Wellware
M1

convenience.
customization.
freedom.

FEASABILITY REPORT
2017

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Team 88
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Smitt Corporation has contemplated the application of its knowledge of medical wearables in the product expansion for an all in one medical device. Our team of internal consultants was asked to analyze the feasibility of pursuing such a project. Initially named the V22, our product development team has culminated its efforts in the creation of the Wellware M1. This report reflects our conducted analysis of the M1 using key business considerations.

**Executive Summary**

The Wellware brand within Smitt Corporation offers convenience, customization, and freedom. Its initial product, the M1, is an FDA-certified, medical wearable that effectively tracks your health. Of the 1 in 5 Americans who own a wearable device, 75 percent of them want to track basic health metrics like step tracking, sleep activity, and calorie intake. The market for wearable, health-monitoring devices is expected to have strong annual growth in the foreseeable future. However, the M1 is more than just a health-monitoring device. The M1’s differentiating feature is its ability to continuously measure blood glucose levels in addition to body heat, electronic body impulses, and basic health metrics. Between 2015 and 2030, it is projected that the total number of people with diabetes will increase by 54 percent. We expect Wellware to remedy this need in the market.

- Based on our ten-year financial projections, we determined that the net present value of this project launch is positive and the internal rate of return of the project is greater than the cost of capital. This confirms that the project is profitable and worth the investment
- The M1 will allow Wellware to be a first-mover within the medical technology industry
- Due to the growth projection of diabetics and the wearable industry, significant increase in market share is expected
Overall we expect the initial cash outflow to be ($2,686,030)

Smitt Corporation’s reputable expertise and leading-edge knowledge in medical devices favors the successful launch of the M1 product. We also recognize that the nature of the M1 product belongs within a product category that Smitt Corporation has never encountered. The Wellware M1 project will be the first of its kind, pioneering an industry with relatively little competition. The expected growth in the number of diabetics also signals opportunity for M1 expansion. There are risks to consider as we establish ourselves in this new market. Though our product is unique, we are competing with both lifestyle wearables and continuous glucose monitoring devices. Additionally, very few Americans are familiar with Smitt Corporation. We are mitigating the risks and considerations listed above through comprehensive marketing strategies, and conservative financial and operational analyses to be found in greater detail within the rest of the report.

The project launch duration is estimated to be 27 weeks long. This is only possible by crashing the project and incurring ($109,900). Still, there is a chance of project failure if we cannot meet 27 weeks. However, there is only a 7.49 percent chance that we will not roll out the project by the required 27 weeks according to our plan. Other initial costs of launch include fixed asset expenses. We expect to lease our fixed assets as we produce and contemplate expansion or abandonment depending on year one production. In planning for the M1 launch, we have divided our market into three different segments in order of importance: diabetics, other medical conditions, and lifestyle consumers.

We estimated consumer perceived value of the M1, positioning us to pursue a More-for-More value proposition in the market. This value proposition requires the M1 to be seen in the market as a superior quality product. This expectation guides the manufacturing
of the device. To manufacture chips for the M1 device, we have chosen to use Smitt Corporation’s current supplier, GCS in consideration of consistency in quality. Their production will result in a total annual cost of ($193,700). Production for the other components of the M1 will be done using a machine-paced assembly process.

Our investment in quality must be accurately reflected in our communication of the M1. We’ll be promoting the product online, on social media, through TV advertising, and through our sales representatives. Our sales representatives will be placed into teams based on an assigned retail channel. We estimate cost per hire to be ($1,950) for each new sales representative. Sales representatives will be screened for extensive knowledge of customer service and should have a detailed understanding of product features in relation to key customer needs. They are expected to communicate points of the M1’s product differentiation. Of these qualities, some of the most important are that the M1 is an FDA-certified device that symbolizes convenience, customization and freedom. There are lifestyle wearables and blood glucose monitoring devices in the marketplace. Traditionally, these have been seen by consumers as separate industries. The M1 is the first device to merge the two industries into a unique product offering.

First we plan to sell the M1 online through a direct to consumer e-commerce site. As we build awareness through an online presence, we plan to leverage our established relationships with physicians to position our product as a solution for need-based consumers. We hope to manage our customer relationships well using CRM technology. Every decision within CRM will be made prioritizing the customer.
Though feasibility has been determined, it would be to Smitt Corporation’s discretion to introduce product kick off by the recommended date of December 10th.

The M1 project launch should be considered not only for its present results, but also for its distant future. Even in the naming of the M1, our vision included product extension and expansion. Our vision for Wellware is to see its name recognized beyond just the United States. Diabetes is a global epidemic. As we see the success of the M1 in the United States, we hope to remedy needs of consumers all around the world. Smitt Corporation places great value in providing high-quality medical devices that free the consumer from his or her medical burdens. Investing in this project would be the most lucrative opportunity as Smitt Corporation strives to lay the groundwork for a bright future.
Management Report

OVERVIEW

Vitate et quam ilit id ut ut earum fugitio rectur, si bere nullabo. Et quo officillam harume persper spierisci remporum et qui dusa alique que nam, sum, assi quat. Epero volorpor aut quatatur, sedit reium id quatintotas nam reri officid molut etum liquidebis et ent

Team 88
Wellware M1 Sales Representative Job Description

**Job Purpose:** Sell goods for wholesalers or manufacturers where technical or scientific knowledge is required in such areas as medicine, health monitoring, and electronics.

**Sales Representatives Job Duties:**

- Advise customers on product features
- Stock or distribute resources, such as promotional or educational materials.
- Identify prospective customers using business directories, leads from existing clients, participation in organizations, or trade show or conference attendance.
- Collaborate with colleagues to exchange information, such as selling strategies or marketing information
- Inform customers of estimated delivery schedules, service contracts, warranties, or other information pertaining to purchased products
- Complete expense reports, sales reports, or other paperwork
- Prepare sales presentations or proposals to explain product specifications or applications
- Emphasize product features based on analyses of customers’ needs and on technical knowledge of product capabilities and limitations
- Contact existing customers to discuss how specific products or services can meet their needs
- Visit establishments to evaluate needs or promote product or service sales
• Negotiate prices or terms of sales or service agreements

Knowledge/ Skills/ Abilities:

• Microsoft Office (Word, PowerPoint, Excel, Outlook)
• Customer Relationship Management Software
• Customer and Personal Service
• Sales and Marketing
• Administration and Management
• Understanding of Manufacturing Standards
• Understanding and Enthusiasm of Tech Industry
• Establishing and Maintaining Interpersonal Relationships
• Communicating with Persons Outside the Organization
• Resolving Conflicts and Negotiating with Others

Qualifications: College Degree in Professional Sales or a Business Related Field

Top KSAOs

• Customer and Personal Service: The M1 is a personal wearable monitoring device that assists the customer in living a healthy life. The M1 will become part of the customer’s daily life. It is a very personal experience. An effective sales rep-
representative should be able to assess the needs of the customer, meet expectations, and evaluate customer satisfaction.

- **Sales and Marketing:** Knowledge of the methods and principles used for selling and promoting products is key especially when it comes to a new medical device. Knowing who you are targeting and how you will convey the product to them is critical in the case of the M1, as the device relates to the physical health of the customer.

- **Communicating with Persons Outside the Company:** The ability to communicate effectively with people outside of the company is crucial. In order to increase the customer base and strengthen the brand, communication between Wellware and outside persons (general public, government, buyers, etc.) is vital.

- **Tech Understanding and Enthusiasm:** In order to be able to sell the M1, knowledge in the field of wearable electronics is essential. Customers will want to know how the technical side of the M1 works, so it is necessary for the sales representatives to have that general understanding and passion for the industry.

- **Establishing and Maintaining Personal Relationships:** In a customer focused environment, it is critical to develop constructive and cooperative working relationships with both co-workers and customers as well as maintain those relationships over time. Developing strong professional relationships will only increase team productivity and aid in fully understanding and satisfying customer needs.
Job Characteristics Model Analysis

- **Skill Variety (Medium):** Although a sales representative’s job is broadly related to sales, when it comes to selling the M1, there is a vast variety of tasks and assignments that are required throughout the day. Some examples include customer communication, sales data input, preparing presentations, computing cost and expense reports, etc. Additionally, a sales representative’s job requires both skill and innate talent in terms of personality and relating to customers.

- **Task Identity (High):** The sales representative position requires work along the whole timeline of the sale - from meeting the customer and pitching the product to finalizing the sale and assessing customer satisfaction.

- **Task Significance (High):** The M1 is a health monitoring device focused on people with diagnosed conditions (diabetes, etc.). This device will become a vital part of these customer’s lives. Selling the product directly results in the improvement of the customer’s life.

- **Autonomy (High):** As a sales representative, the employee possesses a great amount of freedom. Sales Representatives are able to schedule their day and various appointments in a any way they deem fit to be able to achieve sales based upon the needs, attitudes, and preferences of their customers.

- **Feedback (High):** As a sales representative, carrying out the work and selling activities allows for direct and clear feedback about performance. By interacting with customers, the sales representative is able to understand their preferences,
perspectives, and responses with regard to product, work quality, impact, and satisfaction. An integral part of the performance management system is a 360-degree feedback system provided for sales representatives.

High skill variety, task identity, and task significance lead to greater internal motivation. Given that the Wellware M1 Sales Representative experiences a variety of tasks, handles the entire sales process, and has a positive effect on the customer’s life, it is reasonable to believe that there will be a high level of internal motivation. Autonomy produces high quality work and satisfaction. Given that the job provides a high level of autonomy we expect it to elicit high quality work and a higher level of job satisfaction. Feedback, on the other hand, leads to lower absenteeism. Due to the effectiveness of the feedback system throughout the sales process, employees will be inclined to be present.

**Recruiting Advertisement**
The Wellware M1 Sales Representative job would be attractive to new college graduates because of the opportunity for professional growth and development. Sales representatives will be entering a fast-paced, innovative industry that offers an opportunity to have a positive impact on customer’s lives. Additionally, a great amount of autonomy is available. Employees will build meaningful relationships with people inside and outside of the company.

**Selection System**

After defining the specific KSAOs necessary to be successful, Smitt Corporation has developed an effective selection system that uses selection tools and evaluative methods in order to select the highest quality sales representatives while being mindful of the budget requirements.

1. **Personality Test (Extroversion):** Extroversion relates to being outgoing, assertive, upbeat, and talkative. With a validity of .44, it has proved to effectively predict salesperson performance in which a significant portion of the job involves interacting with others. Using the Extroversion Personality Test will directly assess KSAOs including communicating with persons outside the company, establishing and maintaining relationships, and personal and customer service, while also determining person-vocation fit or the alignment between the applicant’s attributes and the occupation.

