



Team

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Entrepreneurial ENERGY
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Executive Summary

We are TraumaBands, bringing life-saving technology to the EMS industry. Disasters are an everyday occurrence in the world, whether they're from war, terror, or natural disasters. When disasters occur, first responders are in charge of finding the injured people of that area, and monitoring them until medical transport can arrive. More often than not, medical transport cannot get to the scene immediately. The responders at the scene must then monitor the injured for extended periods of time, making sure they stay in stable condition until they can be taken to a hospital. However, the number of injured typically surpasses the number of responders, and medical personnel cannot keep a close eye on the stability of each patient. Thus, when an injured patient's vital signs begin to deteriorate because of their injuries, a responder will often not notice until it is too late. They cannot have "eyes" on all of the injured at once during disaster situations, which causes deaths that could have been prevented.

TraumaBands fixes this issue for first responders. Our product combines four important vital signs monitors- heart rate, blood pressure, pulse oxygen, and internal temperature- into a convenient wristband. The band will collect all of these vital signs through the patient's wrist, and send them to the TraumaBands app on the first responder's tablet every two minutes. When a patient's vital signs do dangerously drop while they are wearing a TraumaBand, the responder with the tablet to which the band is connected will be alerted through an alarm. Each TraumaBands app can connect up to 15 bands. Thus, a single responder can have "eyes" on 15 injured patients at one time, while still remaining mobile and assisting other people. This significantly decreases the turnaround time between a patient's vitals dropping and a responder coming to give medical attention. This will help save the lives of many injured during disaster situations.

Our product will be purchased by EMS organizations for use in MCI (mass casualty incidents) such as multi-car pileups and natural disasters. The US Military and Red Cross Relief will also want to purchase TraumaBands for use in war zones.

TraumaBands will be owned and run by its founding group- Mikayla Jenkins, Aaron Henson, and Judith Alvarez- and its starting investors.

TraumaBands' future in the EMS industry is very optimistic. Technology is always moving in the direction of efficiency and mobility, and we provide just that. Our reputation for life-saving technology will help us secure a large percentage of our target market.

We are looking for investors who are willing to invest \$300,000 in our company to cover startup expenses. These include design and engineer fees for the band technology, 3-months operational and inventory costs, and pre-opening advertising and legal costs.

In return for the initial investment, we will offer our investors:

- ❖ 20% of TraumaBands' annual net income
- ❖ A 230% return on investment by the end of our company's fifth year

TraumaBands will reserve a "put" option to buy out our investors after the first five years of operation.

Overview of the Company

TraumaBands is in the business of helping those who help others. Our product gives first responders the assistance they need during mass trauma incidents, and lessens post disaster death rates. As a company, we have four main goals:

- ❖ Assist first responders with saving lives
- ❖ Become a reliable name in the medical device market within the first five years
- ❖ Be known for only the most innovative technology
- ❖ Give our customers a helpful customer service environment

Our company mission is to make monitoring patients in mass casualty situations easier for first responders with the help of cutting edge technology. Our philosophy is to push the limits of the medical device industry in order to provide first responders with the devices they need. The medical device industry is rapidly growing in our technology age, and TraumaBands plans to grow along with it. As proprietors and employees of our company, we have many qualities that will help us succeed in this industry:

- ❖ Passion for the medical field
- ❖ Hardworking mentality
- ❖ Bold and innovative ideas
- ❖ Open acceptance for all professional advice and opinion
- ❖ Follow-through and commitment

We chose a C Corporation format for TraumaBands because it provides unlimited growth potential for our company. It provides a large array of stock and shareholder options if we choose to take advantage of these in the future, and has important tax benefits. It also provides us with limited liability coverage, which is important as a medical device company.

Products and Services

TraumaBands will work in tandem with the TraumaBands app to continuously collect vital information from multiple injured patients. All TraumaBands cases will contain one Android tablet (per 15 bands) with the app pre-downloaded and connected to WiFi. This will ensure that responders overseeing the bands will have a device that works quickly and reliably with no delay. TraumaBands come in a protective Pelican case that will have a wireless WiFi router, so responders will not have to bring their own router to the field.

Each device will be able to communicate with 15 bands at one time through the app, so the responder can have “eyes” on more than one patient at once. While wearing

the wristband, a person's blood pressure, heart rate, temperature, and pulse-ox (pulse oxygen) will be measured every two minutes. This will be done through custom designed sensors that will be built into the bottom of the band and rest on the patient's inner wrist. The band itself will be a self-inflating blood pressure wrist cuff. The pulse oximeter will be attached to the band by a wire and wrap around the thumb. A velcro closure will be used on the band in order to fit all wrist sizes. We know for a fact that this technology will work, because vitals monitoring devices already exist in individual devices (such as a pulse oximeter finger clasp or thermometer patch). TraumaBands will be the first to combine all of these vitals monitors into one convenient wristband, and allow it to communicate with other mobile devices.

All monitored vitals will be sent to the responders device every two minutes. The TraumaBands app on the device will have a home screen that contains numbers 1-15 that correspond with numbers on the actual bands. Within the app, responders can check a patient's most recent vital signs by pressing one of the numbers, depending on which band the patient is wearing. Each band will also have a exterior screen display showing the latest vitals. In the event a person's vitals drop or rise to dangerous levels, the app will alert the responder with an alarm noise and a flashing light.

TraumaBands reset every time they are removed from the wrist of a patient, so they are reusable. Each one has eight hours of battery life. If a responder chooses, they can enter the patient's name and personal information along with their band number on their device. After removal of the band, all records of a patient's vital signs (and their information) will be saved. This is so responders can have a patient record to refer to if need be. Every set of 15 bands will come with a set IP address, which is also set in the Android device (through the device settings). This will control the two devices' communication over the WiFi network. The bands will only transmit information to the device coded with their particular IP address, so multiple responders can be measuring vitals in the same location without getting signals mixed.

Marketing Plan

Market Research

Our goal is to outfit every ambulance and EMS organization in the country with TraumaBands. Nationwide there are 19,437 Emergency Medical Service (EMS) organizations and 78,258 ambulances according to *b/s.gov*. If each ambulance has a TraumaBands case, this gives us a potential market of 78,258 customers in the United States alone (*as of 2011*). This does not include the newly created EMS organizations purchasing them as well (past 6 years). We consulted with three different areas of expertise in the medical industry about our product- EMTs, hospitals, and engineers. The Emergency Medical Technicians (EMTs) of Company 12 Culpeper were all confident that our technology would capture a solid percentage of the market within the first few years. According to Chris Noguera, the transport manager for Culpeper UVA Health System, there is no product like ours on the market currently. He believes

TraumaBands is a “great concept” and would help significantly in MCI (mass casualty incidents).

According to the employees of the EMTs at Company 11 and 12, TraumaBands are highly needed in the EMS industry and would be “highly sought after” (*Serena Imel, Company 12 EMS VA*). They said they would purchase several cases today if they were on the market, as TraumaBands would “help them significantly with their jobs.” A retired EMT that we spoke to about TraumaBands wished that he “had this technology when he was in the EMS field” (*Kevin Robinson, Company 11 EMS VA*).

We also contacted an engineer at Loyola University in California for an engineering professionals’ perspective. Bohdan Oppenheim, Ph.D., an expert of healthcare systems engineering (a branch of medical engineering), believes that TraumaBands would not only work, but are also “superb and badly needed.” He strongly believes our product would fit right into the health care device market.

