution to restoring her “Joie de Vivre.”
- Gordon is a 55-year-old high-powered Wall Street executive. His passion for winning and his dedication to his job have historically sustained his self-worth and provided for a luxurious life-style. However, the economic climate has changed and job stability is no longer guaranteed. With financial regulation looming, global competition increasing and an annual supply of motivated MBA students vying for his job, Gordon is having trouble concentrating and his decision-making has suffered. Gordon is scared that his best days are behind him and fears for his career. Knowing that technology improves his professional achievement in the office, Gordon is searching for a medical technology to purposely improve his personal performance, a scientifically proven

solution to restore his imagination and encourage his “Inner Einstein.” Gordon wants his competitive “edge” back and is motivated to find a product that delivers this promise.

- Becky is a 25-year-old full-time graduate student at Georgetown University. Invigorated with possibilities and enthusiastic for her future, Becky is committed to her educational development. However, now that her first semester of school has begun Becky is beginning to experience the inevitable pressure of weekly assignments, research papers and group projects. Sleep deprivation and daily anxiety attacks have injured Becky’s physical health and led her to question her mental capabilities. Fed up with hourly doses of her favorite 5-hour Energy Drink, Becky is over caffeinated and begging for a more sustainable solution, a product that incorporates her individual history, anticipates her future needs and insures her on-going cognitive capabilities.

### **Shared Needs**

VivaciousMe is for over-committed individuals seeking to restore personal balance, vitality and emotional wellness. These consumers come in many shapes and sizes, but are united in their desire to relieve stress, abolish fatigue and improve mental clarity; it is a core market portrayed by lifestyles and a shared passion for life. It is a collection of individuals committed to improving their daily physical, mental and emotional states, a core group of people seeking coherence and competent in their decision-making capacity. Driven by the personal belief that there is a solution to every problem, these consumers seek autonomy, competency and relatedness in their daily lives, and more specifically, in their decision-making capacity.

### **Differentiation Approaches**

VivaciousMe is designed to be an innovator in the emerging wireless medicine category, a sophisticated instrument that bridges the accessibility and affordability of the consumer products industry with the distinction and prominence of the pharmaceutical profession. VivaciousMe is posed to be the industry leader in promoting an individual’s decision-making capabilities through its advanced technology and consumer-friendly features. A tool that promotes self-determination and sustained positive behavioral change, VivaciousMe will break barriers and reframe the personal wellness market. Consumers will now become the primary architects and healthcare providers will act as co-producers and coaches. The future of medicine is in self-management and VivaciousMe is designed to lead the charge.

## **Components**

The fact that VivaciousMe is a pioneer in the rapidly expanded sphere of wireless medicine and, given its vision to bridge the consumer with the healthcare profession, a great deal of preliminary research was conducted; literature was reviewed, expert advisors were recruited and legislative regulations considered. Additionally, significant analysis was conducted to understand the current life enhancing strategies in place and where there were opportunities for improvement. As the external environment came into view, it helped shape the design of VivaciousMe.

## **Benefits**

- Technology based on scientific data and quantifiable results that validate claims of physiological energy metrics and concurrent central nervous system measurements<sup>1</sup>
- Coherency measurements and bands of synchronization are proven statistics in the reduction of stressors and improvements in energy levels<sup>2</sup>
- Wireless and wearable wristband that is mobile, comfortable, unobtrusive / wearable and washable

## **Features**

- Metric monitoring interface that displays a dashboard of instantaneous and up-to-the-minute physical state tracking
- Onboard event button to mark times of significant experiences
- Onboard clock to synchronize data with other tracking / organizing systems
- A 3-D motion sensor that captures when and how you move
- A thermometer to control for environmental influences (*e.g.*, extreme temperatures impact stress / coherency levels, raise blood pressure and heart rate)
- Ability to log and store 12-weeks of data for long-term data collection
- Upload data and charge battery with your personal computer using a simple USB cable
- Easy to use software lets you visualize, align, compare and analyze your data
- A social network and life coaching opportunities enable total integration and continuous personal improvements

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<sup>1</sup> Poh, Ming-Zher. "A Wearable Sensor for Unobtrusive, Long-Term Assessment of Electrodermal Activity." IEEE Transactions on Biomedical Engineering. Vol. 57. No 5. May 2010. <http://affect.media.mit.edu/pdfs/10.Poh-et-al-TBME-EDA-tests.pdf>

<sup>2</sup> emWave Personal Stress Relief System website. "The Science Behind emWave and Heart Rhythms." <http://www.heartmathstore.com/cgi-bin/category.cgi?category=science>.

### ***Core Attributes (Add chart from SurveyMonkey)***

- Convenience
- Accuracy
- Utility / Usefulness
- Reliability

Commercializing the launch of VivaciousMe involves a multi-disciplinary approach and a coordinated team effort. It requires significant planning and a dedication to long-term success. Building the capacity to compete is instrumental to the sustained success of any new product.

### **Implementation Requirements**

After examining the implementation requirements associated with VivaciousMe and learning more about the political, economic, socio-cultural and technological realities, I went back and studied my product's strengths, weaknesses, opportunities and threats. Next, I reviewed the market research feedback I received during the concept-testing phase of the project. Collectively, VivaciousMe is a viable and desirable product positioned within an industry with exponential growth forecasts, but it faces significant hurdles within the federal regulatory arena and the capital markets. With the FCC and the FDA just beginning to coordinate their efforts, the wireless medicine industry is vulnerable to long-delays and costly legal fees. The regulatory uncertainty is also keeping investors on the sidelines, scared to commit funds to a project that may take years to payout.

In order to solve for these external barriers, I evaluated two options based on how each would impact the long-term success of VivaciousMe: (1) Launch as an independent company with the understanding that it may take a few extra years and a larger financial commitment to get the product into market or (2) Form a strategic alliance with a credible institution with similar brand values and a shared vision for the future of medicine. The decision on my part was clear – form a strategic alliance. Not only would I receive instant credibility, but more important to the implementation phase, I would have access to an established value chain. I could address manufacturing hurdles and distribution challenges, leverage national sales and marketing teams currently in place and establish a bond with consumers based on shared equity. The objective of a strategic alliance is not, however, only to make the life of an entrepreneur easier; the bigger benefit is that your product is now better positioned for sustained success. A strategic alliance, versus a joint venture, allows an entrepreneur to maintain control over her intellectual property and long-term vision while summoning the core strengths of another organization, a value-creating equation for my initiative.

It is important to note here that despite an entrepreneur acknowledging the calculated value of a strategic alliance, she must still convince her partner of the opportunity. She must still sell her idea as though she were presenting to a room of venture capital investors or a bank loan officer. In the end, she is still asking for her partner to believe in her vision, her plan and her projected financial return; she is asking for an investment in her product plan and an on-going public relationship. This commitment requires a dedicated focus on the best-fit candidates and the ranking of their preference.

In the case of VivaciousMe, the best-fit strategic alliance partner is Johnson & Johnson. Beginning with the fact that the former worldwide chairman of Johnson & Johnson's comprehensive care group, Don Casey, has recently been appointed the first chief executive officer at the country's premier wireless medicine organization, The West Wireless Health Institute.<sup>3</sup> The relational bridge between the wireless medicine market and a global consumer health care company with significant commitments in the medical devices and diagnostics segment and the pharmaceutical industry is considerable. In addition, the management approach at Johnson & Johnson encourages innovation and values a decentralized management structure. They also have an internal innovation fund established to stay at the leading edge of transforming the health and well being of consumers worldwide.<sup>4</sup>

With a seat at the national debate over the future of healthcare in the United States, immediate access to the capital markets and influence over the forthcoming regulatory policies, a strategic alliance with Johnson & Johnson would address the key external weaknesses in the VivaciousMe plan. Additionally, with access the Johnson & Johnson's manufacturing and distribution systems and their regional sales and marketing teams, VivaciousMe can address its core internal weaknesses. A production facility equipped with the latest technology, a national distribution system instantly available and, importantly access to food/drug/mass retailers who will need to be convinced to stock VivaciousMe at retail price that is higher than their average stock item. There is also the opportunity to leverage Johnson & Johnson's current website, on-line product ordering procedures and the sharing of innovation / research and development.

Taking in aggregate, a strategic alliance with Johnson & Johnson is a core pillar within the VivaciousMe launch plan. This means that the core benefits for Johnson & Johnson must be fully evaluated and presented in the final proposal to senior management. For example, by aligning with VivaciousMe Johnson & Johnson gets immediate access to intellectual property designed for the

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<sup>3</sup> Dolan, Brian. "Johnson & Johnson Vet Take Helm at WWHI." March 9, 2010. <http://mobihealthnews.com/6869/johnson-johnson-vet-takes-helm-at-wwhi/>

<sup>4</sup> Johnson & Johnson website. <http://www.jnj.com/connect/?flash=true>

future of medicine. Additionally, they receive a roadmap to future portfolio growth in their current divisions as well as opportunities to launch entirely new categories.