2. **Cognitive Ability Test:** Research has shown that individuals with higher levels of general mental ability acquire new information more easily and more quickly, and are able to use that information more effectively. Since the scores on these
tests can predict a person’s ability to learn via training or on the job, be adaptable and solve problems, they show a reasonable validity of .43 for sales representatives. Cognitive Ability Tests will effectively assess the KSAOs related to understanding and enthusiasm for the tech industry and more specifically address the ability to effectively learn about the M1 and the medical/technology sector.

3. **Behavioral Interview**: Behavioral interviews are based on the idea that what applicants have done in the past is the best indicator of their future job success. A behavioral interview, with a validity of 0.4 will effectively measure KSAOs related to establishing and maintaining personal relationships, communication, and customer and personal service by asking about relevant experiences related to teamwork, leadership, and communication.

4. **Situational Interview**: Situational interviews involve asking people how they may react to hypothetical situations. By using a situational interview and asking candidates to describe how they would respond to different situations the KSAOs related to sales and marketing, personal and customer service, and establishing and maintaining relationships could be effectively evaluated. This may help professionals within the firm predict a candidate’s performance of key aspects of the salesperson job. Interviewers will also be able to get a deeper understanding of the thought process behind the response.

5. **Work Sample Test**: Work samples require a candidate to perform observable work tasks or work related behaviors to predict future job success. In the case of Wellware, the work sample test would be a simulated sales call with a doctor. With a validity of .55, a simulated sales call would effectively assess the KSAOs related to sales and marketing, personal and customer service, establishing and maintaining relationships, and understanding and enthusiasm of the tech in-
dustry. This may help professionals within the firm see how the candidate would perform key aspects of the sales person job.

By performing these chosen selection methods and evaluation tools, their high average validity and relevance to a sales position will allow Wellware to acquire the highest quality and most talented sales force while also staying within their hiring budget of $2,000 per hire. The total cost of the personality test, cognitive ability test, behavioral interview, situational interview, and work sample test is $1,950.

**Performance Evaluation System**

The job description guides recruitment and selection of employees. We want to recruit people who can complete the Tasks, Duties, and Responsibilities (TDRs) we need and have the Knowledge, Skill, Abilities, and Other Characteristics (KSAOs) required to perform the TDRs. This gives the organization a better chance of getting the best possible employees in the right jobs, therefore making the firm the most profitable.

Performance management serves as a way to evaluate the employees selected, and it can take many different forms. Regardless, the goal is to maximize productivity. Performance management can be looked at from a variety of perspectives including administrative, strategic, and developmental. Administrative decisions, such as which employees should receive raises, promotions, or demotions can be made. Relative approaches are best for achieving this purpose. Performance management systems also help the organization determine if they are meeting their strategic goals. The results approach is best for this. Finally, performance management systems help organizations develop their employees by providing feedback. Absolute methods are the best for achieving this
By implementing a performance management system that incorporates the absolute approach, results approach, and relative approach, our performance management system and performance evaluations effectively analyze administrative, strategic, and developmental purposes.

**Development and Absolute Approach: Behaviorally Anchored Rating Scales**

The absolute approach involves evaluating employees based on the definition of an excellent employee. Our system involves using behavioral anchored rating scales to evaluate performance in three specific categories, each relating to certain KSAOs and TDRs. This system will allow our workforce to develop and grow as professionals because they will be able to view their scores, receive feedback, and attempt to improve in the necessary areas.

Our three behavioral anchored ranking scales are as follows:

**Customer Service and Catering to the Needs of the Customer**

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<td><strong>Always assesses and focuses on the customer needs and thoroughly understands who the target market is and how the device can benefit that target market</strong></td>
<td><strong>Consistently assesses customer needs. Occasionally portrays the certain benefits to the specific target market</strong></td>
<td><strong>Assesses and focuses on customer needs most of the time. Does not spend time portraying specific benefits for the customer</strong></td>
<td><strong>Occasionally caters to specific customer needs but often does not spend the time understanding each target customer</strong></td>
<td><strong>Does not focus on customer needs and routinely neglects to explain benefits as they relate to specific customer</strong></td>
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This scale helps to evaluate performance in the area of customer service. Feedback on whether or not the sales representative is successfully engaging customers and focusing on their needs is crucial to success in this industry. Some KSAOs and TDRs evaluated here are customer and personal service, sales and marketing, advising customers on product features, and contacting existing customers to discuss how specific products or services can meet their needs.

**Communication and Relationship Building**

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<td>Always communicates techniques and tools with team members and works to build and maintain relationships with co-workers and potential customers</td>
<td>Consistently communicates with team members and occasionally works to build and maintain relationships with those team members and potential customers</td>
<td>Communicates with team members most of the time. Does not work to build and maintain relationships with colleagues and potential customers</td>
<td>Occasionally communicates with team members and often does not work to build and maintain relationships with persons inside or outside the company</td>
<td>Does not communicate with team members and fails to build and maintain relationships with co-workers and potential customers</td>
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This scale assists in the evaluation of overall communication effectiveness. From this scale, you are able to see how effective a sales representative is in terms of building relationships with those inside and outside the company. Some key KSAOs and TDRs evaluated by this scale are communicating with persons outside the company, establishing and maintaining personal relationships, visiting establishments to evaluate needs or to promote product or service sales, and collaborating with colleagues to exchange information, such as selling strategies or marketing information.
Enthusiasm about the MedTech Sector

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<td>Always is willing to learn more about the technology and constantly applies the knowledge when communicating with customers</td>
<td>Consistently willing to learn more about the technology and usage of the device and occasionally applies the knowledge when communicating with customers</td>
<td>Willing to gain knowledge about the technology but does not effectively use the knowledge when communicating with customers</td>
<td>Occasionally has the will to learn more about the technology. Does not apply said knowledge when communicating with customers</td>
<td>Is not willing to learn more about the technology. Does not apply additional knowledge when communicating with customers</td>
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From this ranking scale, sales representatives will be evaluated based on their will and desire to gain knowledge on not only the M1 and Wellware, but the medical benefits and that industry as a whole. Some important KSAOs and TDRs that can be evaluated by this ranking scale are preparing sales presentations or proposals to explain product specifications or applications, emphasizing product features based on analyses of customers’ needs and on technical knowledge of product capabilities and limitations, advising customers on product features, contacting existing customers to discuss how specific products or services can meet their needs, and understanding and enthusiasm of the tech industry.

Strategic Congruence and Results Approach: Goals

We chose to set goals in relation to both behaviors and results because, as seen in the graph below, there are quadrants in which great behavior leads to poor results or great results come as a result of poor behavior. Despite these “off quadrants”, the employee may still be fulfilling the company’s strategic goals.
Behavioral Goal: Contacts or Communications (such as sales calls or visits)

Results-Focused Goal: Sales Revenue Goal

In order to effectively track progress and plan for the long range future of Wellware, both the behavioral and results-focused goal can be evaluated on multiple time frames simultaneously. For example, there could be a daily goal, a weekly goal, a monthly goal, a yearly goal, etc. In that manner, ups and downs of activity will even out over the long run and benefit the organization assuming the goals are achieved.
The results approach and the corresponding behavioral and results-focused goals will evaluate all KSAOs and TDRs in a holistic way. If an employee is successfully performing the TDRs and KSAOs, they will likely be meeting the goals set by management. We chose to develop a results-focused component since it allows for strong strategic congruence, elicits the employee in the process, and emphasizes action and results. While the results approach can potentially prioritize results over behavior and the employee may not have control over the outcome, those downsides are mitigated by the use of multiple other methods including the absolute approach and behaviorally anchored rating scales as well as the relative approach and forced distribution.

**Administrative and Relative Approach: Forced Distribution**

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Our human resources team informed us that Smitt Corp. currently uses ranking for its bonus structure, and it hasn’t been the most effective. We chose to instead implement a forced distribution system since it provides great data for administration. 10 percent of Smitt Corporation’s salesforce will be distributed to the “poor category”, 70 percent will be placed in the “good category”, and the top 20 percent will be placed in the “excellent category” (See Appendix). Although this system may not perfectly reflect a sales representative’s job performance, those downsides are mitigated by the use of multiple other methods including the use of behaviorally anchored rating scales and results-focused goals.

**Compensation System**

Currently, sales representatives earn bonuses for selling more than the expected amount. The person with the most sales in a given year automatically gets the highest bonus, because the bonus is based on the amount they sell. This system has proven to be ineffective. We have developed an all encompassing compensation system that takes into account components including base salary, benefits and perks, commission, and profit sharing.
Given the nature of a sales position, the base salary represents a relatively low percentage of an overall sales representatives compensation, but can be seen as the foundation of the compensation system. A current sales representative discussed additional benefits such as insurance, a company car, gas allowances, a cell phone plan, and an entertainment budget for clients. Based on the fact that successfully selling the M1 requires personal relationships with customers and frequent visits to clients, we found the additional benefits and perks noted above to be key benefits that should be included in the Wellware M1 Sales Representative’s compensation package in order for them to perform their job to the highest level. Throughout the workweek, sales representatives travel often, sometimes seeing 10-15 doctors a week. The base salary component along with the additional benefits and perks will make up the guaranteed portion of the salesperson’s compensation.
Commission and profit sharing compose the portion of compensation that is based on performance and is at risk. Commission is frequently seen throughout professional sales. The more sales you generate, the more commission-based income you earn.

The Smitt Corporation Human Resources Team thought the traditional ‘lone salesperson’ approach may not make sense for the marketing focused, retail environment of the M1 as it may not be reasonable to expect one person to handle such a complex assignment. We find value in creating sales teams. The compensation elements related to base salary, individual commission, and additional benefits will compensate sales representatives individually. We found this to be of value when looking at goal setting theory. The relationship between goals and performance is strengthened when the person achieving the goal can act independently.

Profit sharing on the other hand plays a key role in enhancing the team selling dynamic. Since every member contributes equally to the work, they all receive the same proportion of profits in the form of a bonus. Rewarding the group is important when the workers are dependent upon one another to achieve goals. Group-based rewards incentivize people to work with one another and think about how their work affects those around them.

In considering the elements above, it was decided that 55 percent of the sales representatives’ salaries will be guaranteed, while the remaining 45 percent will be based on performance. The overall compensation is split in this manner because of data that was presented in an interview with a sales representative. The starting base salary for a sales representative with minimal experience is $50,000 a year plus benefits. An additional $20,000 may be earned through bonuses. Research has shown that on average 30 to
50 percent of sales representatives’ total earnings are based on commission. We created this commission component based on these industry averages, however we recognize that commission is relative to each individual company.