** The acronym for EMS stands for Emergency Medical Services, which is the organization in which the first responders work. The acronym EMT stands for Emergency Medical Technician, which refers to the actual first responders**

Features and Benefits

The benefits of TraumaBands are its life-saving capabilities. With “eyes” on multiple patients at once, a responder can attend to more urgent injuries with the peace of mind that other patients are not in distress. If a person wearing the band needs immediate help, responders can give them proper treatment in time. Other features and benefits include:

- ❖ Easily adjustable velcro strap that will allow responders to quickly fit the band to any wrist size
- ❖ Exterior screen display that shows vital signs on the band for responders that are right near the patient
- ❖ Very light weight, allowing for full mobility of both patient and responder
- ❖ Wireless monitoring that eliminates the need for full body sensors and dealing with tangled or shorted wires
- ❖ A warranty that fully covers any breaks or malfunctions of TraumaBands within the first three years
- ❖ Proudly made in the USA

Economics

There are 19,437 certified EMS organizations in the United States and 78,258 active ambulances (*see Marketing Research*). According to *bls.gov*, the EMS industry is expected to grow 4% every year in the US, as it is a rapidly growing market. Thus, our company will have the chance to capture an extra 4% of the market every year.

Over the course of our company’s life, we will claim a significant portion of the EMS industry market. However, we may face a small customer acceptance issue

among very small responder organizations (i.e. rural towns) because of the high purchase price. We will overcome this barrier by explaining to these groups that their need for our life-saving, innovative technology justifies the price tag. Larger first responder organizations (i.e. in cities or large suburban areas) have significant budgets, thus the higher price will not be a concern.

Because TraumaBands is the first of its kind on the market, there is no exact data on how many similar products are sold annually. However, the VISI mobile wireless monitoring product (see Competition pg. 6) gives us a look into the potential market for our product. As of 2016, they were FDA approved and hospitals all around the country wanted to purchase their product. The LifePak systems (Competition pg. 6) distributors have not released how many of their products are sold annually. However, they are a multi-billion dollar company.

A change in industry is not expected for our product, as both natural and manmade disasters will continue to happen. Any technology changes that occur in our field will be noted and applied to TraumaBands in order to maintain efficient functionality. An economical change may affect how much an EMS organization is willing to pay for the bands, but not the need for them. This will keep our customer base steady.

Competition

We will be competing directly with other products that measure vital signs. However, TraumaBands is entirely unique. For example, through conversations with local EMTs, we found that first responders typically use the LifePak 15 to measure vital signs. This is a large, versatile monitor that is used universally. However, they are upwards of \$30,000 per unit, and can only monitor one patient at a time. They are also very heavy and do not allow for easy mobility. Hearing of TraumaBands, our local EMTs were extremely interested. Our product costs much less, can monitor up to 15 patients, allows for full mobility, and weighs virtually nothing.

Our other competition is the ViSi mobile wireless monitor. This device has some similar functions to the TraumaBand, but comes with bulky wires and sensors that must be placed on the body. It is also designed for use in hospital ICUs, not in mass trauma incidents, and comes with subpar reviews from hospital nurses and doctors. TraumaBands will only have wrist sensors, so there is no need to place time-consuming sensors on the body of a patient. Our product is also designed specially for trauma situations.

Companies such as *galls.com* and *aedstoday.com* will be our indirect competitors, since they are selling products that our target consumers buy already. These include individual blood pressure cuffs, stethoscopes, and thermometers. As a company, we will need to convince responder organizations that our technology can improve the way patients are monitored. Though according to our local EMTs, it will not take much convincing.

Customers

Our primary customers are EMTs and other first responders (such as paramedics). These organizations will need Traumabands in situations such as natural disasters, wildfires, car crashes, or other man made disasters. Field and local hospitals that become overrun during disasters will need TraumaBands as well. This way they can monitor the mass influx of patients with ease. It is our belief that every active ambulance or ambulance dispatch center needs at least one case of TraumaBands on standby.

As TraumaBands develops a strong reputation in the medical supply world, we will begin to reach large first responder organizations who deploy to mass injury situations. Examples of these are the Red Cross Relief and the Federal Emergency Medical Agency (FEMA). We will also target the US Military, who need technology like TraumaBands in war zones such as the Middle East. Moving forward, we also hope to also sell to DWB (Doctors Without Borders) and the WHO (World Health Organization).

First responders will be interested in our technology because they can monitor field vitals with all the freedom and mobility that the Android tablet gives. They can also attend to other people knowing there are reliable “eyes” on their patients. The life-saving, innovative technology will draw the customers to our product.

In our first year as a company, we will focus on selling to the Virginia and Washington, DC areas. Selling locally first will help us develop a solid customer base and receive reliable feedback on how to improve TraumaBands. The second year of our company, TraumaBands will focus on selling to EMS companies in large cities such as New York City, Phoenix, Chicago, and Seattle. These areas have the largest numbers of EMS agencies, so our customer market will be very large. Once we develop a strong customer base, we will branch off and begin targeting smaller areas as well. In year five, we will strongly target the US Military, Red Cross Relief, and other large organizations.

** According to www.bls.gov, The EMS industry is estimated to grow by 24% by 2024**

Customer Groups in the US	Number of Customers in the US
EMS organizations in the US	19,437 (2011)
Ambulances in the US	78,258 (2011)
Ambulances in VA and DC	2,191 (2017)
First responders as a whole	10,000,000 (<i>government estimated</i>)
Doctors employed in DWB	3,000 (2016)

Niche

TraumaBand's niche as a company is our innovative spin on what first responders already need during a disaster. Because there is a pre-established need for our product, customers will want to purchase it. TraumaBands combines most of the necessary vitals equipment into one, creating an easy, efficient medical device. Without our band, responders would need to carry bulky equipment or deal with time-consuming wires and sensors. TraumaBands makes monitoring patients simpler than doing it with traditional medical equipment.

Marketing strategy

The first year of sales for our company will be in 2018, which will give us time to engineer and design TraumaBands alongside knowledgeable doctors and EMTs. This will also give the Food and Drug Administration (FDA) time to approve our product, and for us to have a several month long testing period in non-emergency circumstances. The EMTs of Company 12 Culpeper have graciously offered to test TraumaBands for us and give valuable feedback. After we have positive test results with TraumaBands, and know they are fully functional with no irregularities, we will sell locally in Virginia and DC. The second year, TraumaBands will focus on selling to EMS and first responder organizations in large cities around the country. By targeting these cities, we will encounter the largest customer bases. If a company in a smaller region shows interest in our product, we will sell to them. However, we will not reach out to them first for a couple years. We will target first responder organizations in two ways: personally networking with EMS organizations around the country, and advertising on websites such as *galls.com*. In year five, we will begin to target the large federal and worldwide agencies. We want to give the image that we are confident in our company and know where we are heading, but also understand that in the beginning, we will have to pursue the customer instead of the opposite to create a solid customer foundation.