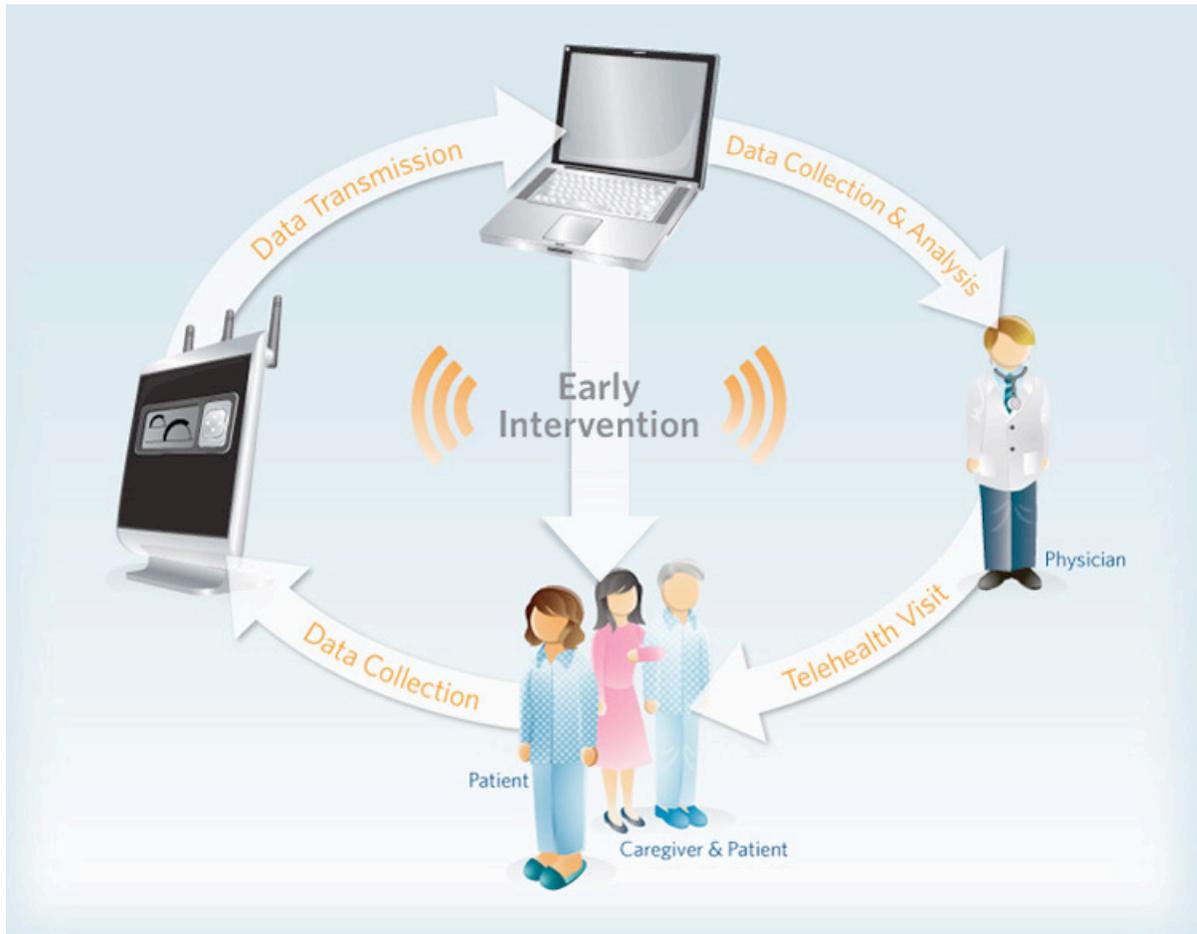
Concurrent to the formation of the proposed strategic alliance with Johnson & Johnson, there are launch tactics that need to be reviewed, designed and executed to bring VivaciousMe to market. Including:

- Hiring and establishing a team of dedicated software developers to work on future innovation. The initial plan is to hire (4) developers to work on physiological software dedicated to physical metrics, (4) developers to work on psychological software focused on emotional / sympathetic nervous system metrics and (4) developers to begin working on advancing the opportunity in Affective Computing, with particular attention paid to automated facial expression recognition. There will be (1) general manager and (1) administrative assistant assigned to this team to monitor progress and facilitate collaboration.
- Establishing a Cloud Computing Network to coordinate the wireless data collection promised by the VivaciousMe brand.
- Developing a VivaciousMe website and link back to Johnson & Johnson's web presence. This website will house key information about the brand and will also be the core meeting point for future social networking programs while inviting users to seek expert advice from a group of life coaches.
- A national communication plan, that includes advertising, public relations, packaging design, a social media strategy and the development of a mobile application must be developed and funded.
- A core executive team for VivaciousMe must be hired and committed to the process and the product vision.
- A dedicated regional sales and marketing team must be hired and trained, and importantly, integrated into the Johnson & Johnson matrix.
- Similarly, the manufacturing and distribution plan must be developed, approved and constructed in partnership with Johnson & Johnson.
- Legal items like patent and trademark filings must be accomplished and an on-going legal retainer and hourly fees must be budgeted.

In total, the implementation phase will take a least a year to accomplish and an investment estimated at \$40MM.

## II. MARKET ANALYSIS

### Wireless Medicine Market Description



Healthcare today is a machine, a vertically integrated juggernaut that navigates patients through various providers, pharmaceutical solutions and reimbursement assaults. Patients spend hours trying to formalize the best healthcare plan for their families. Despite public statements regarding the importance of self-care and wellness prevention, little has been accomplished on the political and regulatory fronts to build an effective framework of support. Patients are left searching for alternatives and hoping for solutions while the healthcare industry continues to grow.

That is until now. With the proliferation of the Internet, cloud computing, cell phones and advances in personalized healthcare, the patient is now in charge. We are at the intersection of health and computing and the time is perfect for consumer-driven healthcare, a reframed health industry where self-management governs and healthcare providers act as co-producers in an individual's

wellness plan. Advances in computer and medical technologies now offer the democratization of healthcare, putting individual wellness back into the hands of the patient. As innovative biomedical technologies begin to mimic existing biomechanics in the body, patients are able to quantify and display relevant information and consciously take preemptive action. By leveraging the miniaturization / nanotechnology and biomedical sensor capabilities, consumers are now able to topologically transfer self-determination of personal health from machines and doctors to a personal wearable biomedical device. Healthcare is now, literally, in the hands of the patient.

This is good news given recent consumer trend reports that detail how good health is now as important to some as parking their 6-figure sports car in front of their McMansion. Going forward, consumers are expected to demand products that improve their quality of life, rejecting the traditional model of prescriptions and disease management. The future will present a growing number of monitoring technologies and an increasing emphasis will be placed on portability and wearable product features. This optimistic outlook involves the emergence of the smartphone and social networking sites to empower consumers with a compassionate and informed audience. The consumerization of healthcare will mean that more consumers will “choose products with embedded health benefits that are actually well designed, desirable, accessible, fun, tasty, interesting or storied.”<sup>5</sup>

### **Industry Metrics**

According to the CITA, the International Association for the Wireless Telecommunications Industry, the current wireless home health market is \$304 million and projected sales are expected to top \$4.4 billion in 2013, with estimated annual growth rates of 96% in 2010, 126% in 2011, 95% in 2012 and 68% in 2013.<sup>6</sup>

ABI Research, a market intelligence company specializing in global connectivity and emerging technology, estimates that the market for wearable wireless sensors will grow to more than 400 million devices by 2014.<sup>7</sup>

Finally, Berg Insights estimates the market size for home health monitoring of chronic diseases at \$11 billion for both the U.K. and U.S. This market is expected to grow at 10% per year

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<sup>5</sup> Trendwatching.com. “Wellthy.” December 2010. <http://trendwatching.com/briefing/#wellthy>

<sup>6</sup> “Wireless Health: State of the Industry 2009 Year End Report.” December 16, 2009. Pg. 2. <http://mobihealthnews.com/wp-content/Reports/2009StateoftheIndustry.pdf>

<sup>7</sup> IBID.

supporting some 300 million people in Europe and the U.S. with at least one chronic disease that may benefit from home monitoring.<sup>8</sup>

No matter how you view it, the wireless health industry is a global business and expected to grow exponentially over the next decade and will adjust its expected “global” market share accordingly.

### **Consumer Demand:**

“Some 78 percent of the US is interested in mobile health solutions, according to a survey conducted by CTIA and Harris Interactive. About 15 percent of the US is extremely or very interested in learning more about mobile health solutions, according to the survey. Interestingly, 19 percent of respondents said they would upgrade their current mobile phone plan to get access to wireless health services, while about 11 percent said they would even switch carriers to get access. Why were they so eager? About 40 percent said mobile health would supplement the medical care they receive from their doctor; 23 percent believe mobile health services could replace doctor visits altogether. More than half of respondents said mobile health would benefit rural populations the most; just under half of respondents believed people with chronic conditions would benefit the most; 41 percent said that retired and or Medicare patients would benefit the most from mobile health. Finally, 38 percent said caregivers would gain the most from mobile health services.

PricewaterhouseCoopers conducted a similar survey that found 73 percent of consumers would use biometric electronic remote monitoring services to track their chronic condition or vital signs. The figure closely mirrors the near three-quarters of the US population interested in mobile health.”<sup>9</sup>

### **Consumer Demographics:**

“Americans as a group are getting older. Today, about 12 percent of the US is 65 years old or older, but by 2030 about 20 percent of the US population will be 65 or older.

Aging aside, the US population as a whole is not fit. The Center for Disease Control said that the average American is about 23 pounds overweight and consumers eat about 250 more calories a day than the average American did two or three decades ago.

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<sup>8</sup> IBID.

<sup>9</sup> “Wireless Health: State of the Industry 2009 Year End Report.” December 16, 2009. Pg. 2-3. <http://mobihealthnews.com/wp-content/Reports/2009StateoftheIndustry.pdf>

And, according to the West Wireless Health Institute 5 million Americans are affected by Alzheimers; 20 million are affected by asthma; 3 million are affected by breast cancer; 10 million are affected by COPD; 19 million are affected by depression; 21 million are affected by diabetes; 5 million are affected by heart failure; 74 million are affected by hypertension; 80 million are affected by obesity; 15 million are affected by sleep disorders.

Our overburdened healthcare system cannot help all these groups using the old methods, but wireless remote monitoring tools could help prevent and/or manage these conditions and others. There are many factors that lead to disease, but up to 40 percent of all chronic conditions are attributable to our behavior. Wireless health solutions can monitor, analyze, encourage and ultimately change behavior.”<sup>10</sup>

### **Wireless Medicine Market Overview**

There is little doubt that the future health of the wireless medicine industry is promising. It is an industry on the verge of exploding, with consumer need driving the projections. However, prior to using these optimistic assumptions, it is wise to compare them to other recent emerging technological achievements. How do these forecasts compare to those found in the mobile phone market, or the game console category? What about the launch and adoption of the iPhone and/or iPad or the social networking phenomenon reflected in FaceBook and GroupOn?