Expectancy theory can be used to motivate Wellware Sales Representative’s. At Wellware, we hope to motivate our sales representatives through the incorporation of expectancy, instrumentality, and valence. Sales representatives should see a high correlation between their efforts and performance. When a Wellware sales representative maintains positive relationships with customers, he or she should naturally see a high number of sales. A high number of sales should be rewarded. We expect to use commission and profit sharing to reward our sales representatives. However, we recognize not every sales representative will appreciate an exclusively monetary reward. Beyond monetary compensation, we will intrinsically motivate our employees with initiatives like employee of the month.

**Importance of Sales Teams**

We find value in implementing a sales team approach for the M1. Organizations use teams to facilitate communication, coordination, and synergy, which is the idea that you achieve more in a team than a single person can.

We have implemented a profit sharing plan in our compensation system where sales representatives are required to work in groups. Group-based rewards provide incentives for people to cooperate with one another and think about how their portion of the task affects those around them. This sense of responsibility can lead to higher employee performance to the betterment of the company. Sharing of information, collaboration, and
coordination are additional advantages of rewarding the sales team as a whole. Information sharing is another result of a profit sharing plan. When group members have access to each other’s work, this leads to increased group productivity, coordination, and collaboration. This has a strong positive effect on group performance. All in all, the use of team rewards leads to an increase of ideas, perspectives, and productivity for Wellware.

There are clear benefits to rewarding the team as a whole, and there are a few disadvantages to address. In the situation that the team is rewarded as a whole, there is an opportunity for inequity of contribution. Rewarding on a team by team basis distributes compensation equally, however, this may not accurately reflect each individual’s contribution. An individual can grow resentful and withdraw engagement. This resentment may also weaken team morale and impact the quality of performance and deliverables. It is our hope that these potential disadvantages will be mitigated by having both team focused and individual elements to compensation.

With the adoption of sales teams, Smitt Corporation will need to adjust their selection criteria. Such criteria can be found in the previous section titled “Selection System”. As mentioned, behavioral interviews, situational interviews, personality tests, and team related selection criteria are all components that should be considered in establishing a team oriented selection process.

Once employees have been hired, the team based sales approach continues to impact the performance management system. There are two aspects to job performance, task performance and contextual performance. While it is always important for evaluation systems to assess both aspects, this becomes even more critical in a team based environment. It would prove beneficial to implement a multi-view evaluation system in which
employees are evaluated not only by superiors, but also team members, coworkers, and customers. In addition, we plan on having team members fill out the relevant behaviorally anchored rating scales periodically to identify the employee’s strengths and weaknesses within a team allowing them to grow and develop professionally. By using a variety of performance evaluation tools, we will effectively assess teamwork skills, communication, and collaboration while assessing individual performance.

**Elements of Company Culture**

As the M1 device is a part of a changing industry, an innovative company culture is necessary to embracing a continuously changing environment. The device is a product that uses cutting edge technology, so in order to continually learn and fully understand the changing industry, we hope that our sales representatives will be idea champions. The values mentioned below are those that will drive the innovative core we are looking for in the sales team.

One value that will be essential for the sales team is encouragement to think outside of the box. We hope to communicate to our sales representatives that we are comfortable with mistakes that constructively contribute to the improvement of their work. Wellware is attempting to penetrate an unestablished market with no current precedents to base current sales strategies or techniques, therefore the value of teamwork is crucial. An emphasis on teamwork values like collaboration and communication will guide the establishment of successful sales strategies within a premature market. Though Wellware is a brand built around teamwork, we also care about the development of each sales representative. We hope our company culture can reflect care and concern for each employee as we do for our customers.

In order to ensure that these values are at the core of the sales force team, it will be
important to provide opportunities to grow and take risks. To make certain the sales force is willing to think outside of the box and make mistakes, stressing job security to each sales representative from the beginning is vital. Team building and bonding activities can help build relationships between people in the sales force which will increase willingness to collaborate and share successful tools and techniques. Also, going back to our compensation strategy, our team profit sharing portion will increase communication between team members as they will want the team to succeed in order to receive a higher overall compensation. In terms of ensuring the salesforce’s continual growth in knowledge about the industry and technology, providing training and development opportunities will allow them to have a consistent channel to expand their understanding of the industry. The absolute and behaviorally anchored rating scales portion of our new performance management system will also contribute to employee development via feedback from management and co-workers.
Appendix B


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As it pertains to our entire marketing submission and the decisions we strategically made, we have focused our analysis on the beginning stages of product release. Future expansion and development was considered, but the bulk of the justification is initial in nature.

**Industry Overview**

With the technological advances the United States has experienced in recent years, the industry for wearable devices has grown exponentially. From 2014 to 2016 alone, wearable device unit sales in the United States increased from 23 million to 50 million, and wearable health-monitoring devices are also expected to have a strong annual growth for the foreseeable future. Globally, nearly 40 million wearable devices were shipped in 2016 according to Forbes.

The wearable device industry covers an array of market segments that involve many different functions for the end consumer. Some examples of these different types of devices include healthy lifestyle wearables, wrist sport performance trackers, smartwatches, and locators. Of the 1 in 5 Americans who own a wearable device, 75% of them want them to track health and medical information. As of 2015, the healthy lifestyle wearables accounted for 30% of the total United States wearables market.

The healthy lifestyle wearables market includes top brands such as Fitbit and the Apple Watch. Although it is true that these two devices have a very high brand recognition in the healthy lifestyle wearables market, the M1 will not necessarily be competing within the same segment, as the market the M1 is entering will be mainly geared towards those
with medically diagnosed conditions as a monitoring device.

As we learned from Smitt Corporation previously, the 2017 forecasts looked bright for the medical testing and monitoring market. The global industry is expected to grow over the next 20 years. Expert sources expect the industry to grow globally to over $12 billion. The industry in the United States specifically has seen tremendous growth. This high market growth rate could be due to an increased emphasis on preventive medicine, the increase in the number of Americans that are overweight, and a substantial elderly population. Specifically, the blood-glucose monitoring device market that Smitt Corporation has become known for shows strong potential, and as of right now no single firm has captured that market. It has been stated by our research and development team that the self-monitoring blood-glucose market is primarily dependent on the number of diabetic patients. The growth in diabetic patients over the last few years has caused the blood glucose monitoring device market to continually grow.

In addition, global trends show the following:

- There is a high risk of diabetes among an aging population both in the United States and in key global markets.

- Scientific studies increasingly link obesity with diabetes, and obesity is on the rise in the United States and key global markets.

- There is a rising incidence of diabetes in children.

- Growing self-care offers opportunities to consumer products.
Market Segmentation

Market segmentation is dividing the market into groups of customers with distinct characteristics, behaviors, or needs. It is important that the segments are different from one another and that those differences are important parts of the firm’s marketing effort.

Lifestyle

We recognize that a small portion of our consumers will be comprised of individuals buying the M1 simply for its advanced ability to perform as a lifestyle wearable. This group of consumers will likely consist of professional athletes, medical professionals, and actively health-conscious individuals. The current dominative nature of Fitbit and Apple Watch within the lifestyle wearable market, leads us to the assumption that life-
style consumers will make up a very small portion of Wellware’s customer base. No direct efforts will be made to target this market because it simply would not be profitable.

**Medically Diagnosed Conditions**

The M1 is marketable to both people supporting a healthy lifestyle and those with a medical need to monitor bodily vitals such as blood glucose, body heat, body electrical impulses, and more. The market share for healthy lifestyle wearables is currently dominated by products such as Fitbit and the Apple Watch, which are recognized as innovative technology companies. Smitt Corporation has a medical orientation, and accordingly the FDA approved wearable will service a market based upon medical needs. The differentiating ability for the M1 to assess blood glucose levels greatly sets this wearable apart from any of its current competitors. Additionally, very few medical wearables that measure other medically associated bodily vitals even exist.

The target consumer group that Smitt Corporation will be marketing the M1 to are individuals with diagnosed medical conditions which require frequent tracking of the specific medical vitals registered by the device. We identified blood glucose monitoring as a specifically useful measurement for our target market, thus, for the purposes of analysis, consumers will be grouped by those acquiring the wearable for diabetes related reasons, and those acquiring the wearable for other medical conditions related the the M1’s functionality. Diabetes is present in various forms within the United States: Type 1, Type 2, and Gestational. These types span across a vast demographic of individuals of varying gender, age, race, socioeconomic class, and lifestyles. This diverse market highlights the
need for blood glucose monitoring as a standout feature of the M1. We will be segmenting our diabetic consumers into Type 1, Gestational, and Type 2 with subsegments of adults and youth.

**Diabetes**

Diabetes is a growing global epidemic. Diabetes is the condition in which the pancreas cannot properly break down the glucose in food in order to provide energy for the body. Due to a lack of sufficient insulin levels, too much sugar gets retained in the bloodstream which can lead to further health complications like heart disease, blindness, kidney failure, and extremity-amputations. According to the World Health Trade Organization, over 442 million adults have been diagnosed with diabetes globally and that number is growing. The United States holds the largest number of diagnosed diabetics at over 30 million people. According to the Center for Disease Control, in 2015, diabetes was the seventh leading cause of death in the United States. Between 2015 and 2030, it is projected that the total number of people with type 1 and type 2 diabetes will increase by 54 percent and the cost of diabetes will increase to $622.3 billion. Diabetes’ increasing prevalence and severity within the United States has called the attention of many new medical innovators hoping to address this growing need. This market trend provides great opportunity for Smitt Corporation to use their expertise in diagnostic medical devices to create a product that addresses the needs of diabetics in the United States. It is important to note that the diabetic population has historically been an important segment for Smitt Corporation regarding profitability. We believe this segment will only continue growing in profitability, therefore it should continue receiving priority attention from Smitt Corporation. While diabetes is an increasingly popular topic, there are few innovators that have paired the all-encompassing attention to diabetes with
user-friendliness like Wellware’s M1 device. Smitt Corporation can reap the benefits of being a first-mover within this market segment if it can approach the needs of its consumers strategically.

**Type 1**

Type 1 diabetes is characterized by deficient insulin production in the body. The exact causes of type 1 diabetes are unknown. It is generally agreed that type 1 diabetes is the result of a complex interaction between genes and environmental factors, though no specific environmental risk factors have been determined. Type 1 diabetes can appear at any age but is most commonly found in children and adolescents. People with type 1 diabetes require daily administration of insulin to regulate the amount of glucose in their blood. If they do not have access to insulin, they cannot survive. This highlights the importance of having constant access to blood glucose levels. About 5% of people with diabetes are estimated to have type 1 diabetes.