❖ Networking

Our company representatives will advertise TraumaBands by giving in-depth demonstrations of the functionality of our bands to potential customers. We will do this by traveling around the country and promoting TraumaBands at expos. Before our company starts in 2018, we will travel to two expos: EMS World in Las Vegas, which averages 5,000 people per event, and EMS Today in Salt Lake City. Through this up close view of our technology, potential customers will have a better understanding of why they need it. They will understand all of the band specifics before deciding if they will purchase TraumaBands. We also plan to loan a TraumaBand to organizations that we believe many benefit from our product, so they can see its functionality up close. This is free advertising for us. We will do this from the start of our company.

❖ **Advertisements**

From the start, we will advertise on EMS supplies websites. We plan to market on these sites:

Websites To Advertise On	Daily Website Traffic
www.galls.com	10,500 visits per day
www.EMSWorld.com	23,098-23,867 visits per day
www.buyemp.com	9,984 visits per day
www.aedstoday.com	11,700 visits per day

While purchasing other supplies from these sites, potential customers will come across our ad and be inclined to get more information about our product. The advertisement will take the potential customer to our website, which will have all the information that they need to know about TraumaBands. We will also advertise in EMS World Magazine, which has over 49,000 subscribers monthly.

Website advertisement costs vary depending on the site. The high average cost for advertising is \$350/month, and \$4,200/year. For four websites, that is \$16,800/year. EMS World Magazine is \$500/year to advertise in, and includes an online banner advertisement as well.

Proposed Location

*14115 Lovers Lane
Culpeper, VA 22701*

The TraumaBands command center will be located in Culpeper, VA. We will be renting a 600 SF office space which includes, multiple offices, a small lobby area, and two conference rooms. The space comes fully equipped with high speed internet and full utilities. For a \$13/SF/Year, and 600 SF of rented space, it will cost \$7,800/yr. The two conference rooms will be used for storage for part of our inventory. This office is adjacent to Route 29 N towards Washington, DC and Charlottesville. The closeness to DC puts us near some of the large first responder organizations we will be targeting, such as the FEMA. Once TraumaBands has expanded beyond our office space and storage unit distribution service, we will lease a warehouse space near our office. This warehouse will have all TraumaBands shipments directly sent there from the manufacturer, facilitate all product orders, and ship all orders. New employees will have to be hired to upkeep this warehouse. However, we do not anticipate that we will need this during the first five years of our company.

Distribution Channels

*Nortech Systems Inc.
750 Industrial Drive
Augusta, WI 54722*

All shipments of TraumaBands will be sent to us from our design engineer and manufacturer, Nortech Systems. They will be delivered to our office space, where they will be stored. When orders come in, we will pack the bands in our custom Pelican cases and ship them right from our unit. Orders can be made from:

- ❖ TraumaBands website at *www.traumabands.com* (all orders will be directed to our manufacturer and overseen by our Vice President of Sales, Aaron Henson).
- ❖ Our office location (Customers can walk in and order TraumaBands through an office staff member. Payment can be made at the office, or sent to a separate billing location. Orders will be shipped to the address of the customer).

Our shipping price will depend on the size of the order, but we will use the USPS (United States Postal Service) and their pricing system for distributing our product.

Promotional Budget

Our promotional budget will be \$25,516 per year. TraumaBands will need to occasionally meet with potential customers by traveling to them. Our travel budget will be \$5,000, and the cost to hire short term employees while our representatives (proprietors) are traveling will be \$2,000. This will ensure that all of their responsibilities will be completed until they return. The representatives who are not traveling will oversee these employees. The budget includes travel costs for US locations. The representative(s) that travel each trip will depend on their availability. Airfare, hotel rooms, food, and car rental are factored into this budget.

Also in the budget is the cost to advertise on four EMS websites (see *Marketing Strategy*) and EMS World Magazine. These costs altogether are \$17,300 per year. We will also have \$1,000 for yearly app upkeep, and a \$216 yearly fee for our website on SquareSpace. Starting in year four, our advertising budget will increase to \$45,516 to keep up with our national company expansion.

Pricing

TraumaBands will have a reasonable price based on the technology that is on the band. However, with the market we are targeting, price is not the main component

of the purchasing decision. First responder organizations are used to paying a large price tag for much needed items (i.e. the LifePak 15). Our product will be no exception. Their purchasing of our product will rely more on need and than on price.

TraumaBands will come in a case of 15 bands each. Each case will also consist of an Android tablet that comes with the TraumaBands app preinstalled, a built-in charging square to charge the tablet and the 15 bands, and a wireless WiFi router with battery.

The breakdown of each component is as follows. The Vodafone Tab Prime7 will be the Android tablet included in the TraumaBands case. At a purchase price of \$208 each, it is the least costly tablet Android manufactures, while still being reliable to the customer. Reliability is an important factor when it comes to monitoring vitals, because a device glitch could mess with valuable patient data. Each case will come with a power square that has outlets for up to 20 devices. This will sit underneath the foam in the Pelican case and charge the bands, the tablet, and the WiFi router battery continuously. Each power square will cost us \$20. The WiFi router and router battery will cost us \$300. The 15 TraumaBands will cost us \$864 in total, at an individual unit price \$57.64 (see *Production: 4 sensors, display screen, self-inflating blood pressure wrist cuff, computer and IP address programming, internal battery, and charger for the band*). The custom case created by Pelican will cost us \$145. We will need the case custom manufactured with a hole drilled into the back and ledges built inside the case. This is so the internal power square can rest on the ledges underneath the foam and charge the bands, and also be plugged into the wall for power when it is not in use. In total, each case unit will cost our company \$1,537.

Cost per Case of TraumaBands

Cost of Tablet	Cost of Power Square	Cost of WiFi Router and Battery	Cost of 15 TraumaBands	Cost of Custom Pelican Case	Total Cost per Case
\$208	\$20	\$300	\$864 (57.64 per band, see <i>production</i>)	\$145	\$1,537

Our price markup will be around 180%. This will ensure that TraumaBands will make a large enough profit off of each case purchase. To customers, the cost per case is \$4,305. In return, our company will make \$2,768 off of each sale. This seems expensive in terms of what most people think a product should cost. However, the medical device market is used to paying higher prices for high tech devices. We have also consulted with several EMTs about our sales price, and they all agreed \$4,305 is very reasonable for a medical device of this kind.

** Finding information for exact pricing of our product could not be achieved. All efforts to contact agencies that could help us proved futile. The above numbers were made from*

*assumptions based on products with similar technology, extensive research, and the advice of local EMTs.**

Sales Forecast

In the first year, we will have a market of 2,191 ambulances (the amount of ambulances in the VA and DC calculated from the number of ambulances in the US). Each ambulance is a potential customer. According to the opinions of EMTs in our Virginia region, we should expect about 15% of the VA and DC market during our first year of sales. In order to maintain a reasonable number, we decided on 10% of the market instead. In our second year, we will be targeting large cities, such as NYC, Chicago, Phoenix, and Seattle, which will increase our sales by 20%. This is not only because we'll have a much larger customer base, but a reliable name in Virginia and DC as well. In years three and four, we expect our market to grow 15%, as we are not expanding to any new customers or locations. In year five, we will begin targeting large customers groups such as the US Military, Red Cross Relief, and DWB. We expect our market to increase by 25% this year, and 20% all subsequent years.

We can expect 10% of the Virginia and DC market within the first year, because the need for our product is so great, customers will want to purchase early on. This is not a 10% market share of the whole country, just the small area of VA and DC. Once a product becomes FDA approved, it does not take long for customers to take interest, as we have seen happen with the ViSi Mobile Monitoring system. We understand that technology normally takes time to become popular in the medical device industry, however, our technology cannot be matched. Thus, we are confident in our market predictions.