- According to Gartner Research, worldwide mobile phone sales totaled 315 million units, up 17% in 1Q 2010 from the same period a year ago. Smartphone sales reached \$54.3 million, an increase of 48.7%.<sup>11</sup>
- At \$199 retail, the Apple iPhone 4 received 600K preorders and was projected to sell 1-1.5 million units in its first three days of sales.<sup>12</sup>
- In June of 2007, Apple launched its first iPhone and sold 270,000 units in the first 30 hours. It took three months to reach the 1 million-unit mark. This success is remarkable when you add in the retail price of \$599 and the fact that it was only available through AT&T. A year later, Apple

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<sup>10</sup> “Wireless Health: State of the Industry 2009 Year End Report.” December 16, 2009. Pg. 4. <http://mobihealthnews.com/wp-content/Reports/2009StateoftheIndustry.pdf>

<sup>11</sup> “Gartner Says Worldwide Mobile Phone Sales Grew 17 Per Cent in First Quarter 2010.” Gartner Research. <http://www.gartner.com/it/page.jsp?id=1372013>

<sup>12</sup> Kane Watani, Yukari and Osawa, Juro. “iPhone 4 Draws Brisk Sales, Antenna Gripes.” *The Wall Street Journal*. June 24, 2010. <http://online.wsj.com/article/SB10001424052748704629804575325661775151320.html>

released the iPhone 3GS and it took only 3 days to reach the seven-figure mark. In, 2010 estimates for the iPad (retailing between \$500-\$1000) are pegged between 5-10 million units.<sup>13</sup>

- According to Nintendo sales figures, total Wii sales in the U.S. have reached 30 million units since its launch in November 2006 and topped 73 million units worldwide. Nintendo also says that this milestone makes the Wii “the fastest-selling console in the history of the industry.”<sup>14</sup> Notably, Nintendo has already sold 2.5 million Kinect gaming sensors since November 4<sup>th</sup>, 2010. Even at \$150 retail, this means consumers are buying 100,000 Kinect sensors a day.<sup>15</sup>
- FaceBook, the world’s largest social networking site, is expected to generate between \$1 billion and \$1.1 billion in revenue in 2010 with over 500 million global users.<sup>16</sup>
- GroupOn, the web-powered social buying service, is growing at exponential rates and expected to end 2010 with 25 million subscribers and \$400 million in gross sales. Available in 29 countries, GroupOn was recently valued at \$6 billion by Google.<sup>17</sup>

In summary, it doesn’t matter whether the retail price is \$199 or \$1000, if a product is designed to fit a consumer need and incorporated into a comprehensive marketing plan, it will sell and sell quickly. Industry demand will buoy an entire category’s sales, but it is still an individual product’s ability to fulfill a consumer need that guarantees sustained profitability and market share leadership.

VivaciousMe is expected to participate in an emerging market with aggressive sales estimates, but with sound assumptions grounding them and a consumer-needs driven product design, VivaciousMe is projected to add financial value to all its stakeholders.

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<sup>13</sup> Dugdale, Addy. “iPad’s Sales Figures Better than iPhone’s.” *Fast Company*. April 5, 2010. <http://www.fastcompany.com/1607098/apple-sales-figures-ipad-compare-iphone>

<sup>14</sup> “U.S. Wii Sales Reach 30 Million. Nintendo further establishes Wii as the fastest-selling console.” August 10, 2010. <http://wii.ign.com/articles/111/1111450p1.html>

<sup>15</sup> Patterson, Ben. “Is Kinect the new Wii this holiday season?” November 30, 2010. Yahoo News. [http://news.yahoo.com/s/yblog\\_technews/20101130/tc\\_yblog\\_technews/is-kinect-the-new-wii-this-holiday-season](http://news.yahoo.com/s/yblog_technews/20101130/tc_yblog_technews/is-kinect-the-new-wii-this-holiday-season)

<sup>16</sup> Pharr, Ben. “FaceBook Could Surpass \$1 Billion in Revenue this Year.” Business.com. 2010. <http://mashable.com/2010/03/02/facebook-could-surpass-1-billion-in-revenue-this-year/>

<sup>17</sup> Ingram, Mathew. “GroupOn Close to Half a Billion Dollars in Sales.” August 26, 2010. <http://gigaom.com/2010/08/26/groupon-close-to-half-a-billion-dollars-in-sales/>

### **Year 0 Sizing – Global Wireless Medicine Market**

According to the CITA, the International Association for the Wireless Telecommunications Industry, the current wireless home health market is expected to sell 36 million units and generate \$304 million<sup>18</sup>

#### ***Global Wireless Medicine Market\****

	2010
Projected Unit Sales	36,000,000
Projected Unit Revenue	\$304,000,000

*\*Source: CITS, the International Association for the Wireless Telecommunications Industry. "Wireless Health: State of the Industry 2009 Year End Report." December 16, 2009. Pg. 2. <http://mobihealthnews.com/wp-content/Reports/2009StateoftheIndustry.pdf>*

With CITA acting as the industry standard and the use of its forecasts in the “Wireless Health: State of the Industry 2009 Year End Report,” VivaciousMe recognizes these sales estimates and will adjust its expected “global” market share accordingly.

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<sup>18</sup> “Wireless Health: State of the Industry 2009 Year End Report.” December 16, 2009. Pg. 2. <http://mobihealthnews.com/wp-content/Reports/2009StateoftheIndustry.pdf>

### **III. Target Market and Value Proposition**

#### **Target Markets Defined**

VivaciousMe will be marketed toward three primary segments: working mothers, baby boomer men and adult students. Connected through a shared / homogeneous psychographic need state to restore personal balance, vitality and emotional wellness and an intellectual need to improve their decision-making capacity, these consumers remain distinct in their personal characteristics, values and daily behaviors. It will be these heterogeneous target distinctions that inform the final product design and marketing plan, a universal message with individual relevance.

#### ***Segment 1: Working Mothers – Seeking Wellness and Emotional Endurance***

As a married woman, aged 35-49, with young children at home, this college-educated suburbanite has a multitude of demands on her time. She is constantly trying to juggle her different roles and responsibilities, a balancing act that requires continual planning and results in less time for herself – a personal compromise she is very conscious of. Her challenge to be the best mom, friend, co-worker and wife has left her disconnected from her own sense of self. She wants to add some spontaneity into her daily routine and regain that energy and vitality she once had. She sees herself as capable, knowledgeable and eager to move forward in life, but she is looking for something to help her get started. As she's aged, she's begun to recognize that the authentic things in life are of far greater value and her focus has shifted from material possessions to "feeling fulfilled in life. She values honesty and emotional integrity and looks forward to everyday small moments of enjoyment, from cooking something special for dinner to reading a good book, this woman wants to enjoy her family and friends, her work and importantly, her life.

#### ***How Working Mothers will Utilize VivaciousMe:***

- Working Moms wear VivaciousMe to track their energetic response to the negative effects of stress, anxiety, fatigue and feelings of hopelessness
- Utilizing the customizable, easy-to-use software and access to a community of experienced life coaches, Working Moms will learn to optimize their energy endurance, replacing the body's negative responses to life's challenges with improved health, stamina and well-being
- Additional support will be found in VivaciousMe's social networking activities

### ***Segment 2: Working Baby Boomer Men – Seeking Improved Performance and Vitality***

As a married man, aged 50-64, with teenagers at home, this MBA-educated urban dweller has spent the majority of his adult life collecting professional achievements. His drive to succeed and his commitment to victory have mockingly left him feeling vulnerable. He fears the next generation's ambition and the fragility of the U.S. economy. If only his performance and vitality matched his sense of self. This is a man who likes to make his own rules, be his own person and have it all. He sees himself as an active participant in all that life has to offer, and most likely has been a coach to his son's baseball team, played in a company-sponsored basketball league and spent his vacations abroad. His is a man who sees himself as carefree adventurer who lives a spirited lifestyle. In reality, the professional pressures of his job have left him deficient in the two qualities he admires most: creativity and risk-taking.

#### ***How Working Baby Boomer Men will Utilize VivaciousMe***

- Professionals in high-pressure work environments wear VivaciousMe to track their energy use throughout the day. They identify peak energy utilization situations and measure the effectiveness of methods to reduce overuse of energy and therefore concurrent stress.
- Working with the customizable, easy-to-use software and a community of experienced life coaches, Professional Males will learn to advance their decision making capabilities, improve their creativity and improve their job performance and satisfaction

### ***Segment 3: Adult Students – Seeking a Boost in Mental Clarity and Memory***

As an adult graduate student, aged 25-35, this single woman lives in the city and is committed to her education. She is a mélange of strength, confidence and intelligence, topped off with a zestful appetite for life. Her interests include fitness and volunteering at her local homeless shelter. Friends are at the crux of her life, helping her understand herself better, establish her priorities and begin to find her place in life. One thing is for sure; she is strongly dedicated to making the world a better place and is always looking for ways to contribute in her everyday activities. This upbeat, forward-looking woman is suddenly feeling anxious and insecure. The pressures of graduate school are mounting and her daily dose of optimism is becoming harder and harder to access. As the caffeine increases and her sleep decreases, this young woman is crying out for mental clarity and improved memory capability.

***How Adult Students will Utilize VivaciousMe:***

- Adult Students will wear VivaciousMe to track their physiological energy response to stress and monitor those times when they are alert and focused versus when they are mentally disengaged and bored
- Working with the customizable, easy-to-use software and a community of experienced educators, Adult Students will learn to advance their educational experience through improved engagement on the cognitive and emotional level because of better energy management
- Adult Students will active participates in VivaciousMe's social networking activities, providing on-going insights and shared learnings with their peers

With the target market defined and quantified and the consumer segments identified and illustrated, it is now time to produce a 5-year volume and market share forecast for VivaciousMe.