Although Type 1 diabetics make up a smaller population of diabetics in the United States, this particular group is the target of most glucose monitoring devices. This consumer group faces the most severity in long-term health consequences and is therefore relatively inelastic in their relevant purchasing decisions. Within this consumer group, it is important to note that a large category of these consumers are parents with diabetic children. Smitt Corporation can assume this consumer group has already been predisposed to a product like the M1. The M1 offers convenience in monitoring glucose levels and other health conditions that would be relevant to the daily activities of Type 1 diabetics. We expect that capturing this segment of the market would be reasonable even at higher prices due to the inelastic nature of continuous blood glucose monitoring in the
market. The greatest benefit to this segment is that the M1 can offer greater freedom, tighter control of glucose fluctuations, fewer complications, and greater ability to live more “normal” lives.

**Type 2**

Among all diabetics, 90-95 percent of them are classified as Type 2 diabetics. The most common classification, Type 2 diabetes, results from the body’s ineffective use of insulin. Common causes of Type 2 diabetes can be traced to genetic or metabolic factors. Ethnicity, family history of diabetes, previous gestational diabetes, older age, overweight and obesity, unhealthy diet, physical inactivity, and smoking are all correlated with increased risk in Type 2 diabetes, obesity being the most prevalent cause. Type 2 diabetes can be found in both children and older adults. We recommend focusing on the older adult age group within type 2 diabetics as research has shown that the percentage of people with type 2 diabetes increases with age. Among those 65 and older, the incidence rate of diabetes reaches as high as 25.2 percent. Though this segment is less inelastic than those suffering from type 1 diabetes, there is great opportunity for Smitt Corporation’s M1 device to address the monitoring needs of conscious type 2 diabetics. For those with a greater concern for health and prevention, the M1 can benefit this segment in creating a more regular routine in which these consumers can stay on top of their diabetes. Exercise is an important part to living with diabetes in addition to constantly watching blood glucose levels. All the additional features of the M1, such as monitoring blood sugar levels during sleep and exercise tracking would appeal to a type 2 diabetic looking to conveniently create a healthy lifestyle.
**Gestational**

Gestational diabetes develops during pregnancy and causes high blood sugar, which can in turn affect a child’s health. This type of diabetes typically develops during the second half of a pregnancy and is more common in women who have pre-diabetes or are significantly overweight. The cause of gestational diabetes is directly related to the fact that as a woman’s baby grows, the placenta then creates more and more insulin-counteracting hormones. These placental hormones can create a rise in the woman’s blood sugar level which can put the child at risk for excessive birth weight or early birth and respiratory distress syndrome. It is estimated that around 16 percent of women develop gestational diabetes within the United States. This group is a valuable portion of the market because during pregnancy, women typically take the safety of their unborn children very seriously. The M1 gives women greater ease throughout their pregnancy because they will have the ability to keep track of necessary vitals and constantly determine glucose levels to ensure that their child is born healthy.

**Non-Diabetics/ Other Medical Conditions**

It is important to recognize that the M1 is not simply a device for those with diabetes, but instead a piece of technology that assists a large sector of people with certain medical conditions that would benefit from the array of features that the M1 tracks including body heat, sweat, and body electrical impulses. While diabetics are a large target market for the M1, because of its ability to measure more than just glucose levels, there are many other medically diagnosed groups that would find value in this wearable technology. For example, those with hyperthyroidism tend to have a low body temperature and the M1’s ability to measure body heat is remarkably valuable to their health. Cardiovascular disease is closely related to diabetes because both groups tend to avoid ingredients
such as sweeteners, trans fats, sodium, and cholesterol. Because of this and the fact that heart disease is the leading cause of death for both men and women, those with heart conditions such as cardiovascular disease or coronary heart disease are key players in the market because they too closely monitor their illness and overall body activity. Other medically diagnosed diseases that would benefit from the M1 include hypoglycemia, kidney disease, muscular conditions, celiac disease, and nerve damage. For people with these and other medical conditions, the M1 would present a relative advantage given that they would not only be able to track activity and calorie consumption, but also key medical vitals, all in a single device.

Value Proposition

Smitt Corporation is confident that a More for More Value Proposition strategically aligns with the nature of the M1. A More for More Positioning Strategy involves providing the most upscale product or service and charging a higher price to cover the higher costs.
The M1 wearable device and app is to be sold as a broad spectrum blood monitor. In many ways this product could replace the traditional monitor device where the consumer pricks his or her finger, draws blood, and measures blood glucose levels. Healthy lifestyle wearables such as the Apple Watch and Fitbit already measure heart rate, calories burned, and steps while occasionally syncing with smart phones. In addition to those features, the M1 presents many more benefits. It is a medical device and will be approved by the U.S. Food and Drug Administration, so the primary role of this product is to help those with illness monitor their vitals. Unlike most consumer wearables, the M1 would measure sweat, body heat, activity, body electrical impulses, and a combination of signals to monitor health. These additional features that other healthy lifestyle wearables do not offer leads to a higher cost. With that higher cost comes an increased value to the consumer.
Positioning Statement

To health-conscious and medically diagnosed individuals looking to conveniently monitor their lives and vitals through technology, our Smitt Corporation M1 is a medical wearable, unlike any other, that is designed to constantly monitor the critical vitals important to your health.

Key Communications to the Sales Force

The fact that the M1 device is a medical device first and a fitness tracker second makes it vital for the sales representative to have the necessary medical knowledge. It is understood that each consumer may have different medical conditions, and knowing which
features of the M1 assist with the monitoring of certain conditions is crucial in understanding the segment that is being sold to. As it makes up a significant market segment, in the case of selling to diabetics specifically, it is important that the sales representatives know the importance and medical benefits of continuous glucose monitoring, a recognizable advantage of the M1, so that they can convey these benefits and relative advantages to diabetics. As this is a new product in the industry of wearables, it will be of major importance for the sales representative to understand that the M1 is an all-in-one fitness and health condition monitoring wearable.

It is likely that a sales representative could be asked about the wearable industry in general, so an understanding of the wearable sector is necessary. For example, seeing that Fitbit had over 20 million unit sales in 2016 alone, it is crucial for the representative to be able to indicate how the M1 is not necessarily within the same consumer segment, but still offers some of the benefits of a lifestyle wearable.

In its simplest form, Smitt Corporation’s Medical Device Sales Representatives need to know the specific needs of the various consumer segments and frequent medically diagnosed conditions that can be managed and monitored using the M1. Additionally, it is critical that the sales representatives know exactly how the M1 benefits each medical condition or health conscious individual. In order for sales representatives to understand the various medical conditions the M1 assists, as well as how the device works and benefits individuals with each medical condition, a significant amount of training and education may be necessary once sales representatives are hired. Although this would increase the length of the onboarding process, a firm understanding of these characteristics will lead sales representatives to understand the needs of individual customers while
in turn selling strategically to them based on those needs. This will increase profitability.

**Condition Specific Required Information**

**Daily Routine**

Though the M1 boasts unique features for our target consumers, it is equally important for customers to know that the M1 is an all-encompassing device that includes the tracking of activities important to one’s daily life like step-counting, sleep tracking, calories burned, and more.

**Blood Glucose Monitoring**

Blood glucose monitoring is one of the best ways to control diabetes. Knowing your blood glucose level and keeping track of trends could help you determine what might make your blood glucose level increase or decrease. For example, you could know how nutrition and physical activity affect you. It may even help you understand how you feel when your levels are too low or too high. This would provide yet another avenue for management and proactive care of one’s diabetes. Diabetes affects people differently, and both high and low blood-glucose levels could jeopardize your daily life. Therefore, getting a continuous blood-glucose monitoring device is very important for a person with diabetes to maintain a healthy lifestyle.

**Body Sweat Monitoring**

Health conscious individuals and those with various medical conditions can experience difficulties with excessive sweating. This becomes a key concern in terms of adequate hy-
dration. It is also important to note that abnormal sweat can signal medical conditions. Daily, people don’t always notice atypical sweat patterns but if they have a device that can continually monitor it, the connection between irregular sweating and overall health can be assessed.

**Body Heat Monitoring**

People with diabetes and other health conditions could have higher risk for other illnesses relating to body heat. Also controlling your body heat has important consequences on cardiovascular regulation and glycemic control. On the other hand, proper glycemic management and aerobic fitness could delay health complications due to heat loss.

**App Availability**

App synchronization is a very convenient function that allows you to track and keep record of overall health. It also easily helps people review their information related to their health and fitness through their phones. This allows him or her to make schedules and goals that are right for his or her specific needs.

**Priority Retail Channels**

After considering all types of retailers, we have chosen four priority retail channels that allow for diversification between direct and indirect channels. These include online sales, healthcare providers, retail stores through medical distributors, and Amazon.
**Direct to Consumer: Online Site**

We will initially be introducing our product on Wellware’s website and selling directly to consumers. During this primary stage, we will focus on attracting early innovators who are health conscious and tech oriented individuals. We recommend establishing an online presence early on in order to address the customer’s legitimate need to both research and understand our product before purchase. As we attempt to establish Wellware as an innovative name, this direct-consumer channel allows Wellware to establish relationships with our customers and communicate the relative advantages of the M1 that distinguish it from its competitors. These early innovators will mainly include type 2 diabetics and other non-diabetics with medically diagnosed ailments. This is a relatively elastic marketspace because these individuals are not in dire need of the product. Eventually, early adopters, who are more need-based consumers, will begin to buy the device as they have been in search of the additional features. It is important to note that online sales are the initial form of marketing to these early adopters, but the online website will continue to be a primary channel of sales as we continue to introduce the other channels mentioned earlier.
Selling Through Healthcare Providers

The second stage of distribution focuses on retail channels in which sales representatives will communicate to physicians.