Below we have our best case five year sales forecast:

Five-Year Projected Unit Sales and Costs for a Product

TraumaBands Sales Forecast

	First Year				
	2018	2019	2020	2021	2022
Best Case Scenario					
Sales in units	219	262	302	347	434
Selling price per unit	\$4,305.00	4,305	4,305	4,305	4,305
Sales	\$942,795 100.0%	\$1,127,910 100.0%	\$1,300,110 100.0%	\$1,493,835 100.0%	\$1,868,370 100.0%
Direct Material cost per unit	\$1,537.00	\$1,537.00	\$1,537.00	\$1,537.00	\$1,537.00
Direct labor cost per unit					
Other direct costs per unit					
Total unit cost	\$1,537.00	\$1,537.00	\$1,537.00	\$1,537.00	\$1,537.00
Total Cost of Sales	\$336,603 35.7%	\$402,694 35.7%	\$464,174 35.7%	\$533,339 35.7%	\$667,058 35.7%
Gross Profit	\$606,192 64.3%	\$725,216 64.3%	\$835,936 64.3%	\$960,496 64.3%	\$1,201,312 64.3%

GRAND TOTALS

Sales	\$942,795 100.0%	\$1,127,910 100.0%	\$1,300,110 100.0%	\$1,493,835 100.0%	\$1,868,370 100.0%
Direct Costs	\$336,603 35.7%	\$402,694 35.7%	\$464,174 35.7%	\$533,339 35.7%	\$667,058 35.7%
Gross Profit	\$606,192 64.3%	\$725,216 64.3%	\$835,936 64.3%	\$960,496 64.3%	\$1,201,312 64.3%

Year One	Year Two	Year Three	Year Four	Year Five
10% of just VA/DC market	20% sales increase	15% sales increase	15% sales increase	25% sales increase

Operations Plan

Management and Organization

As the creators of TraumaBands, we understand that we will be fully in charge of our business operations. Along with traveling and promoting our product, we will be in charge of the startup regulations and design components of the product. Any and all startup capital fundraising and company promotion will be our duties, among other office jobs.

The sole proprietors and their roles in the company are as follows:

- ❖ Company President: Mikayla Jenkins - 33% owner (Salary: \$30,000 yr.)
 - Day-to-day operations
 - Design engineer manager
 - Company/investor relationships
 - Networking with EMS organizations

- ❖ Vice President of Sales: Aaron Henson - 33% owner (Salary: \$30,000 yr.)
 - Orders (online and in office) and shipping
 - Oversee damages, replacements, and refund
 - Technical support for band/app issues
 -

- ❖ Chief Financial Officer: Judith Alvarez - 33% owner (Salary: \$30,000 yr.)
 - Company finances
 - Manufacturer management
 - Advertising

** all secretarial office duties and company startup roles will be equally shared among us**

As TraumaBands grows as a company, we will hire office employees to take over the office duties of technical support, order/shipping management, and finances. All three proprietors will continue to travel and promote TraumaBands, and oversee relationships with investors. If one proprietor is unable to fulfill their duties due to injury and/or other circumstances, the other two will take over their responsibilities. A new owner will take over their duties as soon as a suitable candidate is found. If a proprietor wishes to quit, they must give a two month notice (unless the circumstance deems unnecessary.) The replacement must meet the following requirements:

- ❖ A strong understanding of TraumaBands as a company
- ❖ A flexible schedule (ability to work overtime to fulfil any necessary duties)
- ❖ Prior business knowledge
- ❖ A mindset that affiliates with our goals as a company

Location

As a company that will package and transport their product from one storage unit, space is important. The unit must include easy access to cars, so the TraumaBands can be loaded into a vehicle for transport to the post office.

The location we chose for our storage unit is at CubeSmart Storage of 791 Germanna Highway Culpeper, VA. It has business hours of 7 a.m. to 7 p.m., seven days a week. These hours are perfect for our VP of Sales schedule. The unit we have selected is 1,200 cubic feet, about the size of a large bedroom. It has easy drive up access, and would give us plenty of space to store, pack, and prep cases for shipment. The unit would not only hold a fourth of our inventory (including Pelican cases), but also all of the packing and shipping supplies. HVAC utilities are built into the cost of the unit. The estimated cost of the unit is \$94 per month, and \$1,128 per year.

Legal Environment:

Our product will need FDA approval and fall in line with medical device standards they require. Approval will cost a one time fee of \$3,382 according to *fda.gov*. The standards can be found on their website. TraumaBands will also need general liability insurance. This will make ensure that no lawsuits can be filed against our company due to negative outcomes while using the band.

Patents will need to be filed to protect our intellectual property. According to Brett Cenkus, our attorney, a one year provisional patent would cost our company about \$2000. After the one year is up, we will work to create a permanent patent with him for around \$10,000 that would last for 16 years. We will also have a lawyer to help advise us in creating a company structure and navigating the FDA, for which we will set aside \$6,000.

Personnel

We will all act as TraumaBands employees (Mikayla Jenkins, Judith Alvarez, and Aaron Henson). The type of labor we will be doing is classified under both professional and unskilled. It is professional because we will have to meet face-to-face with EMS organizations and have a strong knowledge of our company. Unskilled labor will apply as well, because we will be packaging and shipping our product by ourselves. This requires very little specialized training.

Since the company is equally shared between the three of us, we will be receiving an equal share of 33% percent of all profits from the TruamaBand product. This does not include the percentage of the profits that our investors will receive. Each employee will receive a paycheck bi-monthly.

Mikayla Jenkins will be in charge of day-to-day operations, manufacturing management, design engineer management, and EMS networking. Judith Alvarez will have the responsibilities of all company finances, company/investor relationships, and online advertising. Aaron Henson will be in charge of orders, shipping, technical

support, and customer refunds. When the representative(s) of our company travel, short-term employees will be hired to fulfill their duties until they return.

Suppliers

❖ Tekscan

*307 West First Street
South Boston, MA 02127*

- Tekscan has a reputation for engineering and designing state of the art sensors for medical devices that are both accurate and durable.
- Tekscan will engineer and manufacture the blood pressure, heart rate, skin temperature, and pulse oxygen sensors that will make up TraumaBands.
- All sensors will be created in Boston and shipped to the Nortech Systems manufacturing plant to be built into the band.

❖ Nortech Systems Inc.

750 Industrial Drive Augusta, WI 54722

- Nortech will be our key manufacturer and design engineer for TraumaBands. They will manufacture the self-inflating blood pressure band, exterior display screen, and internal battery (including the charger).
- They will place all sensors and batteries into their proper places and assemble the exterior screen.
- A device programmer at Nortech program will code all of the bands with IP addresses so vital signs can be transmitted and shown on the screen.
- Nortech will ship all completed bands to our office space in Culpeper, VA in boxes of 100 bands each. They will then be held in our office and storage unit until packing and shipment.

❖ Pelican Cases, Pak-Rite Ltd

46921 Enterprise Ct. Wixom, MI 48393

- Pelican will custom create our protective cases with built-in wireless WiFi routers.
- The cases will be protected against weather and wear, as to protect the TraumaBands inside. They will fit 15 bands per case inside padded dividers.
- Pelican has a reputation for having high quality products, and they offer lifetime warranties.