### *VivaciousMe Market Share and Five-Year Volume Forecast*

	2010	2011	2012	2013	2014	2015
<b>Global Market Units<sup>1</sup></b>	<b>36,000,000</b>	<b>70,560,000</b>	<b>159,465,600</b>	<b>310,957,920</b>	<b>522,409,306</b>	<b>783,613,958</b>
<b>Growth Rate (%/yr)<sup>1</sup></b>	<b>96%</b>	<b>126%</b>	<b>95%</b>	<b>68%</b>	<b>50%</b>	
<b>Total by Segment<sup>2</sup></b>						
<b>Working Moms<sup>3</sup></b>		<b>28,000,000</b>	<b>54,000,000</b>	<b>92,000,000</b>	<b>136,000,000</b>	<b>240,000,000</b>
<b>Baby Boomer Working Males<sup>4</sup></b>		<b>26,000,000</b>	<b>51,000,000</b>	<b>86,000,000</b>	<b>128,000,000</b>	<b>192,000,000</b>
<b>Adult Students<sup>5</sup></b>		<b>7,000,000</b>	<b>14,000,000</b>	<b>24,000,000</b>	<b>36,000,000</b>	<b>54,000,000</b>
<b>Desired Market Share</b>						
<b>Working Moms</b>		<b>0.30%</b>	<b>0.50%</b>	<b>1.00%</b>	<b>1.25%</b>	<b>1.50%</b>
<b>Baby Boomer Working Males</b>		<b>0.30%</b>	<b>0.50%</b>	<b>1.00%</b>	<b>1.25%</b>	<b>1.50%</b>
<b>Adult Students</b>		<b>0.15%</b>	<b>0.20%</b>	<b>0.30%</b>	<b>0.40%</b>	<b>0.50%</b>
<b>Expected Sales</b>						
<b>Working Moms</b>		<b>84,000</b>	<b>270,000</b>	<b>920,000</b>	<b>1,700,000</b>	<b>3,600,000</b>
<b>Baby Boomer Working Males</b>		<b>78,000</b>	<b>255,000</b>	<b>860,000</b>	<b>1,600,000</b>	<b>2,880,000</b>
<b>Adult Students</b>		<b>10,500</b>	<b>28,000</b>	<b>72,000</b>	<b>144,000</b>	<b>270,000</b>

### *Data Sources / Assumptions for Total Volume by Segment*

Estimating the total volume by segment was a two-step process. First I projected the total market population by segment. Then, I used the U.S. Census Bureau's population growth estimates to project volume into the future.

#### *Sources*

1. CITS, the International Association for the Wireless Telecommunications Industry. "Wireless Health: State of the Industry 2009 Year End Report." December 16, 2009. Pg. 2.
2. U.S. Census Projects Annual Population Growth of .97% over next 5-years.
3. U.S. Department of Labor Bulletin, 2007.
4. U.S. Census Bureau, Population Projections, July 1, 2008.
5. U.S. Department of Education, National Center for Education Statistics, 2009.

### ***Market Share Assumptions***

Desired market share is conservatively based on penetration into the global wireless medicine market. It also assumes a deeper, faster adoption rate for working mothers and Baby Boomer males over 50. This hypothesis is grounded in the belief that older adults have a slightly higher urgency in their energy equation as they battle fatigue and the inevitable biological challenges that come with age.

### ***Five-Year Volume Forecast***

Combining the target segment estimates with the projected market share quotes, VivaciousMe is expected to grow from a 172,000-unit product in year one to a 6.75 million brand in year 5. The significant growth rate reported is in large part a reflection of the category and the pent-up consumer demand for self-care products. And, can be trusted given the due diligence in developing the market place forecast and the *guarded* market share assertions.

## **IV. ENVIRONMENTAL ANALYSIS**

### **Economic Environment**

#### ***U.S. Economic Snapshot – December 2010***

The U.S. economy remains fragile 18 months after the official end of the recession. With companies still not hiring, unemployment rose to a seven-month high of 9.8% in November. The number increases to 17% when you add in the part-time workers who'd prefer to work full-time and people who have just given up looking. These numbers are even more disturbing when you factor in the fact that the number of people unemployed for 27 weeks or more increased to 41.9%, the highest level since August.

These worse-than-expected jobs numbers are disheartening when compared to a recent series of statistics that seemed to show the economy picking up steam. Sales at retailers were up in November and manufacturing was expanding. The Holiday shopping season was beginning to look optimistic.

As the economy remains stuck in neutral, consumer spending is not likely to increase and everyone from producers to politicians are trying to project what consumer demand is going to do in 2011.<sup>19</sup>

#### ***U.S. Capital Markets***

As the Federal Reserve embarks on another round of quantitative easing, the added liquidity in the market is not guaranteed to find its way into the hands of credit-starved small businesses. Banks remain nervous about lending to anyone below "investment grade" and entrepreneurs are turning to venture capital firms or waiting on the sidelines for the market to recover.

#### ***Consumer Confidence and Retail Sales – November 2010***

Confidence among shoppers rose in November to the highest level in five months, according to the New York based Conference Board. Colder and wetter weather may have boosted sales as consumers bought more outerwear after an unseasonable warm October.

Retail sales were up across more than 30 chains tracked by Retail Metrics, rising 5.3% and beating estimates. Retailers benefitted from more shopping over the Thanksgiving Day Weekend with an estimated 4-day sales total of \$45 billion, up 9.1% to last year. More shoppers also hit the stores over the Holiday weekend, up 8.7% to 2009 and topping out at 212 million people.

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<sup>19</sup> Miller, Rich and Homan, Timothy. "U.S. Economy Struggles for Full-Fledged Recovery as Jobs Lag." *Bloomberg BusinessWeek*. December 4, 2010. <http://www.businessweek.com/news/2010-12-04/trichet-challenges-budgets-as-spain-steps-up-measures.html>

These numbers may not accurately reflect the true health of the retail industry however; as many retailers began discounting early and continued the aggressive trend through Thanksgiving. And, while there appears to be pent-up consumer demand, it may still take profit-slashing prices to get them to make the sale.<sup>20</sup>

### **Political Environment**

There are two core political issues facing the wireless medicine industry today: (1) The rising cost of healthcare and the uncertainty surrounding The Patient Protection and Affordable Care Act (PPACCA) and (2) The lack of regulatory coordination between the Federal Communications Commission (FCC) and the Food and Drug Administration (FDA).

The ultimate goal of the Obama healthcare plan is to save money and get people to lead healthier lives. However, the U.S. currently spends \$6,102 annually per capita on healthcare, ranks 42<sup>nd</sup> among developed nations in life expectancy and commands a budget of \$2.4 trillion.<sup>21</sup> With fears of rising costs and unclear policy directives, the PPACCA faces considerable risk in the newly elected Congress. This uncertainty is impacting businesses, large and small, as they sit and wait for how the new law will impact their bottom-line.

Confounding the questions surrounding national healthcare is another legislative issue that is retarding the growth of wireless medicine - the lack of coordination between the FCC and the FDA. As it states today, if a life-critical wireless device were to launch in the U.S. it would be accountable to the FCC because of its wireless, cloud-based communication capabilities and to the FDA due to its medical claims and purpose.<sup>22</sup>

The good news is that the FCC and the FDA held a joint public meeting in July of 2010 and both sides committed to providing appropriate clarifications in the future.<sup>23</sup> The bad news is a timeline was not published which would have given entrepreneurs and creditors encouragement to begin investing for the future.

### **Social-cultural Environment**

Consumers participating in the wireless healthcare industry are directly impacted by four prevailing and interrelated social-cultural trends: Infolust, Tracking & Alerting, Butlering and

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<sup>20</sup> Townsend, Matt. "Retail Sales Up Most Since March on Black Friday Boost." *Bloomberg BusinessWeek*. December 2, 2010. <http://www.businessweek.com/news/2010-12-02/retail-sales-up-most-since-march-on-black-friday-boost.html>

<sup>21</sup> West, Darrell M. "Customer-Driven Medicine: How to Create A New Health Care System." Governance Studies at Brookings. October 2009.

<sup>22</sup> "Wireless Health: A Prescription for Regulatory Clarity." West Wireless Health Institute. August 2010.

<sup>23</sup> FCC-FDA Joint Statement on Wireless Medical Devices. July 26, 2010.

Wellthy.<sup>24</sup>

### ***Infolust***

“Thanks in large part to the insanely expansive and detailed web of information that continues to be spun; consumers have become addicted to getting instant access to *any* kind of useful and relevant information. In fact, consumers are experiencing nothing short of an all-encompassing INFOLUST. Experienced consumers are lusting after detailed information on where to get the best of the best, the cheapest of the cheapest, the first of the first, the healthiest of the healthiest, the coolest of the coolest, or on how to become the smartest of the smartest. Instant information gratification is upon us.

So forget information overload: this desire for relevant information is insatiable, and will soon move from the online world to the ‘real’ world to achieve true ubiquity. Get ready for a click-and-know, point-and-know, text-and-know, hear-and-know, smell-and-know, touch-and-know and snap-and-know world.”<sup>25</sup>

### ***Tracking & Alerting***

A sub-set of INFOLUST, TRACKING & ALERTING “is the new searching, as it saves consumers time, makes it impossible to forget or miss out, and thus ultimately gives consumers yet another level of control. Count on *everything* being tracked and alerted on: from friends to enemies to fuel prices to flights to authors to pizzas to any mentions of oneself.

ALERTING, when done well, is of course the ultimate in INFOLUST: relevant information *finding* consumers, based on (voluntarily revealed) preferences. The advantage of TRACKING and ALERTING is that consumers actually need and want the information, it delights them, and they crave it. They are quite literally asking for relevant information, even giving businesses permission to provide them with more.”<sup>26</sup>

### ***Butlering***

“With pragmatic, convenience-loving consumers enjoying instant access to an ever-growing number of supporting services and tools (both offline and online), brands urgently need to hone their ‘butlering skills,’ focus on assisting consumers to make the most of *their* daily lives, versus the old

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<sup>24</sup> Trendwatching.com. <http://trendwatching.com/briefing/#wellthy>

<sup>25</sup> IBID.

<sup>26</sup> IBID.

model of selling them an *image*. Products must offer consumers time, convenience, control and independence – the new currency in B2C products<sup>27</sup>

### ***Wellthy***

“As good health is now as important to some consumers as having the biggest, newest or shiniest status symbols, growing numbers of consumers will expect health products and services in 2011 to prevent misery if not improve their quality of life, rather than merely treating illnesses and ailments. Some signs of the times:

- 73% of US consumers consider being physically fit important to being ‘well’, with 74% including ‘feeling good about themselves’. (Source: The Hartman Group, August 2010)
- An estimated 500 million people worldwide are expected to be using mobile healthcare applications by 2015. (Source: Reasearch2Guidance, November 2010)
- There were nearly 17,000 health apps available in major app stores in November 2010, with 57% of them being aimed at consumers rather than health care professionals. (Source: Reasearch2Guidance, November 2010)
- The heaviest use of health or medical related apps is by young adults: about 15% of those aged 18 to 29 have such apps, compared to 8% of users aged 30 to 49. (Source: The Pew Internet Project, October 2010)

In 2011, count on even more monitoring technologies becoming portable or even wearable, as well as getting cheaper (the smartphones held by many consumers are now more advanced than most dedicated medical devices).