Physicians

Smitt Corporation has historically sold devices through the use of physicians as an intermediary. Sales of Smitt Corporation’s monitors through physicians had previously resulted in low relative market share. We believe that this channel is still indispensable in capturing the need-based consumers who are heavily dependent on the counseling and recommendations of their personal physicians. For example, Type 1 diabetics and those with severe health conditions are in more frequent contact with primary care physicians and are most readily persuaded to adopt a new technology or medication upon a doctor’s referral. We would classify these consumers as early adopters and the early majority. The use of physicians leverages the power in a doctor’s referral to those who value it most. Doctors are also the people who know their patient’s medical conditions the best. Smitt Corporation’s goal is to sufficiently address the needs of its consumers. It would be a mistake not to use physicians to our advantage due to their ability to identify the specific needs of their patients and advocate the M1 as a device that can be used to address those needs. Visiting a physician is a very personal experience, and the M1 is a very personalized device which makes this channel a fitting platform.
Medical Distributors: Select Retail Stores

We will be utilizing medical distributors as a third party broker to disperse our product throughout brick-and-mortar stores that sell medical and health related products, like pharmacies and drugstores. These distributors will simply be intermediaries between Smitt Corporation and the retail stores. This will allow us to have greater control of the M1’s marketing, merchandising, and brand equity, while minimizing distribution costs. Additionally, implementing a third-party distributor grants you access to the distributor’s channels, connections, and relationships within the industry. An inherent benefit of utilizing distribution partners is the natural dissemination of information about the M1 in relevant markets which will lead to increased publicity.

Online Distribution

Once the M1 gains enough recognition within the marketspace, it will be better positioned to be offered at a discounted price through lower-cost providers. For the purpose of ease and maintaining brand equity, Amazon will be a key component in retailing the M1 to the wide-scale online marketplace. Amazon’s lower cost and mass market reach will target the far and wide consumers of this medical device as well as capture customers looking at the M1 as an elevated lifestyle wearable.

An important strategy to keep in mind as we discuss our preferred retail channels is the idea of market skimming. Market skimming is a common strategy among luxury and innovative technology products such as the M1. We strategically chose to use a price skimming strategy as a way to continually maximize consumer perceived value within each consumer segment. Those consumer segments who are willing to pay a higher price for
our product net a higher consumer perceived value. Some people will naturally see more value in the product than others due to perception. Having a variety of retail channels and a timeline allows us to skim prices by consumer segment. It also aids in determining the consumer segments that comprise each stage of adoption

**Consumer Perceived Value**

For the purposes of this consumer perceived value analysis, we are only considering the launch stage in which our most inelastic consumer group determines our CPV and initial selling price. The features of the M1 include glucose monitoring, sweat and activity measuring, and the monitoring of other physical conditions. These physical features fulfill greater intrinsic needs of our consumers. The value in the M1 is that such a device relieves the burden of taking care of one’s medical conditions. What our device really offers is convenience, freedom, personalization, and peace of mind. Our goal is to better understand the monetary value of these perceived benefits in order to determine a price and ultimately satisfy and exceed customer expectations.

Also taken into account are the costs in making the M1 which determines the price floor. A purchasing decision will only occur when Smitt Corporation’s customer sees the price of the M1 being equal to or less than the perceived value of the product, and when the price is greater than Smitt Corporation’s incurred cost for each device. Our operations team has given us an estimated variable cost of each device being between the $29-$38 range. Our finance team has also given us an estimated variable cost of around $22. We move forward with our analysis assuming a conservative price floor of $38 for each device to arrive at a range of possible starting sales prices broadly derived from this analysis.
Our customers are seeking the improvement and simplification of their daily lives. Comparable products have given us insight into the monetary value of the benefits of the M1 for consumers. For example, lifestyle wearables, such as the Fitbit and Apple Watch, offer the customer freedom and personalization by tracking activity and syncing with apps. They are priced at around $400, varying slightly by features. In contrast, traditional glucose meters and strips offer peace of mind, but not convenience since they showcase readings at a specific point in time and require you to interrupt your life in order to test. They are priced at around $50 dollars for the meters and an additional $10-$30 are incurred for every repeat purchase of the strips.

Continuous glucose monitoring devices can sell for around $1000-1500. Though we used a price of $120 in order to estimate financial projections, given the benefits of the M1, the monetary value of consumer perceived value would be closer to the following estimation:

\[ \text{CPV} = \text{Smartwatch Capabilities ($400)} + \text{Medical Certification ($1000)} + \text{Psychological Peace of Mind} + \text{Convenience} + \text{Variable Cost ($38)} = $1,438 \]

When taking into consideration all of the relevant alternatives, we would value the Wellware M1 device at an initial starting price of $1,438.
Promotion

Promotion plays a key role in the delivery of a profitable product and serves as an opportunity to elevate the brand positioning in the minds of the consumer. In terms of promoting the M1, some of the most effective promotional strategies include personal selling, direct marketing, advertising, and public relations and product publicity. Each of these promotion strategies will be discussed in order of importance.

1. Direct Marketing

Direct marketing is connected with target consumers that solicit a response while building lasting customer relationships. Items such as a website and social media fall under this category. In the case of Wellware and the M1, direct marketing will take the form of the increased social presence and an online e-commerce site, Wellware, and “how-to” videos posted throughout social media platforms including Youtube. These are platforms that create an interactive environment that educate the customer about the M1’s distinctive benefits.

2. Personal Selling

Personal selling can be described as a personal presentation by the firm’s sales force for the purpose of making sales and building relationships. Due to the fact that the M1 is a very personal device that impacts the lives of the customer, personal selling is of the utmost importance for our sales team. By visiting physicians and healthcare providers and communicating with medical distributors, they will be building relationships with customers and assessing the customer’s needs in order to emphasize benefits of the M1 for them in their life.
3. Public Relations and Product Publicity

Public relations plays an important role in obtaining favorable publicity and developing a positive corporate image, especially for companies with innovative products like Wellware. Within public relations is the concept of product publicity or managing the message about products to make them newsworthy and gain positive placement and attention. The ground-breaking nature of the M1 with its vast array of features and FDA-certified continuous monitoring of vitals all within a single wearable, warrants the need for discussion of the product in press and news sources. The newsworthy topics we expect to see cycle through the media include Wellware’s FDA approval of the M1, the revolutionary nature of continuous glucose monitoring with merely a wrist-wearable.

4. Advertising

When it comes to advertising, specifically for the M1, the use of television will prove to be highly beneficial. Television advertisements are good for mass marketing coverage and appeal to all senses by combining sight, sound, and motion. Ads can be distributed nationwide on a variety of channels, and these ads would serve as a way to bring the device to life by allowing potential customers to see how the device works all while witnessing the power of the M1’s benefits. Research has also shown that tv advertising has a large contribution to the long-term success of a brand and the maintenance of its brand equity.

Push and Pull Promotion Strategies

Given the priority retail channels chosen for the M1, using both push and pull strategies will lead to the most effective result. Promotion and communication related to the e-commerce site, how-to videos, and television ads will go directly to the custom-
er prompting them to visit any channel such as e-commerce, doctors, hospitals, and healthcare providers, or retail locations to find the product. The element of push strategies becomes primarily relevant for the medical distributors that will sell to medical and health focused retail stores which will then sell to consumers. Promotion in this sense will trickle down through the channel.

**Advertising Campaign Tools**

**Consistent Brand Layout**

It has been proven that all successful promotional campaigns possess at least one of these elements. In relation to the M1 in particular, and when considering the concept of integrated marketing communications, it becomes clear that having a consistent layout throughout all communications is critical. By using a consistent layout, the brand provides a unique design and the elements of that design can be found in every communication for the brand or product. A consistent layout and design allows customers to easily identify your brand. The use of a consistent layout builds familiarity and therefore trust in the mind of the consumer. Regarding the M1, a medical wearable that customers will essentially partner with and use to monitor and improve their health, we hope to take advantage of all promotional opportunities to further build trust in our product and brand.

**Repeatable Theme**

A repeatable theme would be of great benefit when promoting the M1 as well because it consistently present and calls out the need for a company’s product. Consumers love to
see the setup played out in different situations. Repeatable themes lead the customer to feel connected to your brand given that they know how the situation will play out which leads customers to feel like an insider. As it relates specifically to the M1, education and how-to videos, as well as television advertisements, can offer a consistent theme that shows off the product and how to effectively reap the various benefits through use. It is possible that separate advertisements could each feature someone with a different medical condition. After viewing the full range of advertisements, through the repeatable theme, potential customers will not only recognize and feel connected to the brand, but will also emphasize the M1’s value as an all-in-one medical wearable that assists with multiple aspects of health and wellness.

**Web Page Framework and Messaging Aspects**
Usability Customized to Consumer Segments

In contemplating what constitutes good web design, the user’s experience of navigating a web page is important to consider in hopes of leading him or her to a purchase decision. Our promotion strategies are derived from the segmentation of our consumers and we expect to have potential buyers coming to our website from each of those three segments. Since these consumers will be looking to purchase the M1 for different reasons, having buttons that the user can identify with to easily access information about the product, provides quick and simple navigation which will result in the greater likelihood of a purchase to be made.

Communication of Value

The first thing we want users to see is the value in our product. Wellware is positioning itself in the market based on the belief that our product is inherently differentiated in quality and concept. Our product addresses a combination of consumer needs that we believe no other product is meeting in the market. The consumer’s perceived value in the product is that it conveniently allows someone to personally and constantly monitor their health in order to freely live their lives without burden.

Call to Action

Not every user that stumbles upon our website is looking to purchase our product immediately. For those that do wish to purchase through our online channel, we hope to lead them through the process with the ease of a click of a button located right on the homepage.
Physical Features, Benefits, and Tutorials

We expect many consumers to search through our website looking to learn more about the product. Within the navigation pane, “How it works” will lead the user to a page that describes the key features of the wearable (i.e. glucose monitoring, sweat and body heat measurements, sleep activity, etc). Tutorials of how to use the product and integrate it into one’s daily life will also be posted here.

Target Consumer Segments

Here we want to communicate the importance of our consumer segments to Wellware. We have the opportunity to describe our passion for helping diabetics and anyone limited by a medical condition.

Research and Education

We want to emphasize Wellware’s commitment to continuing research and cultivating our image of innovation and cutting edge technology. Any health-related articles, blog posts, news, or forums we wish to share with the user will be posted here.

Online Accounts

Access to online accounts for established M1 users should also be located on the website so they can easily login and view their metrics. Our distribution partners also have the opportunity to create their own online accounts in order to do business with us. Personal accounts will be used to enhance the interactive customer experience, while business
accounts will help to manage our business-to-business relationships.

**Company Values and Purpose**

For both consumers and distribution channel partners looking to learn more about Wellware, they can find our values, beliefs, commitment to our customer, and ways to partner with us under this tab.

**Customer Relationship Management Advice**

With regards to using Customer Relationship Management systems, companies such as Salesforce have established successful methods to optimize customer business relationships. As Wellware distributes through multiple channels it will be vital to institute some type of CRM system in order to capture and retain value from each channel or customer. It will be important to keep track of those distributive channel buyer tendencies as well as an individual consumer’s trends and activity.