** we will also be purchasing products from Android and wireless WiFi distributors**

Inventory

In order to minimize personal loss in the event of storage unit theft, we will only store a fourth of our inventory there at a time. The rest will be stored at our office until they need to be brought to the unit to be packaged and shipped. It is our goal that inventory numbers will never fall below 375 bands (25 boxes with 15 bands each). This will be our buffer so we can fulfill orders until a new stock shipment arrives. We will order 1000 bands (66 cases) each time we need to restock, and our average inventory will be 690 bands (46 cases). During some natural disaster seasons such as tornado season, we will always be sure to have the 375 band buffer in place, as sales may increase rapidly. Each year, our projected number of sales will change. Thus, each year we will have a different number of ordered inventory.

It will take 2-3 weeks of turnover from the time our restocking order is placed to when the finished product is delivered to our Culpeper office. Aaron Henson, our Operations Manager, will keep an eye on all inventory to ensure there is no sudden shortage. We will be shipping TraumaBands directly from our inventory to customers.

Professional and Advisory Support

❖ Board of Directors

- Mikayla Jenkins
- Aaron Henson
- Judith Alvarez

❖ Management Advisory Board

- Tad Loving: *business and technology consultant*
- Brett Cenkus: *lawyer and entrepreneur*
- Kevin Robinson: *former National Guard and EMS*

❖ Professional Design Management Team

- Serena Imel: *Company 12 EMT Dispatch Culpeper, VA*
- Melanie Smart: *Company 12 EMT Dispatch Culpeper, VA*
- Chris Noguera: *Paramedic and Transport Manager UVA Health*
- LeighAnn Isenhower: *Nurse Practitioner of Culpeper Health*

❖ Attorney

- Patent attorney

❖ **Accountant**

- Jones Nicholas & Co., PLC

❖ **Insurance Agent**

- Liberty Mutual- *General Liability Insurance*

❖ **Banker**

- Tripp Butler: *Vice President and Commercial Lender, Virginia Community Bank*

❖ **Mentors and Key Advisors**

- David Heatwole
- Brett Cenkus
- The EMS team of Company 12 Culpeper

Production

TraumaBands will be produced by Nortech Systems of Wisconsin, and Tekscan of Boston. First, our sensors will be created in Boston for \$5 per four sensors (blood pressure, heart rate, temperature, and pulse oxygen). This includes cost for the metal and plastic they are made of, and cost of labor to assemble them. These will then be shipped to our band manufacturer in Wisconsin. Quality control will be overseen by the Nortech control department. They will make sure that the sensors and batteries have no visible defects when they arrive. Nortech will then assemble the TraumaBand by placing all of the sensors into our custom made self-inflating blood pressure wrist cuff. Each wrist cuff will cost \$15 to manufacture per unit (material and assembly included). Along with our cuffs, Nortech will also create the band's internal batteries and their chargers for 39 cents per unit (the battery and charger will cost 39 cents together). The exterior screen display will then be created for \$10. Their device programming department will then code the internal hardware of the bands with an IP address (each box of 15 bands has a different IP address) and allow it to collect and send (also display) vitals every 2 minutes. This will cost \$20 per band. After each band has been manufactured, the quality control department will check the functionality of each band again, to ensure all sensors and programs are working correctly. The following diagram shows the price breakdown of a single TraumaBand:

Cost per Individual TraumaBand

Amount of Bands Ordered	Price of (4) Sensors	Price of BP band	Price of Display Screen	Price of Internal Battery and Charger	Manufacturing and Coding Price per Band	Total Cost of Shipping per Unit	Total Price per Unit
1000	\$5.00	\$15.00	\$10.00	\$0.39	\$20.00	\$7.25	\$57.64

the above number were estimated from extensive research and the advice of several EMTs, as exact numbers could not be found

When we need to restock inventory, both *Tekscan* and *Nortech* will be alerted. This is so that while *Tekscan* is creating the sensors and batteries, *Nortech* can be creating the needed number of wrist cuffs. We will also order the necessary number of tablets from *Android* and *WiFi* routers to add into the cases. This will decrease our turnover time between ordering and final delivery in *Culpeper*. The manufacturing of custom cases from *Pelican* will be much simpler to oversee since there are not as many parts to create. Each *Pelican* case will cost us \$145 to create, including material and labor fees.

Each inventory restock order will cost \$101,442 for 66 *TraumaBands* cases (1000 bands and other case costs). Shipping of our sensors from *Boston* to *Wisconsin* through *USPS* will cost approximately \$50 per 1000 units (each unit will consist of the 4 sensors) which is about 5 cents per unit. Shipment of the bands from *Wisconsin* to *Culpeper, VA* through *USPS* Ground will cost \$221 per 1000 units. This is about 20 cents per band. Each order of 66 *Pelican* cases through *UPS* coming from *Michigan* will cost \$465 in total, and 7 dollars per case. Altogether, each unit (a case with 15 bands) will cost \$7.25 to ship. We will be ordering 1000 units with every order (with exception to our startup supply), even though we can only get 66 full cases of 990 *TraumaBands* (15 per case) out of each purchase. The leftover 10 will be used to send to companies as part of our company advertising.

Startup Expenses and Capitalization

TraumaBands is building this technology from the ground up. Our starting inventory as a company will be 3-month supply of TraumaBands (54 cases), which will cost us \$82,998 after all of the starting design costs. We will need a 3-month salary for our employees to cover the time until we begin generating profit. Before our company begins sales in 2018, we will receive pre-sales orders from organizations around VA and DC. This will ensure us that we are ordering the proper amount of bands. The four TraumaBands sensors (pulse oxygen, heart rate, skin temperature, and blood pressure) will be engineered by Tekscan. Each individual sensor will cost \$14,000 to custom engineer, thus all 4 sensors will cost a total of \$56,000. The self-inflating blood pressure cuff created by Nortech will cost \$18,000. We will have a contingency plan within our startup costs in case our startup costs surpass our estimations, which will be \$40,000. This contingency budget can also be used for engineering or legal expenses.

Our 600 SF office location will need a 3-month rent deposit, which is \$1,950, as will our storage unit, which is \$282. Utilities such as HVAC, water, electricity, and high speed internet are included in the cost of the office. Furniture and office equipment will cost a combined \$600. Our general liability insurance will have an estimated \$240 down payment (*according to insurance.com*). We have set aside \$21,382 for our startup legal and accounting costs. This will include a provisional and full patent, legal counsel, and the FDA certification fee.

Our startup advertising costs will be \$33,866. This includes the two EMS expos of EMS World (costs \$4,600 to advertise at (*emsworldexpo.com*) and EMS today (will cost \$3,250 (*emstodayexpo.com*)). Together, this is \$7,850. We will need a \$4,000 travel budget. The cost to create our TraumaBands website on SquareSpace will be \$216. We will be able to create this ourselves, as SquareSpace is very simple to use. The TraumaBands app will cost \$21,800 to create. However, the app creation will be a one time cost.