Also, both regular and dedicated medical social networks give audiences a platform to share, compare and discuss their personal health issues with other consumers.”<sup>28</sup>

In total, these four social-cultural trends form a collective vision, a consumer-needs driven market request for a portable, wearable, monitoring device that provides relevant, on-the-go, information to assist consumers in their every day activities. This product must support their desire to improve their physical and emotional health while offering them the convenience, control and

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<sup>27</sup> IBID.

<sup>28</sup> IBID.

independence to help them make informed, up-to-the-minute, decisions. Today's consumers want a mobile informant to help them enjoy life to its fullest.

### **Technological Environment**

Fortunately, just as consumers are requesting a “mobile personal assistant” and “life coach,” technology is making significant advances in cloud-based tools, sensor and GPS capabilities and social networking constellations. Just as consumers seek a new vision for self-management, technology is offering them autonomy, competency and pervasive connectivity. This is a defining moment - a point where the human desire for self-actualization is meet with the intellectual firepower of technology, a world where consumers become informed architects in their lives and benefit from the collective wisdom of a participatory culture.

### ***Technological Advancements - Cloud Computing***

The energy-source powering this on-the-go connectivity and information sharing is due to the capabilities of the “cloud” for the consumer, a networked way to store and distribute information independent of your location, or for the producer a way to increase capacity or add capabilities on the fly without investing in new infrastructure, training new personnel or licensing new software.<sup>29</sup> Cloud computing encompasses both the consumer and producer needs, a collaborative solution that creates web-based data repositories for all to gain and access knowledge.

### ***Technological Advancements - Sensor Technology***

There is a revolution taking place in the sensor and measurement technologies, enabling metric devices to be deployed comfortably without encumbering daily activities.<sup>30</sup>

It is now possible for a mobile, interactive biomedical device with multiple sensors to measure physiological and emotional activity via skin conductance, a form of electro-dermal activity that grows during states such as excitement, attention or anxiety and lower during states of boredom and relaxation. These sensors can measure physiological signaling, such as blood pressure, heart rate, respiration, body temperature and activity, or track eight emotional states: neutral / coherency range, anger, hate, grief, love, romantic love, joy and reverence.<sup>31</sup>

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<sup>29</sup> Knorr, Eric. Gruman, Galen. “What Cloud Computing Really Means.” InfoWorld. <http://www.infoworld.com/print/34031>

<sup>30</sup> Picard, Rosalind. “Emotion Research by the People, for the People.” MIT Media Lab. Cambridge, MA. January 12, 2010. Pg. 4. <http://affect.media.mit.edu/pdfs/10.Picard-ER-revised.pdf>

<sup>31</sup> Poh, Ming-Zher. “A Wearable Sensor for Unobtrusive, Long-Term Assessment of Electrodermal Activity.” IEEE Transactions on Biomedical Engineering. Vol. 57. No 5. May 2010. <http://affect.media.mit.edu/pdfs/10.Poh-et-al-TBME-EDA-tests.pdf>

### ***Technological Advancements – On-Line Social Networking***

As consumers reframe their definition of self-management and come to depend on each other to construct knowledge, the on-line social networking tool is growing in popularity. As a way to connect individuals with a common interest, an on-line social network is designed to service its participants. At any moment, a consumer may be an active contributor, an information sharer, a peer leader or a self-tracker; the choice is up to the individual and her need in the moment. The human desire to connect and share information is facilitated through these on-line networking systems and offer companies and brands great ways to establish on-going relationships with their consumers.

### ***Technological Issues***

Technology is a powerful tool that must be continuously monitored, managed and strategically planned. There are endless stories about how a company's reputation was shattered by a strong negative current on popular social networking sites. Or, how a brand lost its reputation because it didn't have the technological infrastructure in place to support its promise to consumers, e.g., AT&T's overburdened cell networks in large cities. Technology is no longer just a simple tool to make transactions faster; it represents an entire ecosystem that demands coordinated, flexible and competent multi-disciplinary attention.

## V. COMPETITOR ANALYSIS

### *SWOT Analysis: VivaciousMe*

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>•Interactive biomedical dashboard of physical and psychological metrics</li> <li>•Mobile decision making tool designed for the user</li> <li>•Sensor technology enables comfortable daily wear</li> <li>•Affordable in mass channels and accessible on-line</li> <li>•Easy to use software to visualize and analyze your data</li> <li>•Social network and life coaching opportunities enable total integration and continuous personal improvements</li> </ul>	<ul style="list-style-type: none"> <li>•No established value chain to bring product to market</li> <li>•Unknown brand name and reputation</li> <li>•Innovative product that requires consumer education</li> <li>•Retail price (\$299.99) is high relative to other personal care products shelved in Food / Drug / Mass channels</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>•Establish a competitively positioned strategic alliance with an industry leader with shared valued and common vision</li> <li>•Partner with Best Buy to capitalize on their new emphasis on wireless healthcare products*</li> <li>•Leverage social-cultural demand for relevant and immediate mobile information designed to support their lifestyle</li> <li>•Partner with MIT Media Lab and other research institutions to build out affective computing capabilities</li> </ul> <p><i>*Source: <a href="http://mobihealthnews.com/5381/best-buy-brings-health-tech-to-40-u-s-stores/">http://mobihealthnews.com/5381/best-buy-brings-health-tech-to-40-u-s-stores/</a></i></p>	<ul style="list-style-type: none"> <li>•A fragile U.S. economy and conservative lending practices are obstructing access to traditional capital markets and diluting consumer confidence / purchasing habits</li> <li>•Lack of specific regulatory guidelines and a national healthcare plan still in-flux have private investors sitting on the sidelines</li> <li>•The Healthcare Industry is a vertically integrated network of powerful, vested principals</li> <li>•Overburdened cell networks</li> </ul>

## SWOT Analysis, emWave (Direct Competitor)

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>•Built on a foundation of solid science and consumer demand</li> <li>•Product purchase includes “Coherency Coach” CD to provide instructions and multiple levels of mastery</li> <li>•A portfolio of related and complimentary products available to consumers</li> <li>•Established market position and value chain process</li> <li>•Target market includes consumers and healthcare professionals</li> <li>•Post-purchase relationship structure in place: free e-training program, 30-day money back guarantee</li> <li>•Established presence on Amazon.com</li> <li>•Brand awareness growing through global awards (MacWorld UK Editor’s Choice Award), national PR (mentions on Dr. Phil television show) and media mentions (Los Angeles Times, Esquire).</li> </ul>	<ul style="list-style-type: none"> <li>•Product uses an “ear or finger clip” to monitor biomedical systems and generate “coherency level”</li> <li>•Limited availability and low brand awareness</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>•Expand retail distribution strategy to include Food / Drug / Mass</li> <li>•Incorporate wear-ability / mobility into core product line to enhance consumer’s desire for “health edutainment” and continuous wellness management</li> <li>•Launch a product that tracks and enhances emotional states, build in more “affective computing” capabilities</li> <li>•Partner with national public health programs, wellness campaigns and local health fairs to drive awareness and trial</li> <li>•Offer ancillary, on-going “life-coaching” advice and/or social networking platforms, to encourage on-going relationship and an annuity of profits</li> </ul> <p>Source: <a href="http://www.heartmathstore.com/">http://www.heartmathstore.com/</a></p>	<ul style="list-style-type: none"> <li>•Competition launches a more advanced, technological product that is wearable, mobile and features both physiological and emotional sensors</li> <li>•Sales increase to a point where large pharmaceutical companies feel threatened and they (a) attack and discredit or (b) launch their own personal stress relief product that works with their prescription drugs</li> </ul> <p><i>1- Source: West, Darrell. “Customer-Driven Medicine: How to Create a New Health Care System.” Governance Studies at Brookings. October 2009.</i></p>

## SWOT Analysis, HealthCare Industry (Indirect Competitor)

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Superior Value Chain capabilities, from inbound logistics to multiple points of distribution, the U.S. Healthcare system is a well-oiled multi-billion dollar machine</li> <li>• Ability to offer patients immediate relief with subsidized treatments</li> <li>• Strong emotional connection with consumers. We still trust our physician and turn to branded companies when our loved-ones health is on the line</li> <li>• Access to capital markets to fund continuous portfolio of innovative products / services</li> <li>• Leadership position demands inclusion in development / proposal for change: Strong Competitive Barriers in place</li> </ul>	<ul style="list-style-type: none"> <li>• Bureaucratic system weighed down by federal regulations, legal constraints and the cost of innovation and patent approval</li> <li>• Consumer and Corporate attitudes toward continuously rising costs with limited value added</li> <li>• Doctors are not adopting digital technology at the same rate patients are: only 15% of doctors use digital technology to order prescriptions for their patients<sup>1</sup></li> <li>• Cost structure is prohibitive and escalating. The US health care system now costs \$2.4 Trillion. We spend \$6,012 per capita on healthcare, yet rank 42<sup>nd</sup> among developed countries in life expectancy<sup>1</sup></li> <li>• According to PriceWaterhouse Coopers Health Research Institute, the U.S. wastes \$210 Billion in “defensive medicine,” focusing on tests that focus on liability and increased revenue versus patient health<sup>1</sup></li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• To begin offering proactive, preventive “body area network” devices to leverage wireless community and increasing consumer demand for responsible self care</li> <li>• Partner with affective computing researchers (MIT Media Lab) to develop complimentary preventative “prescriptions” to accompany drug sales</li> <li>• Use market strength to drive private and public insurance reimbursement for mobile health, eCare solutions and wireless technology</li> <li>• Work with the FCC and FDA to develop shared, collaborative regulatory measures for wireless medical devices</li> <li>• Launch mobile wellness applications for smartphone usage</li> <li>• Institute electronic medical record standards</li> <li>• Promote and support social networking apparatus for consumers seeking self-care and proactive wellness advice</li> </ul>	<ul style="list-style-type: none"> <li>• The national healthcare debate reframes the entire industry to a more preventative system that relies on self-management and co-patienting</li> <li>• Increase in web-based health care delivery, e.g., <a href="http://www.hellohealth.com">www.hellohealth.com</a></li> <li>• As healthcare transparency increases and consumers converge through multiple mediums, a cultural shift takes place and patients are no longer content to “take two aspirins and call me in the morning.”</li> <li>• Telecommunications industry (AT&amp;T, Sprint) establish an early leadership position in wireless medicine industry while controlling the technological infrastructure</li> <li>• Companies adopt their own healthcare initiatives (Safeway’s “Healthy Measures” program) and reduce dependency on national healthcare industry</li> </ul>

## **Minimizing Weaknesses and Threats**

VivaciousMe is a well-constructed product designed alongside specific consumer needs and is positioned to be an innovative leader in the wireless medicine industry. However, as a new entrant, armed only with intellectual property and a solid new product development plan, the brand needs the support of an established partner to bring its vision to market. And, as documented earlier, I believe Johnson & Johnson to be the best fit for both parties. VivaciousMe gets access to an established value chain while immediately aligning with an established “caregiver” archetype. Johnson & Johnson, on the other hand, benefits from the opportunity to a first mover in the next wave of wireless medicine and to capitalize on jointly developed research and development.