There are some aspects of CRM that can be misunderstood or left out of the process that can destroy the value of the system. The foundation or framework of a CRM system comes from customer strategy so in order to implement a successful CRM system, a clear understanding of market strategy is crucial. The only way their CRM can be successful is if the entire structure of Wellware (compensation, job descriptions, training, etc.) is centered around customer needs. Although superior technology is important in developing and monitoring CRM systems, there is a point at which too much technology can result in unnecessary costs and inefficiency. Also, being overly dependent on technology can diminish personal touch. Finally, it is important to note which customers are
worth targeting and when this attempt to build and retain relationships can be perceived as “stalking”. In order for continual communication to not be perceived the wrong way, something in the system needs to ensure that this communication has value for the customer.

How Customer Relationship Management Affects Relationships

Ultimately the goal of our CRM system is not only to build relationships, but also categorize our customers into various “buckets”. In the model below, we suggest four different categories of our customers and provide recommendations on how to manage each of those relationships efficiently.

Research alludes to the idea that there are five lifetime stages for customers. The first stage is the attraction of potential customers. These will be people that are added to the CRM system and have a relationship that hasn’t quite been built yet. The next stage involves those buyers who have recently purchased the M1 and have only began to understand the value of the product. Communication to build their loyalty will be important in strengthening the relationship. The next couple stages include repeat buyers and those buyers which have a low rate of defection. It is important to continue to communicate with these people and maintain relationships as they are a source of high profitability. In terms of the M1, this comes into play once updated versions are released. The last stage includes those who defect for one reason or another, whether it be a new competitor, better deals, etc. If all goes well and the CRM system in place effectively manages the relationships at each stage of the customer lifetime, then ideally this stage will never come up.
Relative Market Share and Concerns Regarding Relative Market Share

<table>
<thead>
<tr>
<th>Brands (Blood Monitoring Industry)</th>
<th>Current Relative Market Share (Blood Monitoring Industry)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bayer</td>
<td>180%</td>
</tr>
<tr>
<td>Smitt</td>
<td>11%</td>
</tr>
<tr>
<td>Abbott</td>
<td>56%</td>
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</table>
Though Bayer holds a great amount of relative market share within the blood monitoring market, Smitt has only ever competed within the same product category as Bayer, traditional blood chemistry monitoring devices such as meters and test strips. Opening ourselves up to potential new product categories, such as wearable devices, introduces additional competition but also frees us from Bayer’s market dominance. A possible reason for Bayer’s dominance in the market could be due to its brand recognition as Bayer produces and sells several other well known products, such as aspirin, across different product categories. Therefore the Bayer brand name is more recognized and trusted by consumers across all categories. The Smitt brand name is not currently well known among all American consumers as reflected in its lower relative market share. However, it is well-known amongst medical professionals and the diabetic community. With the establishment of the M1, we expect brand recognition and relative market share to increase as promotional strategies and customer recognition of benefits comes to fruition.

<table>
<thead>
<tr>
<th>Brands (Electronic Wearables)</th>
<th>Current Relative Market Share (Electronic Wearables)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple</td>
<td>107%</td>
</tr>
<tr>
<td>Fitbit</td>
<td>80%</td>
</tr>
<tr>
<td>Xiaomi</td>
<td>93%</td>
</tr>
<tr>
<td>Garmin</td>
<td>33%</td>
</tr>
<tr>
<td>Samsung</td>
<td>33%</td>
</tr>
</tbody>
</table>

The current relative market share in the electronic wearable industry is also important to consider. In addition, it is also important to understand that the nature of our product is not necessarily comparable to that of lifestyle wearables due to medically certified features such as blood glucose monitoring. While Apple Watches dominate the lifestyle wearable market, the M1 does not fall into that same product category. Though there may very well be potential buyers in our target market that Apple will capture, our M1 addresses the needs of target consumers that Apple products cannot satisfy.
As it relates to the M1, by developing and releasing this product, Wellware is essentially fusing both the blood chemistry monitoring market and the electronic wearables market. Given that Wellware and the M1 can be considered first movers in this space, it is reasonable to believe that once customers recognize the benefit, value, and relative advantage of the M1, Wellware will begin to capture market share within a new market category. However, there are a few circumstances and concerns that should be considered regarding this metric. Despite the M1’s benefit, value, and relative advantage, it is possible that those benefits and advantages will not be understood by consumers in the most effective way. If that were the case, Wellware would not see the expected increase in market share. Additionally, it is important for Wellware to anticipate the fact that it may take significantly longer than expected for its market share to noticeably increase after the product is launched. It is often the case, unless the product is a fad, that it takes time for profits from increasing customer sales to flow back to the firm.
There are many components that determine a brand name. Such components include a consideration of the product and its benefits, the target market, and proposed marketing strategies. It should also be distinctive and easy to pronounce, recognizable, and memorable. Additionally, it is important for the brand to be extendable. The Wellware brand has evolved from its parent company, Smitt Corporation. Its product, once called the V22, has since been branded as the M1: M denoting the medical nature of the product and the 1 which references the first version of many to come. The Wellware name comes from our purpose. Wellness can be defined as the quality or state of being healthy in body and mind, especially as the result of deliberate effort, or an approach to healthcare that emphasizes preventing illness. The “ware” portion of the Wellware name alludes to the fact that the M1 and any future device under the Wellware name would be a wear-
able device of some kind. The M1 will work with its user in order to establish a baseline to work towards improvement of overall health. Any future device that will fall under the Wellware brandname will follow a similar trend of improving bodily health and wellness.

Given the M1’s more for more value proposition, we can currently classify our product as a specialty product. As we contemplate branding strategy, it is important for managers to focus branding efforts around communicating the unique characteristics of the M1.

Brand management should keep the following things in mind while building brand equity. When it comes to branding the M1, key aspects to branding include the medical orientation and an emphasis on FDA Approval because these aspects build credibility and represent quality. Additionally, customers must have confidence in the reliability of the device. We also suggest that the branding should embody a forward-looking, innovative image. The M1 should be portrayed as sleek and modern to fit the innovative nature of the company. This could be an indication of quality in the minds of the consumer as well as a distinguishing factor of the consistent layout for Wellware’s M1.

Wellware embraces change and is ready to adapt in order to better satisfy customer needs. Customers should also perceive the M1 as a meaningful device that can improve their lives. The M1 is a dependable helper along a user’s health and wellness journey. We hope that the overarching message the M1 conveys is that Wellware cares about its customers. This genuine concern can be seen through our commitment to diabetic and medical education, training on how to use the device, physician partnerships, and our
detailed understanding of the customer. In a holistic sense, we want to communicate that the M1 is an innovative, user-friendly, and a reliable device.
Appendix B


Operations Report

OVERVIEW

Vitate et quam ilit id ut ut earum fugitio rectur, si bere nullabo. Et quo officillam harume persper spienisci remporum et qui dusa alique que nam, sum, assi quat. Epero volorpor aut quatatur, sedit reium id quatintotas nam reri officid molut etum liquidebis et ent

Team 88
The Assembly Process Decision

Assumptions:

- Forecasted demand of 20,000 units = Annual Production

In initial considerations about Wellware’s operations, we needed to review the forecasted demand of our product and respond with the appropriate assembly plan. We assume that our first year’s production will be 20,000 units because that is currently our forecasted annual demand. Additionally, we are inferring that demand will grow consistently with our production growth rates capabilities. Lastly, we believe that a three year timeline is sufficient in determining an assembly process for the foreseeable future.

We are considering a worker-paced system and a machine-paced system, whose respective initial costs are ($975,000) and ($1,450,000) plus ($10,000) per year in maintenance expense. Variable cost for each system has an inverse relationship with the efficiency of the assembly process. It was estimated that worker-based variable cost per unit had a 40 percent chance of being $35 and a 60 percent chance of being $38. For machine-paced the variable cost per unit had a 45 percent chance of being $29 and a 55 percent chance of being $30. The estimated production was determined using the first years production and compounding it over three years using the respective growth rate. For the worker-based system, there is a 40 percent probability of having 6 percent annual production growth and there is a 60 percent chance of having 5 percent annual production growth. For a machine-paced assembly process there is always a 4.8 percent annual production growth. Expected value was calculated considering variable cost for production with its given probabilities of occurring. (See Appendix C.5)
We determined the estimated costs of both assembly processes when encompassing every variable cost outcome. The total estimated cost of the worker-paced and the machine-paced are $3,304,396 and $3,339,463, respectively. Our team came to the mutual decision that though the machine-paced system is about $35,000 more in total assembly cost over a three year period; this cost is insignificant when considering the benefits of machine-paced systems in the long term. Furthermore, through our analysis we concluded that the machine-paced has a singular production growth rate of 4.8 percent and a $1 variability in unit variable cost, which is better than having to consider multiple potential annual growth rates with a $3 variability in unit cost in the case of a worker-based system. Convincingly, the machine-paced system has a much more predictable future assembly process.

In the medical device industry, precision and accuracy are imperative. A machine can produce a more consistent product in a more predictable amount of time. This allows Wellware to make more strategic decisions because we can better anticipate the future of production. Utilizing machines also helps avoid the inevitable complications created by humans in a worker-paced system. There is an increase in costs for complications such as unexpected human resource errors, possible overtime, and much more random cause variation. Moreover, it takes time for workers to adapt to the assembly process before maximizing their production efficiency. We must consider this learning curve in determining our growth potential; every new worker will perform at partial proficiency in the beginning, whereas purchasing an additional machine for the assembly process will immediately improve the assembly capability by a foreseeable amount.
Overall, Wellware will be utilizing a machine-paced system regardless of the initial expense. The M1 medical wearable is a high end, FDA approved device, so sacrificing cost for accuracy and consistency is a compromise we are willing to make. The main goal of our assembly process is to best attain our target goals in an effort to continue to precisely assess the future of our manufacturing.

**Chip Supplier Problem**

**Assumptions:**

- Service Level = 95 percent
- 365 days in a Year

Through our analysis we established that through Smitt Corp.’s current digital-output chip supplier, GCS, they pay $9.50 per chip, and each setup costs $250 with a 20 day lead time. We concurrently established that a competing supplier, MT, offers competing prices for the chip with a volume discount associated. The cost per unit is $9.10 if less than 10,000 units are ordered, and is $9 per unit if 10,000 or more but less than 20,000 units were ordered, and the price is $8.85 per unit if order volume is 20,000 or more. MT’s cost per setup is $100 and has a lead time of 7 days. For both manufacturers, annual forecasted demand is 20,000 with a standard deviation of 3.75 and a rate of 15 percent.