Startup Expenses

TraumaBands Startup Expenses

Company begins operations in: 2018 [1]				Buildings Depreciate over 20 years	
Line	If you plan to rent or lease an existing facility	Note			
1	Deposit & rent expense prior to operation	office	\$1,950		
2	Remodeling expenses [2]				
3	ffff [3]				
4	Enter item			sales jump	\$40,000
5	Other	unit	\$282		<u>\$40,000</u>
				TOTAL STARTUP EXPENSES	<u>\$277,818</u>
If you plan to buy an existing facility					
6	Purchase cost allocated to land [4]	N/A			
7	Purchase cost allocated to buildings [5]				
8	Purchase cost allocated to equipment [6]				
9	Remodeling expenses [7]				
10	Enter item				
11	Enter item				
12	Other				
If you plan to buy land and build a facility					
13	Purchase cost of the land [8]	N/A			
14	Construction cost including parking, etc.				
15	Architectural & engineering fees				
16	Enter item				
17	Enter item				
18	Other				
Capital Equipment List				Total Facility	\$2,232
19	Furniture & fixtures		\$450		
20	Office Equipment		\$150		
21	Production Equipment	Sensors	\$56,000		
22	Other	BP bands	\$18,000		
				Total Capital Equipment	\$74,600
Pre-opening Administrative Expenses					
23	Utility deposits [9]				
24	Legal and accounting fees		\$21,382		
25	Prepaid insurance [10]		\$240		
26	Pre-opening salaries [11]		\$22,500		
27	Other				
				Total Preopening Administrative Expenses	\$44,122
Opening Inventory					
28	54 TraumaBands cases (3 month supply)	3 months	\$82,998		
29	Enter item				
30	Enter item				
31	Enter item				
32	Enter item				
				Total Opening Inventory	\$82,998
Pre-opening Advertising and Promotional Expenses					
33	Advertising	expos	\$7,850		
34	App		\$21,800		
35	Website		\$216		
36	Travel/entertainment		\$4,000		
37	Other				
				Total Advertising/Promotional Expenses	\$33,866
Other Expenses					
38	Enter item				
39	Enter item				
				Total Other Expenses	\$0

Financial Plan

Five-Year Profit & Loss Projection

We are setting our annual payroll at \$90,000 per year (\$30,000 per employee). We will increase our annual payroll starting at year four to \$120,000 (\$40,000 per employee) because of our company growth. Our payroll expenses are 25% of our annual payroll budget, which is \$22,500, and \$30,000 after the payroll increase. This includes the benefits of health and dental insurance. We will have general liability insurance to protect our employees from any potential accidents. This will cost \$3,000 annually, according to our quote from Insureon. We will not need phone or internet service. Most of our internet work will be done at the office, which is already equipped with high speed internet.

We will not require many office supplies, as the majority of our customer/employee interactions will happen in person or over our website. We will need packing supplies for shipping our product from the storage unit, for which we will lay aside \$2,000. In year four and five, we will need \$3,000 for this, as our sales will be significantly higher.

Our annual rent expense will be \$8,928 including the office and storage unit (\$7,800 for the office and \$1,128 for the unit). Any maintenance that our office building requires will be covered by our landlord, James Lerner. Utilities in our facility are covered in the annual rent expense as well. We will need insurance on our storage unit, as a fourth of our inventory will be kept there. Coverage for the amount of inventory in our unit will cost \$420 per year (Bailey's Moving and Storage).

Our yearly legal and accounting expenses will be \$6,000. This will be for hiring a lawyer to help guide us in FDA guidelines and our company structure, and also the support of an accountant. Our yearly advertising budget will be \$25,516. This includes a \$5,000 travel budget, \$2,000 for short term employees, and \$17,300 for advertising on magazines and online. We'll also need \$1,000 for yearly app upkeep, and \$216 for our SquareSpace website. Starting in year four, our advertising budget will be increased to \$45,516. As a nationally growing business, our advertising costs will need to grow along with us. We have added an additional \$20,000 to the budget to account for extra traveling and events to promote TraumaBands, or any online/magazine advertising we want to add.

Five-Year Projected Profit and Loss (P&L)

TraumaBands Startup Expenses

		First Year		2019		2020		2021		2022						
		2018		2019		2020		2021		2022						
1	Sales	9	\$942,795	100.0%	1	\$1,127,910	100.0%	1	\$1,300,110	100.0%	1	\$1,493,835	100.0%	1	\$1,868,370	100.0%
2	Direct Costs	3	\$336,603	35.7%	4	\$402,694	35.7%	4	\$464,174	35.7%	5	\$533,339	35.7%	6	\$667,058	35.7%
3	Gross Profit		\$606,192	64.3%		\$725,216	64.3%		\$835,936	64.3%		\$960,496	64.3%		\$1,201,312	64.3%
Expenses		Note														
4	Salaries & wages [1]		\$67,500	7.2%		\$90,000	8.0%		\$90,000	6.9%		\$120,000	8.0%		\$120,000	6.4%
5	Payroll expenses [2]		\$22,500	2.4%		\$22,500	2.0%		\$22,500	1.7%		\$30,000	2.0%		\$30,000	1.6%
6	Supplies (office & operating) [3]		\$2,000	0.2%		\$2,000	0.2%		\$2,000	0.2%		\$3,000	0.2%		\$3,000	0.2%
7	Repairs and maintenance [4]	N/A		0.0%			0.0%			0.0%			0.0%			0.0%
8	Marketing / Advertising		\$25,516	2.7%		\$25,516	2.3%		\$25,516	2.0%		\$45,516	3.0%		\$45,516	2.4%
9	Accounting and legal		\$6,000	0.6%		\$6,000	0.5%		\$6,000	0.5%		\$6,000	0.4%		\$6,000	0.3%
10	Technology [5]	N/A		0.0%			0.0%			0.0%			0.0%			0.0%
11	Telephone [6]	N/A		0.0%			0.0%			0.0%			0.0%			0.0%
12	Utilities and vehicle fuel [7]	N/A		0.0%			0.0%			0.0%			0.0%			0.0%
13	Insurance (property & liability)		\$3,420	0.4%		\$3,420	0.3%		\$3,420	0.3%		\$3,420	0.2%		\$3,420	14066.0%
14	Rent		\$8,928	0.9%		\$8,928	0.8%		\$8,928	0.7%		\$8,928	0.6%		\$8,928	0.5%
15	Miscellaneous [8]			0.0%			0.0%			0.0%			0.0%			0.0%
16	Total Expenses		\$135,864	14.4%		\$158,364	14.0%		\$158,364	12.2%		\$216,864	14.5%		\$216,864	11.6%
17	EBITD - Earnings Before Interest, Taxes, & Depreciation		\$470,328	49.9%		\$566,852	50.3%		\$677,572	52.1%		\$743,632	49.8%		\$984,448	52.7%
18	Mortgage Interest		\$0	0.0%		\$0	0.0%		\$0	0.0%		\$0	0.0%		\$0	0.0%
19	Depreciation on Buildings (20 years)		\$0	0.0%		\$0	0.0%		\$0	0.0%		\$0	0.0%		\$0	0.0%
20	Depreciation on Equipment (5 years)		\$14,920	1.6%		\$14,920	1.3%		\$14,920	1.1%		\$14,920	1.0%		\$14,920	0.8%
21	Profit Before Taxes		\$455,408	48.3%		\$551,932	48.9%		\$662,652	51.0%		\$728,712	48.8%		\$969,528	51.9%
22	Taxes @ 35%		\$159,393			\$193,176	0		\$231,928	0		\$255,049	0		\$339,335	0
23	Net profit after taxes		\$296,015	31.4%		\$358,756	31.8%		\$430,724	33.1%		\$473,663	31.7%		\$630,193	33.7%