Equally as important as getting the product to market is the successful commercialization of the brand’s integrated communication strategy. It is here that VivaciousMe will begin building its brand name and reputation, start the consumer education process and demonstrate its value proposition. It is within these core strategies that a long-term relationship with users will begin to be nurtured and managed. The goal is to communicate and deliver on the brand promise with every user connection through easy to use software and access to a social support network that will guide users naturally through the integration phase and solidifying their long-term connection to the brand community. It is important for all purchasers of the product to understand and experience the brand promise and to constructively build on each interaction. In the end, VivaciousMe is a learning tool, designed to help its users maximize their decision-making capability through the joint monitoring of their physical and emotional statistics. The ultimate promise of VivaciousMe is the opportunity to live a more satisfying, rewarding life.

A strategic decision was made up-front not to pursue an FDA approval for VivaciousMe. Given the regulatory environment and the process required to claim “medical improvements,” it was determined to launch VivaciousMe as a decision-making tool that leverages the latest in sensor technology. The plan is to establish VivaciousMe as a productive personal tool that is as indispensable as your Smartphone. Then, from there and with on-going affective cognitive research, begin to add to the portfolio. Simultaneous to the development of a VivaciousMe portfolio, established researchers and developers will be coordinating and conducting market research seeking out FDA approval for future product lines. It will be in these achievements that the strategic alliance with Johnson & Johnson will be realized. It will be these launches that truly bridge the company’s consumer health care, medical devices and diagnostics and pharmaceutical divisions. These new products will be the connective tissue across their organizational structure, leveraging their core strengths while benefiting from the intellectual property of VivaciousMe.

## **VI. MARKETING**

### ***VivaciousMe Brand Architecture***

#### ***Positioning Statement -***

*...Especially for people who aspire to the highest levels of physical wellness and emotional satisfaction, VivaciousMe is the first customizable, mobile biomedical device that optimizes an individual's biological resource utilization decision-making process. VivaciousMe continuously monitor's energy levels making real time energy use decisions achievable. This is possible through the latest in nanotechnology, understanding of biological processes, and the power of wireless technology. You can finally achieve coherency between your body's needs and capacities and the energy demands of any desired activity. To leave energy quantification out of the activity commitment decision making process would be just as erroneous as leaving money out of the financial decision making process. There is a quantum leap in self awareness support enabling humans to finally make healthy energy based decisions which is critical in the self determination process. The primary cause of all disease processes and unhealthy biological adaptation is inadequate energy reserves and utilization. Better Energy Decisions = Better Life Decisions!*

#### ***Product Archetype***

The primary role of VivaciousMe is that of a Sage, a wise experienced friend who leverages the latest in technology and science as she seeks to inform and educate. The Sage will be the trusted advisor that cultivates long-term relationships while inviting its users to enjoy branded experiences along the way. This role will invite VivaciousMe into the users' daily routine, and with the product's capabilities and on-going support network, establish preference and brand loyalty.

#### ***Marketing Strategy***

The objective of the VivaciousMe marketing strategy is to drive awareness and trial among its core targets: Working Moms, Baby Boomer Males and Adult Students, while promoting distribution gains to support the annual volume estimates. The goal is to engage all stakeholders in the product's national launch and to simultaneously stimulate consumer demand and retail inventory.

#### ***Communication Strategy***

The key communication strategy is designed to encourage targeted adults to adopt VivaciousMe as their personal productivity tool, their portable potential energy gauge that allows

them to make “Better Energy Decisions” so they can ultimately make “Better Life Decisions.” This brand message clearly communicates the product’s sophisticated biomedical core benefit in relatable, motivating language.

***Marketing Message***

Better Energy Decisions = Better Life Decisions.

The plan is to leverage this one over-arching marketing message and tie all the marketing and sales tactics back to one idea, one core product concept. Local activation and individual target executions will be encouraged, but will all work off of this shared creative brief.

***Consumer Marketing Tactics***

A comprehensive marketing plan is in place to launch VivaciousMe, starting with a \$26 million communication plan that emphasizes consumer advertising, a national PR program, vibrant and informative packaging and subsidized point-of-sale materials. With three key promotional “tent-poles” planned for VivaciousMe, the product will see market emphasis in January, March and September; all months when “new decisions” are emphasized. January has its New Resolutions, March includes the annual crusade to fit into our bathing suits and September embraces New Thinking with images of a new school year.

***Consumer Marketing Plan Assumptions – Initial Investment***

<b>Consumer Tactic</b>	<b>Cost</b>	<b>Source</b>
<b>Creative Agency Retainer Fee</b>	<b>\$1,000,000</b>	Assume approximately 5% of Revenue
<b>(3) National Promotions</b>	<b>\$20,000,000</b>	Assume promotional value equal to 10% of retail price + production + creative
<b>(3) National PR Campaigns with strategic sponsorship</b>	<b>\$1,000,000</b>	<a href="http://www.allbusiness.com/management/contract-management/381026-1.html">http://www.allbusiness.com/management/contract-management/381026-1.html</a> .
<b>(4) National Print Executions * 3 separate media buys</b>	<b>\$1,500,000</b>	<a href="http://www.ehow.com/facts_5625807_average-cost-advertising-magazine">http://www.ehow.com/facts_5625807_average-cost-advertising-magazine</a>
<b>(2) National Radio Executions * 3 separate media buys</b>	<b>\$500,000</b>	<a href="http://www.strategicmediainc.com/radio-advertising-articles/radio_advertising_costs_how_much_should_i_budget.html">http://www.strategicmediainc.com/radio-advertising-articles/radio_advertising_costs_how_much_should_i_budget.html</a>
<b>Website Development / Social Media Plan</b>	<b>\$600,000</b>	<a href="http://mackcollier.com/so-how-much-will-a-social-media-strategy-cost/">http://mackcollier.com/so-how-much-will-a-social-media-strategy-cost/</a>
<b>After-Sales Support / On-line Social Network and Life Coaches</b>	<b>\$150,000</b>	Retainer Fees estimated to equal (2) full-time positions at \$75K.
<b>Packaging Design / Production</b>	<b>\$200,000</b>	Creative estimated at \$150K + \$50 production
<b>Subsidized POS</b>	<b>1,000,000</b>	Creative, production and cost subsidy for customers / accounts
<b>Total</b>	<b>\$26,000,000</b>	

Note that national television is not included in the consumer-marketing plan. This is a strategic decision to educate and connect on a more personal level during the product's "introductory phase." Purchasing and integrating a personal productivity tool, or any medical diagnostic device like VivaciousMe, takes patience, education and a focused message. Emphasizing point-of-purchase communications, relevant media buys that allow for detail and information sharing, and national programming translate into a long-term consumer relationship with VivaciousMe.

Given the complexity of a national launch and the importance in establishing a local connection with consumers, \$500,000 additional dollars are projected to cover the cost of a small regional marketing team of four managers. It will be their responsibility to take the national programming and integrate it into their communities, a personalized activation strategy to support a customizable product.

### ***Customer / Account Specific Marketing Tactics***

Customer marketing and account specific initiatives are critical in the success of a national rollout. Retailers need incremental funds to support the sell-through of the brand and the product manager needs the distribution gains. Importantly, these relationships also provide the opportunity for joint-promotions. An example for VivaciousMe is partnering with Best Buy, a national electronics retailer that has recently begun to sell personal wireless health devices.<sup>32</sup> A national promotion with Best Buy would drive awareness, add a new distribution channel and connect with the product's core consumers.

The emphasis on customer marketing is supported with a \$5,000,000 budget and subsidized point-of-sale merchandising.

## **VII. Sales Strategy – Channel Strategy**

VivaciousMe will be sold in accessible and affordable channels, strategically communicating the brand's productivity message, Better Energy Decisions = Better Life Decisions. This means VivaciousMe can be purchased in the food / drug and supermarket channels.

In the future the brand website will also allow for on-line purchase, but for the rollout it is necessary to "push" sales at the account level. Therefore, the product site will guide potential users to their local retail base, highlighting various accounts throughout the year.

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<sup>32</sup> Dolan, Brian. "Best Buy brings health tech to 40 U.S. stores." *Mobihealthnews.com*. November 11, 2009. <http://mobihealthnews.com/5381/best-buy-brings-health-tech-to-40-u-s-stores/>

A regional sales force will be funded, \$500,000, and partnered with the local marketing staff to encourage coordination and leverage resources.

### **VIII. Pricing Strategy – Wholesale Pricing**

VivaciousMe will be sold directly to retailers at a wholesale price of \$149.99 and available to consumers on shelf at \$299.99 a unit. This price was constructed on a cost plus profit framework, with an eye on the competition and an emphasis on the product's unique core benefits.