In analyzing GCS, we calculated the optimal order quantity (Q) with a 95 percent service level with 7 days in an average operating week. Given the conditions, we found
the optimal number of units to order per replenishment is 2,649 units. To ensure that the proper order quantity is met at the proper time, we established the reorder point. Through analysis, we found that the point at which we place our order is when inventory drops to 1,123 units. This calculation leaves room to meet demand during lead time plus safety stock using a 95 percent service level. Safety stock was determined to be 28 units. Reordering at this point guarantees that Q will properly be met based on our ordering schedule. The total annual cost for this ordering plan is $193,700.

In considering the alternative supplier, MT, we discovered a reorder point of 400 units. This reorder point is consistent for each alternative regardless of quantity ordered. For less than 10,000 units at a cost of $9.10 per unit, the optimal order quantity was found to be 1,712 units per order. Using other information provided by our operations team, we established that the total annual cost for the order plan, assuming less than 10,000 units were ordered, is $184,337. If Smitt Corp. is attempting to acquire the inventory at a price per unit of $9.00, then the optimal order quantity would be 1,721 units, though to attain the per unit discount, order quantity must be 10,000 or more and less than 20,000 units. This means that Smitt Corp. would need to order a quantity well above their optimal order quantity at that price in order to get the per unit price discount. This un-ideal order quantity of 10,000 units results in a total annual cost of $186,950. In order to attain the $8.85 price per unit, 20,000 or more units must be ordered. The optimal order quantity at a price of $8.85 per unit, given all other conditions, is 1,736 units. Again, this is far below the order quantity required to attain the per unit price discount of $8.85 meaning to attain this price under the given conditions, an un-optimal order quantity would be used. Ordering at the required amount of 20,000 units to qualify for the discount would result in a total annual cost of $190,375.
In this current situation, choosing MT with a price per unit of $9.10 (under 10,000 units ordered) is the most cost effective option for digital-output chip producers. Additionally, it has a shorter lead time which means the demand during lead time fluctuates from its expected value less. Having more predictable demand during lead time results in a more accurate assessment of the ideal ordering plan to use. More must be considered about chip suppliers’ manufacturing processes before coming to a final conclusion (See Appendix C.6)

**Quality Control Charting**

We analyzed the alternative supplier option, MT, based on the 15 samples of 10 units each. For the remainder of this analysis we are assuming that the 150 given observations are representative of MT’s overall manufacturing capability. In determining the viability of the manufacturing process based on x-bar, r-bar, and p-bar charts, the basic tools for determining out-of-control data were applied in the situation. Additionally, in our findings related to MT’s chip’s defect rate, we assume a three standard deviation range of variation for manufacturing. This is a safe estimate because it will equally mitigate the data from being a false positive or false negative representation of MT’s manufacturing ability.

In an effort to determine how well MT’s manufacturing capability fits within our tolerance limits we computed various metrics. Our tolerance limits are how much variability in the distance from the chip to the sensor that customers deem acceptable. In this case, operations decided that the control limits for the process should be the same. We confirm that our control limits should be equal to tolerance limits because our limits for quality specifications should never be outside of our customer’s expectations. We know
that the most ideal distance for this is 11.25mm and our production processes can tolerate the variation in this distance from 11.10mm to 11.40mm. Based on the 150 observations given by MT, the average distance of each of the 10 samples fall within this range which would initially lead us to believe that MT’s manufacturing process is consistently within the limits used to control our assembly process.

In further analysis it was determined that the average distance over many samples is not the only variable to consider in predicting MT’s capability. Due to this, we considered the average fluctuation in the distance from its ideal length of 11.25mm. Samples with higher fluctuations indicate a lower likelihood that the distance from the chip to the sensor is indeed 11.25mm. The average fluctuation of our samples is representative of the consistency in our ability to most accurately attain our target distance. This means that even if the average distances per sample fall within our control limits, the precision in MT’s manufacturing process is too low, creating a control process out of our limits. MT’s ranges of the samples indicate that their process is out of control. An out of control process makes predicting the quality of future production more difficult. This means that the x-bar data has a false positive representation in MT’s capability, meaning that it appears that their capability meets our standards though it does not because the r-bar chart indicates otherwise.

To further interpret the lack of precision within MT’s process capability, we considered the likelihood of a product being defective. No process can be perfectly accurate, so we accounted for a small degree of variability within the process. In this case, a sample is acceptably variable if there is a 26.65 percent or less chance of having a defective product. In one of our 15 samples there is a defective product. Additionally, MT’s shorter lead time does not provide benefit when the overall process yields defects. Considering this in a grand spectrum over years of production, the consistency of producing defective products further supports that MT’s process capability is outside of the control limits we
have set for our production. (See Appendix C.5)

**Development of a Project Schedule**

One challenge in accurately estimating the project duration is the uncertainty in the duration of setting up the production system (Activity I). The uncertainty in I’s duration derives from the uncertainty in the durations of its subtasks. In order to create a general timeline and schedule for project launch, I was calculated to be 10.3 weeks using the most optimistic, pessimistic, and most likely estimates of its subtasks. We chose to round up to the next integer of 11 weeks to simplify our analysis. Assuming I’s duration is 11 weeks, we expect the project to take at least 33 weeks in total. (see Appendix). Our marketing team has informed us that they would like the product to be available on shelves, ready for sale by June 17th. Therefore, we need to crash certain activities within the project to meet a 27-week deadline to enable the product’s purchase by June 17th.

As we crash, we could assume project length is 33 weeks. To meet the 27 weeks, we would crash the project 6 times and incur costs up to $89,900. In order to estimate crash costs with certainty, every activity’s duration must be certain, but that is not the case. Our challenge in estimating one total crash cost is due to the uncertainty in I’s duration. The problem with this assumption is that I’s duration will only be 11 weeks or less 71.6 percent of the time which means that the other 28.2 percent of the time, we risk the chance of I being longer than 11 weeks. We’d have to crash later activities after I that were unplanned for and thus face additional crash costs that were not budgeted.

Although 11 weeks might be a standardized and somewhat likely estimate for I, we
would like to have greater certainty in our total crash cost estimate to later find that we have budgeted more conservatively. To do so, we have come up with a model of hypothetical examples of ranges of values that I could fall under. Also listed are their corresponding cost estimates and the likelihood of those cost estimates being accurate when considering our budget (see Appendix C.1).

This model gives us a rough estimate of the maximum costs of crashing in which we can budget to shorten the project to completion within 27 weeks dependent on the range of I values.

Although this model can be expanded to use any range of values for I, we chose to only provide data on ranges of I being a maximum between 10-14 weeks because the likelihood of I being outside of that range is quite low.

Ideally, we would like to budget crashing using a maximum cost estimate with a confidence level as close to 100 percent as possible. Not only is this impossible, but we would also be budgeting an amount for crash costs well over what we are likely to spend and therefore our budget would be quite inaccurate. In our analysis, we try to balance the accuracy of our range of crash cost estimates while providing a significant amount of confidence in that estimate. This analysis was specifically done through comparing the differences in the maximum crash cost estimates with the differences in confidence. Crashing with an estimate of I being 11 weeks or less results in an estimated maximum crash cost of $89,900 which we can say with 71.61 percent confidence. Crashing with an estimate of I being 12 weeks or less results in an estimated maximum crash cost of
$109,900 which we can say with 92.51 percent confidence. Crashing with an estimate of I being 13 weeks or less results in an estimated crash cost of $129,900 which we can say with 98.96 percent confidence. Though we can say with 98.96 percent confidence that I will take 13 weeks or less and cost $129,900 or less, this range is quite large. It is quite likely to be less than 13 weeks and if that is the case, we crashed the project too much as a result of such a conservative estimate. We can gain more accuracy in using an estimate for I of 12 weeks or less narrowing our cost estimate by $20,000 while only sacrificing 6.45 percent in confidence. However, we feel uncomfortable with narrowing that range further because if we were to do so, we would be able to narrow our cost estimate by $20,000 again, but at the sacrifice of having 20 percent in confidence of our estimates. We would also like to note that $20,000 can be considered as somewhat insignificant when put into perspective of the cost of this whole project, $2,049,214, which was given to us from our finance team. Therefore, we recommend crashing the project 7 times with the expectation of I having a duration of 12 and the project having a total duration of 34 weeks instead of 33. This would result in a maximum cost of $109,900 to budget for which we believe will be the maximum cost we’d expend 92.51 percent of the time.

In addition to crashing the critical path to meet the 27-week deadline, we also need to be aware of any other project paths that are longer than 27 weeks. One path in particular (see Appendix C.2) has a total duration of 31 weeks. These activities must also be crashed to meet the 27-week deadline. Since all the durations of these activities are certain, we can crash the path four times to incur an additional $39,000 crashing this project.

Network diagrams and Gantt charts using this project plan have been provided (see Appendix C.4, C.3 respectively).
Though our analysis led us to assume the total duration of the project would be 34 weeks, there are risks that must be considered in that assumption. First, there is the possibility that this project will surpass 34 weeks. If I ended up taking longer than 12 weeks, we would need to crash the activities that follow I in order to try to make the 27-week deadline. We would incur additional costs that were not planned for and these costs would also be comparatively more expensive since costs of crashing activities after I are greater than the costs of crashing activities before I. However, there is less than an 8 percent chance of this happening. Therefore, though we recognize this is a risk, we still recommend crashing with the assumption of I being 12 weeks long.

Another risk to consider is that it is likely that the duration of I is less than 12 weeks. When we crash assuming I is 12 weeks, the act of crashing activities before I could potentially be unnecessary and we would’ve incurred crash costs that could have been avoided. Though this is also a considerable risk, we justify this risk because the costs of crashing activities before I are less than the costs of crashing after I. We perceive the risk of I being shorter than expected as more preferable than assuming the risk of I is longer than expected. We would rather be conservative in our estimates and potentially sacrifice cost savings than risk incurring greater crash costs to crash activities after I.

**Operations as a Value Added Activity**

Operations management has been defined as the design, operation, and improvement of the systems that create the firm’s primary products and services. Wellware has the opportunity with the launch of the M1 to establish a hierarchy and purpose of its opera-
tions in regards to building its brand equity.

Currently within Smitt Corporation, its operations can be classified as being internally supportive. As seen in Exhibit P2, responsibilities of Smitt’s operations team are very clearly amalgamated with the activities of other departments. Therefore, the importance of alignment of corporate strategy seems to be well recognized already by Smitt Corporation upper management. The Smitt Corporation brand name is also strongly associated with high quality products considered to be reliable among medical professionals. We would assign this reliability in product quality to Smitt’s competitive advantage. The driving force behind successful product quality decision is having an adept process capability with a superior quality design. Therefore, we really can say that Smitt Corporation’s operations give the brand name its competitive advantage.