Five-Year Projected Cash Flow		TraumaBands Startup Expenses				
Line		2018	2019	2020	2021	2022
1						
2	CASH ON HAND - Beginning of year		\$333,117	\$706,793	\$1,152,437	\$1,641,020
3	Cash from venture capitalists [1]	\$300,000				
4	Less (startup expenses - mortgage) [2]	\$277,818				
5	Cash on hand after startup expenses	\$22,182				
	CASH RECEIPTS					
6	Sales [3]	\$942,795	\$1,127,910	\$1,300,110	\$1,493,835	\$1,868,370
7	Total Cash Available	\$964,977	\$1,461,027	\$2,006,903	\$2,646,272	\$3,509,390
	CASH PAID OUT [4]					
8	Direct costs (Material, Labor, & Other)	\$336,603	\$402,694	\$464,174	\$533,339	\$667,058
9	Salaries & wages	\$67,500	\$90,000	\$90,000	\$120,000	\$120,000
10	Payroll expenses	\$22,500	\$22,500	\$22,500	\$30,000	\$30,000
11	Supplies (office & operating)	\$2,000	\$2,000	\$2,000	\$3,000	\$3,000
12	Repairs and maintenance					
13	Marketing / Advertising	\$25,516	\$25,516	\$25,516	\$45,516	\$45,516
14	Accounting and legal	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
15	Technology					
16	Telephone					
17	Utilities and vehicle fuel					
18	Insurance (property & liability)	\$3,420	\$3,420	\$3,420	\$3,420	\$3,420
19	Rent	\$8,928	\$8,928	\$8,928	\$8,928	\$8,928
20	Miscellaneous					
	Mortgage Interest	\$0	\$0	\$0	\$0	\$0
	Mortgage Principal repayment	\$0	\$0	\$0	\$0	\$0
	Taxes	\$159,393	\$193,176	\$231,928	\$255,049	\$339,335
21	Total cash paid out	\$631,860	\$754,234	\$854,466	\$1,005,252	\$1,223,257
22	Cash remaining at end of year [5]	\$333,117	\$706,793	\$1,152,437	\$1,641,020	\$2,286,133

Breakeven Analysis

We calculated the breakeven analysis using our first year 100% retail sales scenario. Based on our sales projections, this scenario gives us more than enough profitability to maintain our operations.

<u>Breakeven Analysis</u>	
TraumaBands	
Selling price per unit	\$4,305.00
Variable costs per unit	
Materials	\$1,537.00
Labor	
Other	
Total Variable Costs	\$1,537.00
Gross Margin per unit	\$2,768.00
Total Annual fixed costs	\$135,864
Annual breakeven in units	49
Annual breakeven in dollars	\$211,306

Analysis

Needed sales: 49

Estimated first year sales: 219

First year sales margin: 170

Return On Investment

Our investors' ROI will be valued at 20% of Traumabands' annual net profit. At the end of year five, our investors will make 230% of their original \$300,000 investment.

<u>Projected Return on Investment (ROI)</u>						
TraumaBands Startup Expenses						
Year:	2018	2019	2020	2021	2022	
EBITD from 5-Year P&L	\$470,328	\$566,852	\$677,572	\$743,632	\$984,448	
Venture Capital Investment	\$300,000					
Percentage of stock given to Venture Capitalists	20%					
Venture Capitalists' EBITD Return on Investment (ROI)	31.4%	37.8%	45.2%	49.6%	65.6%	229.5%

Exhibits

Manufacturers



Locations



Cube Smart- Culpeper, VA



14115 Lovers Lane- Culpeper, VA 22701

Contact Emails

Email #1:

Here is an email response Bohdan Oppenheim Ph.D. of Loyola University CA on February 17th, 2017, replying to our product pitch:

Hi Mikayla,

I am not an expert on medical devices, but I think your idea is superb and badly needed! In fact, healthcare is moving in this direction: of automating monitoring of patients.

Congratulations!

My best

Bohdan W. Oppenheim, Ph.D., Professor of Systems Engineering
Associate Director for Healthcare Systems Engineering Program

Email #2:

Here is an email response from Jack Albani of Tekscan Systems on March 8th, 2017, in response to our question about his company's sensor technology:

Hi Mikayla,

Thank you for your interest in Tekscan Force and Pressure Measurement Systems.

Tekscan's systems can solve your pressure distribution analysis needs by measuring, displaying and documenting contact force, area, and pressure distribution between two mating surfaces. Tekscan systems offer dynamic pressure measurement which allow pressure differences across a contact area to be readily visualized and recorded in vibrantly colored, 2D and 3D displays. Our versatile pressure mapping systems include software, hardware and sensors, turning your PC into a complete pressure measurement system. The sensors are very thin (0.004") and minimally disruptive to the

true application. Our array of sensors coupled with our systems allow for a wide variety of applications to be addressed.

Our tactile pressure sensing technology plays a key role in medical device development all over the world. Designers and manufacturers of sutures, tourniquets, implants, surgical instruments and wound care products are constantly developing new designs and improved materials for their products. Tekscan systems play a major role in their efforts since our high-resolution sensors are designed to provide data that is accurate and reliable. Our user-friendly software makes data display and manipulation simple for analysis and interpretation. Tekscan systems are compatible with other measurement devices such as EMG, video, and forceplate, further enhancing the quality of data at your disposal. As a result, manufacturers develop more effective products, and researchers have the data necessary for their analysis.

Our array sensors measure compressive load and contact area between 2 surfaces. If you provide us with some more details about your specific application and interests, we will do our best to serve you.

Please call or email if you have any questions.

Best Regards,
Jack Albani

Jack Albani, Regional Manager, Pressure Mapping

Email #3:

Here is an email response from Peter Murray, the Executive Dean of Science Learning Institute in California, on February 22nd, 2017. This is in response to our product pitch and asking for professional advice:

Hi Mikalya,

One of the best approaches to determine a product's requirements is to contact eventual users. So go visit the local fire departments and speak with the EMT/Firemen. They will be the first responders to a significant crisis.

Your idea sounds very practical for a major incident. Some suggestions would be to use bluetooth versus IP as you may not have access. Bluetooth is point-2-point with a limited range and up to 7 devices. Each band on the list should be colored and shown on the display to indicate priority assigned in a major event, Color tags are often used in a disaster to indicate which people need service and level of severity.

Just some ideas.

Please send me your pitch deck. Curious to see your ideas.

Regards,
Peter

* In response to Peter's email, we took his advice into consideration. However, the bluetooth connectivity would not work for our product, as we needed the capability to connect more than seven devices. We discovered a way with the advice of Tad Loving to make IP addresses and WiFi work just as efficiently for TraumaBands.*

Email #4

Here is the response of Chris Noguera, the transport manager and paramedic (EMT) for UVA Novant Health System, on March 10th, 2017 in response to our product pitch:

Hi Mikayla,

I apologize for the delay as work has been very hectic. I think your team's product idea has a great concept for MCI (mass casualty incidents). My thoughts on the android tablet would be that a designated person would have to be in charge of that device and alert the team members of which pt TraumaBand needs care first or the most critical.