The brand price will be protected and justified through the national communication strategy and the product's ability to deliver on its promise, "Better Energy Decisions = Better Life Decisions." All national promotions, customer marketing campaigns and consumer messaging will emphasize awareness and trial, not price-off programming to drive sales; any price-based execution proposal must be approved by the corporate staff. Sustained profitability is a focus and the main source of future brand extensions and portfolio opportunities. Establishing VivaciousMe as a leader in the wireless medicine category from its launch will position the brand to succeed in the future. Everything communications, and pricing is a key expression of a brand's "self worth." The holistic approach to sales and marketing and the company's significant investment in its initial launch year is designed to generate demand and maintain momentum into the future. Discounting is discouraged.

## **IX. Exit Strategy**

While the majority of the commercialization effort is focused on the initial investment year's operating plan, the product manager for VivaciousMe is also setting the direction for the long-term, and specifically planning for "How to extend the life-cycle of the product?" Merging the environmental information from the PEST examination and the product specific SWOT analysis with the brand vision, three possible exit strategies emerged for VivaciousMe:

### ***New Users – Professional Athletes***

Professional athletes present a unique opportunity for VivaciousMe, a target market segment that would quickly adopt the brand given their need and demand for a potential energy monitoring device. Athletes are very aware of their bodies' mechanics, but the majority of their injuries occur when they push past their bioelectrical energy reserves. This is when you see professional football players pull a hamstring, or sprinters blowout an Achilles heel. Professional Athletes lose millions of dollars when they get injured. But what if they could monitor their personal productivity? What is they knew when they could push past the pain or when it was time to sit out a play? Individual performance would be improved and the life span of an athlete could be expanded, adding millions of dollars to their bank account and many more memories to savor over time.

### ***New Usages – New Channels of Distribution***

VivaciousMe is a versatile product, a brand with numerous applications. In this exit strategy, the brand extends its "usage occasions" to include testing within public safety organizations. For example, airline pilots could be required to wear a VivaciousMe wristband to alert themselves and the control room to their up-to-the-minute bioelectrical energy level. Then, if their personal "fuel tank" runs down to dangerously low levels, a co-pilot could take over or the pilot could be grounded before even taking off.

This usage strategy opens up numerous channels of distribution and new sales categories, all incremental sales. From airports to local school bus operations, to subway operators and fighter pilots, each participant wants to be highly alert during their working hours. Monitoring and reporting their personal productivity measures helps their job performance while protecting the lives of the public.

### ***New Features – Affective Computing***

With a significant amount of research and development planned over the next five years, VivaciousMe is well positioned to leverage the next wave of nanotechnology and wireless

communication – affective computing. We are already seeing the birth of this phenomenon in gaming software and its crossover into everyday activities is quickly approaching. VivaciousMe is set to be a leader in this field and could either extend its current product offerings or begin to add to the larger portfolio at the end of five years. Having the ability to recognize emotional and physical changes in the environment would empower VivaciousMe with “relational intelligence,” a core feature in the future growth of computing.

## VIII. Financial Analysis

VivaciousMe is build on the research and development advances of the MIT Media Lab. Specifically, patterned after “Handwave,” a product concept in development within the team’s Affective Computing Division. The following cost analysis is based on the raw materials contained in Handwave. (Source: [http://affect.media.mit.edu/projectpages/handwave/HandWave\\_Users\\_Guide.pdf](http://affect.media.mit.edu/projectpages/handwave/HandWave_Users_Guide.pdf)).

### *Unit Cost Breakdown*

<b>Hardware</b>	<b>\$ Per Unit</b>
Flash Memory <sup>1</sup>	\$24.00
Bluetooth Board <sup>2</sup> (2)	\$11.90
Motion Sensor to detect movement in 3-directions <sup>3</sup>	\$2.25
Power Circuitry: Rechargeable Battery, Switch & Leads <sup>4</sup>	10.97
Internal Clock <sup>5</sup>	\$1.15
External Button for Event Marking <sup>6</sup>	\$1.30
Electrode Leads <sup>7</sup>	\$5.49
Black Rubber Wrist Straps <sup>8</sup>	\$5.44
Protective Padding / White Padding <sup>9</sup>	\$1.24
<i>Hardware Total</i>	<b>\$63.74</b>
<b>Software</b>	<b>\$ Per Unit</b>
Driver – written in Python Code <sup>10</sup>	0.00
Thermometer Graphics Applications <sup>11</sup>	0.00
Virtual COM Port / Bluetooth Configuration <sup>12</sup>	0.00
<i>Software Total</i>	<b>0.00</b>
<b>Labor</b>	<b>\$ Per Unit</b>
Assembly <sup>13</sup>	\$9.00
Packaging / Literature / USB Cord <sup>14</sup>	7.11
<i>Labor and Packaging</i>	<b>\$16.11</b>
<i>Total Unit Cost</i>	<b>\$79.85</b>

## ***VivaciousMe Unit Cost Assumptions and Sources:***

### ***Unit Cost Assumptions:***

- 1 – 3G S iPhone Flash Memory @ \$24.00;
- 2 – 3G S iPhone Bluetooth Chip @ \$5.95
- 3 – 3G S iPhone GPS Chip @ \$2.25
- 4 – Retail @ \$21.95, wholesale at \$10.97
- 5 - 3G S iPhone Audio / Human Machine Interaction
- 6 - 3G S iPhone Power IC Application Processor Function
- 7 - Retail @ \$18.96, guaranteed lowest price \$5.49
- 8 - Retail @ \$10.88, wholesale @ \$5.44
- 9 - Retail @ \$2.49, wholesale @ \$1.24
- 10 - Python Programming Language is an open-source license and free to use
- 11 - Within Python Programming Language, Thermometer graphics application free upon request
- 12 - Virtual COM port is part of "Client Applications" with Python Programming Language, an open-source license free to the public
- 13 - 3G iPhone Assembly costs
- 14 – Samsung Galaxy Tab

### ***Unit Cost Sources:***

- 1 – [http://www.pcworld.com/article/167304/apples\\_iphone\\_3g\\_s\\_dissected\\_whats\\_the\\_real\\_cost.html?tk=mod\\_rel](http://www.pcworld.com/article/167304/apples_iphone_3g_s_dissected_whats_the_real_cost.html?tk=mod_rel)
- 2 – [http://www.pcworld.com/article/167304/apples\\_iphone\\_3g\\_s\\_dissected\\_whats\\_the\\_real\\_cost.html?tk=mod\\_rel](http://www.pcworld.com/article/167304/apples_iphone_3g_s_dissected_whats_the_real_cost.html?tk=mod_rel)
- 3 – [http://www.pcworld.com/article/167304/apples\\_iphone\\_3g\\_s\\_dissected\\_whats\\_the\\_real\\_cost.html?tk=mod\\_rel](http://www.pcworld.com/article/167304/apples_iphone_3g_s_dissected_whats_the_real_cost.html?tk=mod_rel)
- 4 – <http://www.amazon.com/Battery-Disconnect-Switch-Will-Both-Side/dp/B00099YOV8>
- 5 - [http://www.pcworld.com/article/167304/apples\\_iphone\\_3g\\_s\\_dissected\\_whats\\_the\\_real\\_cost.html?tk=mod\\_rel](http://www.pcworld.com/article/167304/apples_iphone_3g_s_dissected_whats_the_real_cost.html?tk=mod_rel)
- 6 - [http://www.pcworld.com/article/167304/apples\\_iphone\\_3g\\_s\\_dissected\\_whats\\_the\\_real\\_cost.html?tk=mod\\_rel](http://www.pcworld.com/article/167304/apples_iphone_3g_s_dissected_whats_the_real_cost.html?tk=mod_rel)
- 7 - <http://www.medicalproductsonline.org/silver-coated-electrodes--10-packages-4-per-p.html>
- 8 - <http://www.overstock.com/Jewelry-Watches/Black-Rubber-Compass-20-mm-Sport-Watch-Band/3031869/product.html?cid=123620&fp=F&mr:trackingCode=2D93968A-6D04-DF11-BAE3-0019B9C043EB&mr:referralID=NA>
- 9 - <http://www.amazon.com/Maxi-Aids-MAXI-Foam-Padding-White/dp/B00016T0TK>
- 10 - <http://www.python.org/>
- 11 - <http://www.python.org/>
- 12 - <http://www.python.org/>
- 13 - [http://www.pcworld.com/businesscenter/article/147530/new\\_3g\\_iphone\\_costs\\_173\\_to\\_make\\_isuppli.html](http://www.pcworld.com/businesscenter/article/147530/new_3g_iphone_costs_173_to_make_isuppli.html)
- 14 – [http://www.isuppli.com/Teardowns-Manufacturing-and-Pricing/News/Pages/Samsung-Galaxy-Tab-Carries-\\$205-Bill-of-Materials-iSuppli-Teardown-Reveals.aspx](http://www.isuppli.com/Teardowns-Manufacturing-and-Pricing/News/Pages/Samsung-Galaxy-Tab-Carries-$205-Bill-of-Materials-iSuppli-Teardown-Reveals.aspx)

The unit cost to produce VivaciousMe is the driving force behind the \$149.99 wholesale price and \$299.99 retail tag. Managing the variance within the unit cost will be crucial going forward. Offering the consumer the best value possible will require an efficient manufacturing process and a distribution channel that is established and shared. Combined these two imperatives argue further for a strategic alliance with Johnson & Johnson.