Although operations currently plays a critical role at Smitt, we believe there is opportunity for Wellware to add value to its company by advancing the significance of its operations even further. As Wellware establishes its own operations team, we recommend doing so in such a way where the operations team is externally supportive as a full partner of the company. When the operations team is externally supportive, customers do business with a company because of its operational excellence. We believe these are worthy efforts of such an investment. The nature of the M1 does not allow for any variation in quality. As our consumers integrate the M1 into their lives, we naturally expect a fierce dependency to develop as consumers look to the device to monitor their well-being. Any deviation or deterioration from consistency in quality could possibly result in a fatal consequence. Therefore, the importance of delivering exceptional and consistent product quality necessitates superior operations. Our hope is that Wellware consumers
can depend on the Wellware name for its operational excellence which ultimately results in excellent product quality.

One source describes this idea really well:

“No single innovation promises an everlasting competitive advantage for an organization. The secret to success lies in creating such a robust competitive advantage which has its roots in the processes; the processes for use of new technology, the process for using resources, the process for utilizing the current resources to generate new ones and above all the process for creating value. These all can be achieved only if the operations are managed in a way that makes a difference and creates the concept of differentiation right at the shop floor.”

As we begin to think about the expansion of Wellware’s operations to different manufacturing locations, and into various markets and product lines, it is important consider building competitive advantage into the operation of our processes. Our vision for Wellware is that wherever we are, whenever, and with whatever product, we will be a distinguished name that represents mindfulness, reliability, and care to the consumer. Our operations are an important function in establishing this identity. Some things Wellware should consider moving forward from this product launch include developing and enhancing an operational strategy.

As we observe the results of this product launch and its sales performance, it is im-
important for us to analyze our segmentation strategy, profit margins, order winners and qualifiers. This will require frequent communication with our sales and marketing team. This insight will then be turned into performance requirements as we continue to produce and improve M1 devices. This will also create a foundation as we begin to expand the Wellware name into new markets.
Appendix C


C.1

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### C.2

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<th>Maximum number of Crashes</th>
<th>Cost of Crashing</th>
<th>Durations After Crashing</th>
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<tr>
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<td>4</td>
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</tr>
</tbody>
</table>

*gap between duration and 27*

### C.3

[Project Gantt Chart Image]

- A. Product Kickoff
- B. Organize introduction of member to salience
- C. Design advertising campaign
- D. Setup financial accounts
- E. Develop budgetary controls
- F. Prepare final commercial design
- G. Finalize manufacturing process
- H. Acquire process equipment
- I. Setup production system
- J. Finalize QC procedures
- K. Hire new personnel
- L. Purchase monitor parts
- M. Startup equipment and train personnel
- N. Develop advertising copy
- O. Design packaging
- P. Develop packaging literature
- Q. Train salesforce
- R. Make trial run under full production conditions
- S. Produce initial stock for warehouse
- T. Coordinate invoicing system with warehouses
- U. Distribute items to warehouses
- V. Open initial advertising campaign
- W. Coordinate final trade show details
Finance Report

OVERVIEW

Vitate et quam ilit id ut ut earum fugitio rectur, si bere nullabo. Et quo officillam harume persper spi-enisci remporum et qui dusa alique que nam, sum, assi quat. Epero volorpor autquatatur, sedit reium idquatintotas nam reri officid molut etum liquidebis et ent

Team 88
Assumptions:

- Do not include fixed costs of $900,000
- Do not include the mutual fund as an opportunity cost
- Tax rate is 37.2%
- Risk free rate is 3.85%
- $120,000 is only relevant previous spending costs
- Negative values are indicated by parentheses

Project Beta, Cost of Capital, Incremental Cash Flow, and NPV

We began our process of analyzing the financial data within the project beta tab and used the historic data from the S&P returns, along with the monthly sales revenues for recent projects to help calculate the various beta measures. The levered beta, which involves the use of debt, magnifies results and can make a company look as if they are performing better than they truly are if they are successful. We found a levered beta of 1.131, so this stock’s returns are 13.1 percent more sensitive relative to the returns of the market. The unlevered beta, which does not take debt into account, is .992, which proposes that this stock is 99.2 percent less sensitive relative to the market. Because this unlevered beta is positive, investors will invest in the company’s stock when prices are expected to rise (See Appendix D.1)

Based on the weighted average of the regression coefficients and the relative sensitivity of projects P, Q, R, S, and T, our team computed the beta for each of the individual projects. Our CFO has estimated that this new project is most like the existing project
Q in terms of how it would react to market-wide news. Because of this, we used project Q’s beta for our new project, the M1, which had a value of 1.272. We interpret this number as a sensitivity measure, meaning it will have 27.2 percent more sensitive of returns relative to the market. This number becomes valuable in the future when calculating the project’s overall cost of capital.

Our team’s next step included making several assumptions for the Benchmark CAPM Returns. To determine the risk-free rate, we used information from existing treasury debt data. We figured the YTM of each Treasury bill and noted that there is a 0 percent coupon rate for the 79-day treasury bill, so there will be no payment associated with this debt security when calculating the risk-free rate. This specific factor led us to assume that using the YTM for the 79-day treasury bill of 3.85 percent was the most logical step for the project. The equity premium for the market was previously estimated to be 7.7 percent. Finally, as a group, we concluded it was important to include the extra risk premium of 2.2 percent because of the added risk for investing in this project. There are minimal products currently on the market that are related to the M1. So, investors would likely to be hesitant to invest in this project without this added liquidity premium.

Within the side effects table on the cash flow tab, we determined the total impact of products A-E which totaled to ($1,415.00). This number becomes beneficial when calculating side effects after tax within the main cash flow table. Also, before transferring over to the cash flow table, we looked at each of the depreciable assets and determined an overall effective cost of $2,049,214 for the projected ten years. This number is relevant because it is used as the value for flows related to expected depreciable expenses within the cash flow table.
In the main cash flow table, we computed a tax rate of 37.2 percent. Next, in regards to fixed costs, we included the $1,260,000 operating expense but not the $900,000 fixed loan and bond interest expense because this is a financing cost. In years 1-10, we found side effect costs to always exist as outflows. Opportunity costs of $200,000 are only relevant in years one and two, which are valued as the decline of returns from innovations to existing products. Finally, we chose to not include the mutual fund as an opportunity cost because net present value includes the excess amount that you will receive on a project related to a similar mutual fund in the market. So, it would be unnecessary to include a mutual fund on top of this.

In regards to the three initial cash outflows, various assumptions were made. We determined that the relevant opportunity flows related to the previous spending or borrowed assets were $120,000, as all other costs listed within “Previous Spending” provided by our finance team, were all either sunk or irrelevant costs. It is important to note that this $120,000 is an after-tax value. Also, the total incremental cash flow of ($2,686,030) is partially comprised of crash costs initially given by our operations team. For years 1-10 the profit will always be positive, so taxes are always being paid on these amounts. The only year that has a negative operating cash flow is year one, which does not necessarily mean the company will see a loss where profit is negative. Instead, this proposes that the company needs to generate a positive cash flow from financing or investing activities by selling stock, paying dividends, or even buying a treasury bond throughout the project to make operating cash flow positive.

Our calculated project IRR, 17.94 percent is greater than the project cost of capital of
15.84 percent. Also, we calculated a positive NPV of $314,906. Because the NPV is positive and the IRR is greater than the cost of capital, this is a project Smitt Corporation should invest in.

**Buy versus Lease Analysis for Fixed Assets**

Within the lease versus buy tab, we were provided several numbers to use for calculations. These include the equipment price, annual warranty package, annual lease payment, annual termination premium, annual lease costs lock-in premium, discount rate, and the corporate tax rate.

For the leasing option, we used the annual lease payment of $460,000 starting at time-point zero. We then determined the annual lock-in premium cost using the 5 percent premium given, as well as the termination premium cost using the 10 percent termination premium provided because we need to consider the option of abandonment. Based on these numbers, we determined the net cashflow after tax for each year by using one minus the corporate tax rate of 38.6 percent. Finally, we assessed the present value of this leasing option at an amount of ($2,486,749).

After determining the present value of the leasing option, we performed several calculations for the buy option. First, we took into account the equipment cost of ($3,100,300), which is an outflow at time-point zero and at time-point five. Next, we calculated the warranty cost after tax for each year using the information on the $99,000 annual warranty package given. We chose to include the warranty package because the equipment is not only very expensive, but it also allows for comparison to the leasing option.
by providing similar conditions. After this, we computed tax savings for years 1-10 along with the net salvage value for year ten from the information we solved in the depreciable assets table. Finally, we did not account for taxes again because we already calculated tax savings in a prior step. So, we found the net cash flow of each year and then determined a present value of ($2,514,598).

While we considered the whole buy option including the warranty package, we believe it is smarter to pick the leasing option because it is not only about $28,000 cheaper, but it also allows for a more streamlined planning of cash outflows at the beginning of the project. It is important to note that the leasing option provides Smitt Corporation a convenient way to abandon the project if needed.

**Expansion/Abandonment of the Project**

For the expansion or abandon tab we were also provided data including the forecasted unit sales for year one, net salvage value for year one, initial cash flow for year one, price (net inflow), expansion boost, variable cost per unit, tax rate, annual fixed operating expense, and the annual fixed loan and bond expense.

In regards to the abandonment strategy, we used our original project operating cash flow as a base point and compared that information to two tables titled “What if Abandon at Time-point 1” and “What if do not Abandon”. It is important to note that if we decide to abandon the project, we will only get cash flows for timepoints zero and one, and a gain in opportunity at time-point one because of the net salvage value. We used the Goal Seek function to find an equalized point of the present value of the cash flow if we
do not abandon, along with the cash flow if we do abandon the project, when the units sold in year 1 are the same for both tables. This value is ($2,138,440). The net present value when we do not abandon the project must be at least this number at all times to maintain reason to pursue the strategy. So, we should abandon the project if year-one unit sales are below a threshold of 13,157 units.

For the expansion of the project, we also looked at the original project operating cash flow and then compared these values to the expected project operating cash flow. Within the expected table, we implemented the initial cash outflow value of time-point one given to us by our finance department of ($1,375,000), and also boosted cash flows from time-points 2-10 by 30 percent within the expected project operating cash flow row. Next, we compared these operating cash flow values to a table titled Expansion Project operating cash flow where we used Goal Seek to determine the expansion cash flow values. This Goal Seek function equalizes the expansion project net present value and the Expected project net present value when unit sales in year one are the same. So, we should expand the project if year-one unit sales are above a threshold of 22,901 units.