I do not believe the medical field has a device like this out right now. There are of course plenty of pulse ox devices out there. Nothing I believe that can send an alert to a device though. I feel large EMS agencies/large hospitals would be interested in a device like this though for those unexpected MCI calls. Another thought would be to have these used in large Emergency department waiting rooms so triage can know if a pt may need

more immediate care. Those Large EDs would probably need more than 15 and need to figure out if it would be possible to link up the TraumaBand to a pt identifier. Would it be possible to link more than 15 TraumaBands to one Android Tablet?
I hope this input helps you and I do think it is a great idea/concept!

Thanks,

Chris Noguera, Paramedic, NRP
Transport Manager
Novant Health UVA Health System
Culpeper Medical Center
Ambulance/Emergency Services

Contact #1

We spoke with the EMTs of Company 12 and Company 11 (eight in people all) in person, so there is no email of the interaction. However, below is the contact information of the Lieutenant of Company 12 EMS, one of the EMTs we conversed with:

Serena Imel
Lieutenant
Culpeper County Office of Emergency Services
Office #: (540)-727-7161
Email: simel1@culpepercounty.gov

Below is a conversation between Serena Imel and Mikayla Jenkins about TraumaBands:

Serena: So basically the traumabands would be taken by the responders to the mci sites?

Mikayla: Yes, the responders would store them at their organizations, and bring them when they get the calls for disasters

Serena: Would they be fully charged and ready to go when we need them?

Mikayla: Yes they would. There will be an opening in the back of the storage case that will allow the case to "plug into" the wall through a cord and charge all of the bands, tablet, and wifi battery continuously.

Serena: That's super cool. So how much would one case cost?

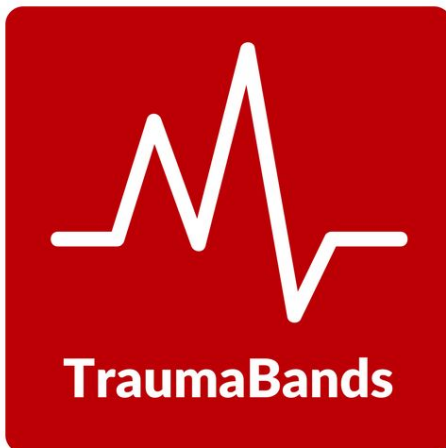
Mikayla: \$4,305 per case. Is that a price EMS places like you guys would pay for?

Serena: Definitely, our Lifepak is much more expensive than that, and we buy those

Mikayla: Do you believe this idea would be successful throughout the country?

Serena: to be honest with you, i would buy several cases for company 12 today if you had them. I love the idea, it'd do great in the industry, really.

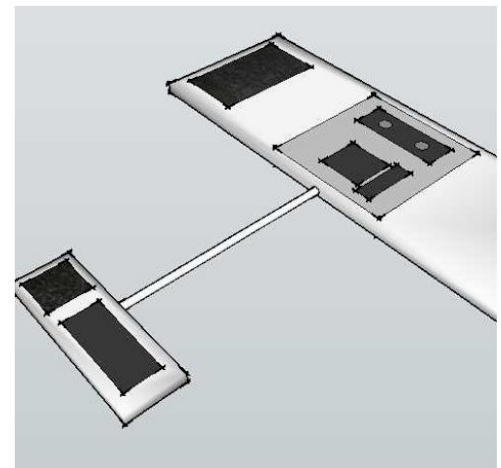
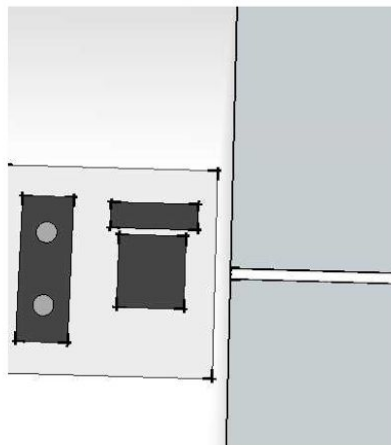
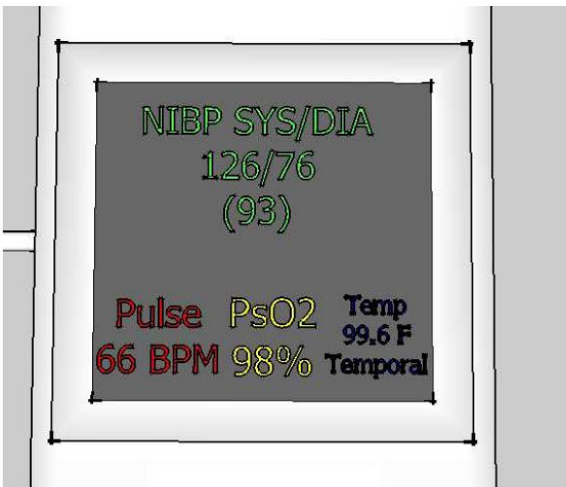
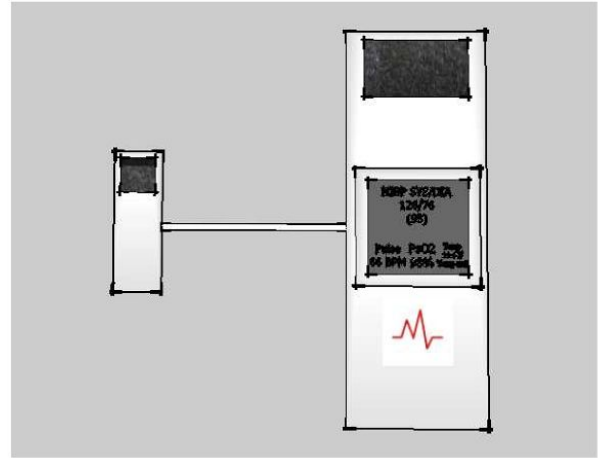
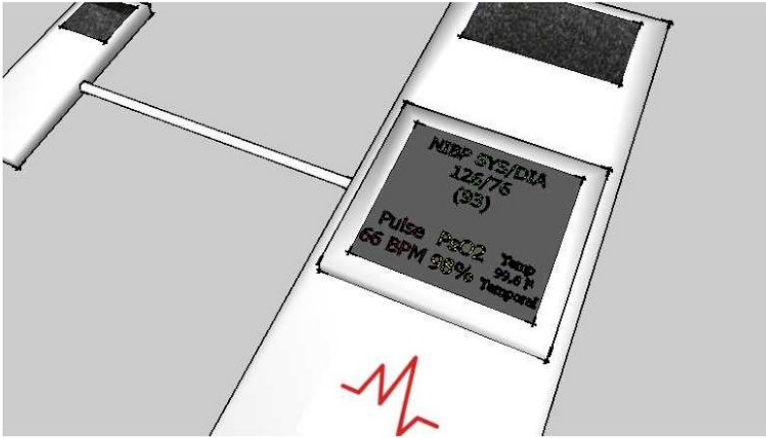
Product Details



Above: TraumaBands app logo (Android)

Below: TraumaBands logo (Company)





2-D TraumaBands demo model (band not pictured at an **exact** width or design of a real TraumaBands model)

Top images: An above view of a TraumaBand demo model (including pulse oxygen finger monitor)

Bottom left image: TraumaBands screen demo (including vitals signs)

Bottom middle image: External sensors built into the bottom of the band

Bottom right image: An underside view of a TraumaBand demo model

Contact Us



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