***VivaciousMe Initial Investment Breakdown***

<b>Investment</b>	<b>Cost</b>
Software Development Costs <sup>1</sup>	\$7,000,000
Cloud Computing Set-up <sup>2</sup>	\$2,000
Staff – Management <sup>3</sup>	\$1,000,000
Staff – Regional Market <sup>4</sup>	\$500,000
Staff – Regional Sales <sup>5</sup>	\$500,000
Distribution / Logistics <sup>6</sup>	\$0
Manufacturing / Capital Expenditures <sup>7</sup>	\$0
Patent / Trademark Filing <sup>8</sup>	\$1,000
Legal Fees <sup>9</sup>	\$35,000
Marketing Budget <sup>10</sup>	\$26,000,000
Channel / Customer Account Budget <sup>11</sup>	\$5,000,000
<b>Total Initial Investment</b>	<b>\$40,000,000</b>

***Initial Investment Assumptions:***

1 – (4) Developers working on Physiological software, (4) Working on Psychological software and (4) Working on affective computing software. (1) General manager @ \$200,000 / yr each. (1) Administrative Manager @ \$100,000 and \$4.3 million in research equipment/programming

2 – Cloud Usage 24 hours / 7 days / 365 @ \$.043/hr.:

[http://www.ebizq.net/blogs/enterprise/2009/08/what\\_does\\_cloud\\_computing\\_actu.php](http://www.ebizq.net/blogs/enterprise/2009/08/what_does_cloud_computing_actu.php)

3 – (8) Dedicated VivaciousMe staff members @ \$125,000 / year

4 – (4) Dedicated Regional Marketing staff members @ \$125,000

5 – (4) Dedicated Regional Sales staff members @ \$125,000

6 – Assumed strategic alliance with Johnson & Johnson

7 – Assumed strategic alliance with Johnson & Johnson

8 – Filing charges associated with patent and trademark @ \$500 / each

9 – Legal Fees at \$350 / hour \* 100 hours

10 – Marketing Budget detailed in Section VI of product plan

11 – Channel /Customer Account budget detailed in Section VI of product plan

VivaciousMe is a product that bridges nanotechnology and wireless communication and is expected to compete in the highly sophisticated, competitive wireless medicine category. As such, the brand demands a commitment to continuous software development. An investment of \$7 million is budgeted for the brand’s first year and an incremental 5% of sales in the out years. Building for the future is just as important as commercializing the present.

### **Financial Analysis – 5 year forecast**

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Initial Investment</b>	<b>(40,000,000)</b>					
<b>Revenue</b>		\$25,873,275	\$82,944,470	\$277,781,480	\$516,565,560	\$1,012,432,500
<b>COGS</b>		(13,774,125)	(44,157,050)	(147,822,200)	(275,003,400)	(538,987,500)
<b>Gross Margin</b>		\$12,099,150	\$38,787,420	\$129,899,280	\$241,562,160	\$473,446,000
<b>Depreciation</b>		(8,000,000)	(8,000,000)	(8,000,000)	(8,000,000)	(8,000,000)
<b>SG&amp;A</b>		(8,279,448)	(26,542,230)	(88,890,074)	(165,300,979)	(323,978,400)
<b>Incremental R&amp;D (5% of Rev)</b>		(1,293,664)	(4,147,224)	(13,889,074)	(25,828,278)	(50,621,625)
<b>Operating Profit</b>		(5,473,962)	\$97,966	\$19,120,132	\$42,432,903	\$90,844,975
<b>Taxes</b>		1,915,887	(34,288)	(6,692,046)	(14,851,516)	(31,795,741)
<b>Profit</b>		(3,558,075)	\$63,678	\$12,428,086	\$27,581,387	\$59,049,234

### **Financial Analysis Assumptions:**

1 – Initial Investment of (\$40,000,000)

2 – Depreciation - 5 years, common industry practice

3 – SG&A – 32% using Johnson & Johnson’s Consolidated Statement of Earnings as a proxy  
(<http://www.jnj.com/connect/?flash=true>)

4 – Incremental Research & Development expense, 5% of Revenue

5 – Tax Rate – 35% using Johnson & Johnson’s Consolidated Statement of Earnings as a proxy  
(<http://www.jnj.com/connect/?flash=true>)

6 – Cost of Capital 15% - 2x WACC for Johnson & Johnson (7% as reported by WikiWealth:  
<http://www.wikiwealth.com/research:jnj>)

### **Financial Analysis Summary**

Under the most likely scenario, VivaciousMe will generate an NPV of \$10,253,492 and an IRR of 21%, returns on capital that will support the proposed strategic alliance with Johnson & Johnson.

### **Sensitivity Analysis – Contingency Planning**

A key component of any new product’s financial review is the sensitivity analysis, the process of studying the impact of each variable on the total project’s value creation. By identifying those variables that are the most influential, a product manager can then focus her resources on managing the relevant issues. And, by anticipating potential variances to expectations, the product manager can produce specific contingency plans and, perhaps even, mitigate the risk ahead of time. The objective of sensitivity analysis is to look forward and plan back. The goal is to promote a successful new product launch in a constantly changing, fast-paced global economy.

### *Change in Initial Investment*

A key element to the VivaciousMe product plan is the proposed strategic alliance with Johnson & Johnson. But, what if the deal didn't go through? What if the current economic landscape prohibited firms from further investment? Could VivaciousMe launch on its own merits? Is it possible to add significant manufacturing and distribution costs and still generate superior returns? This is Scenario 2: Launching VivaciousMe as an independent company and product offering.

New assumption: \$100,000,000 initial investment required to launch VivaciousMe nationally. The \$60,000,000 increase is designed to cover the manufacturing costs, inbound and outbound logistics, storage and increased funding for staff and customer specific marketing to drive distribution gains while establishing first-time relationships with key retailers.

This is a likely scenario and one to be closely monitored and planned against.

	<b>Year 0</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
<b>Initial Investment</b>	<b>(100,000,000)</b>					
<b>Revenue</b>		<b>\$25,873,275</b>	<b>\$82,944,470</b>	<b>\$277,781,480</b>	<b>\$516,565,560</b>	<b>\$1,012,432,500</b>
<b>Net Profit</b>		<b>(\$11,358,075)</b>	<b>(\$7,736,322)</b>	<b>\$4,628,086</b>	<b>\$19,781,387</b>	<b>\$51,249,234</b>

<b>Initial Investment</b>	<b>Scenario 1: \$40,000,000</b>	<b>Scenario 2: \$100,000,000</b>
<b>NPV</b>	<b>\$10,253,492</b>	<b>(\$75,893,317)</b>
<b>IRR</b>	<b>21%</b>	<b>-10%</b>

To compensate for the negative impact on NPV, VivaciousMe needs to increase its wholesale price by \$50.00 to \$199.99, which drives the retail price up \$100.00 to \$399.99. The immediate question then becomes: What impact this sales increase has on future sales and market share gains. Additional consumer research needs to be completed to determine the optimal contingency plan in this scenario.

<b>Wholesale Price Increase</b>	<b>Scenario 2: \$100,000,000 Initial Investment</b>	<b>Scenario 2: \$100,000,000 Initial Investment  Wholesale \$199.99</b>
<b>NPV</b>	<b>(\$75,893,317)</b>	<b>\$69,702,947</b>
<b>IRR</b>	<b>-10%</b>	<b>29%</b>

### Change in Unit Price

The current unit price for VivaciousMe is \$79.85, but what if raw materials or labor drove the cost up 25% to \$100.00? A higher unit cost is a likely scenario given the product's position on the learning curve and its ongoing economic awareness within each phase of the value chain.

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Initial Investment</b>	(40,000,000)					
<b>COGS</b>	<b>Unit Price \$79.85</b>	(\$13,774,125)	(\$44,157,050)	(\$147,882,200)	(\$275,003,400)	(\$538,987,500)
<b>COGS</b>	<b>Unit Price \$100.00</b>	(\$17,250,000)	(\$55,300,000)	(\$185,200,000)	(\$344,400,000)	(\$675,000,000)

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Initial Investment</b>	(40,000,000)					
<b>Net Operating Profit</b>	<b>Unit Price \$79.85</b>	(\$4,180,298)	\$4,245,190	\$33,009,206	\$68,261,181	\$141,466,600
<b>Net Operating Profit</b>	<b>Unit Price \$100.00</b>	(\$7,656,173)	(\$6,897,760)	(\$4,308,594)	(\$1,135,419)	\$5,454,100

Unit Price	Scenario 1: Unit Price: \$79.85	Scenario 3: Unit Price: \$100.00
NPV	\$10,253,492	(\$82,881,896)
IRR	21%	Negative / Incalculable

This exercise emphasizes the importance of unit cost management and the product's precarious pricing model. Given the current cost-based pricing strategy, if unit costs deviate from the expected, VivaciousMe will see significant changes to its gross margins. And, importantly, if costs do go up, the brand will not be able to increase pricing quickly as it is establishing itself in the marketplace and needs to signal credibility and trust.

The bottom line is that VivaciousMe must be very confident in its unit costs prior to adopting a cost-plus pricing scheme. Otherwise, if the plan is off by even a small amount, the financial viability of VivaciousMe is at risk.

### Change in Market Share

The market share estimates were planned to be very conservative, but what if they turn out to be optimistic? What if consumers are skeptical or unable to afford the retail price? What if distribution gains are slower than expected?

Let's assume a 10% reduction in current market share estimate – across all three segments.

Market Share (10%)	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Initial Investment	(40,000,000)					
Working Moms		0.27%	0.45%	0.90%	1.13%	1.35%
BB Men		.027%	0.45%	0.90%	1.13%	1.35%
Adult Students		.014%	0.18%	0.27%	0.36%	0.45%

A lower market share drives revenue down and creates a negative impact throughout the income statement.

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Initial Investment	(40,000,000)					
Revenue	Most likely scenario	\$25,873,275	\$82,944,470	\$277,781,480	\$516,565,560	\$1,012,432,500
Revenue	10% reduction in market share	\$23,285,948	\$74,650,023	\$250,003,332	\$464,909,004	\$911,189,250

Market Share (10%)	Scenario 1: Most Likely Scenario	Scenario 4: 10% Reduction in Market Share
NPV	\$10,253,492	\$3,485,022
IRR	21%	17%

The important point from this analysis is to highlight the direct correlation between slower than expected market share gains and a reduction in revenue. To mitigate this risk, VivaciousMe will implement its comprehensive sales and marketing strategies and focus on driving trial and gaining distribution during its launch year.

In doing the sensitivity analysis for VivaciousMe, the unit cost risk appears to be the most critical and commands the attention of senior management. As referenced, the launch price needs to remain stable and predictable for at least the first few years, which means decisive analysis must be completed prior to launching with a cost-based pricing strategy. It is essential that the brand launch with a financially sound cost-plus price, and management routines must be set up to monitor and correct for significant deviations from the established standard.

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