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Final Project Report: *Scorpion*

SUMMARY

Team Kanye 2020 has officially pitched *Scorpion* to the panel of judges. Our team has grown drastically since changing our product late in the semester. We have developed as a team in the following ways; communication is better, we grew to be more committed to our product, and each team member started taking the initiative towards the creation of *Scorpion*. The team started meeting outside of class more frequently, and during those collaborations individuals became more comfortable to freely voice their opinions. Overall, we felt proud of our product and accomplishments as a team.

Our product, the *Scorpion*, provides the customer with a sense of safety and security. We provide a cell phone case that carries pepper spray, and includes an app that records and sends information to authorities and friends during an emergency.

Our product aims to help the community by donating a portion of our sales to charities that help those who have been victims of sexual assault.

DESIRABILITY

After speaking with over 40 potential customers about our product, we realized that we should be especially focused on college students and their parents. Although older adults believed *Scorpion* was an important invention, they doubted that they would actually purchase it for themselves. Adults who had children in their early college years or about to enter college said they would be likely to purchase *Scorpion* if they had seen it at retail stores or even at student stores on college campuses. College students noted that they would purchase *Scorpion* as an alternative to other protective phone cases as long as it did not take up additional space (as noted in the Feasibility section).

Sexual assault is a major problem across the country, with one in four college women reporting an assault during her lifetime. Throughout our product development, we debated whether or not to make our target customers only women - by doing this, we would eliminate half of the population. After further research, we found another prominent statistic: that four in ten Americans fear walking alone at night. This opened our product's ability to satisfy the needs of a much broader audience.

Scorpion is meant to fit into users' daily lives by attaching to their cell phones. While traditional forms of pepper spray are often found on key chains, it is unlikely that someone walking home would be already holding his or her keys. By seamlessly fitting into a phone case, we will save users precious seconds of searching through pockets or purses and ensure that they can feel safer

in risky environments. Although our product cannot prevent all assault, it can help users feel safer - and give them a way out of dangerous situations.

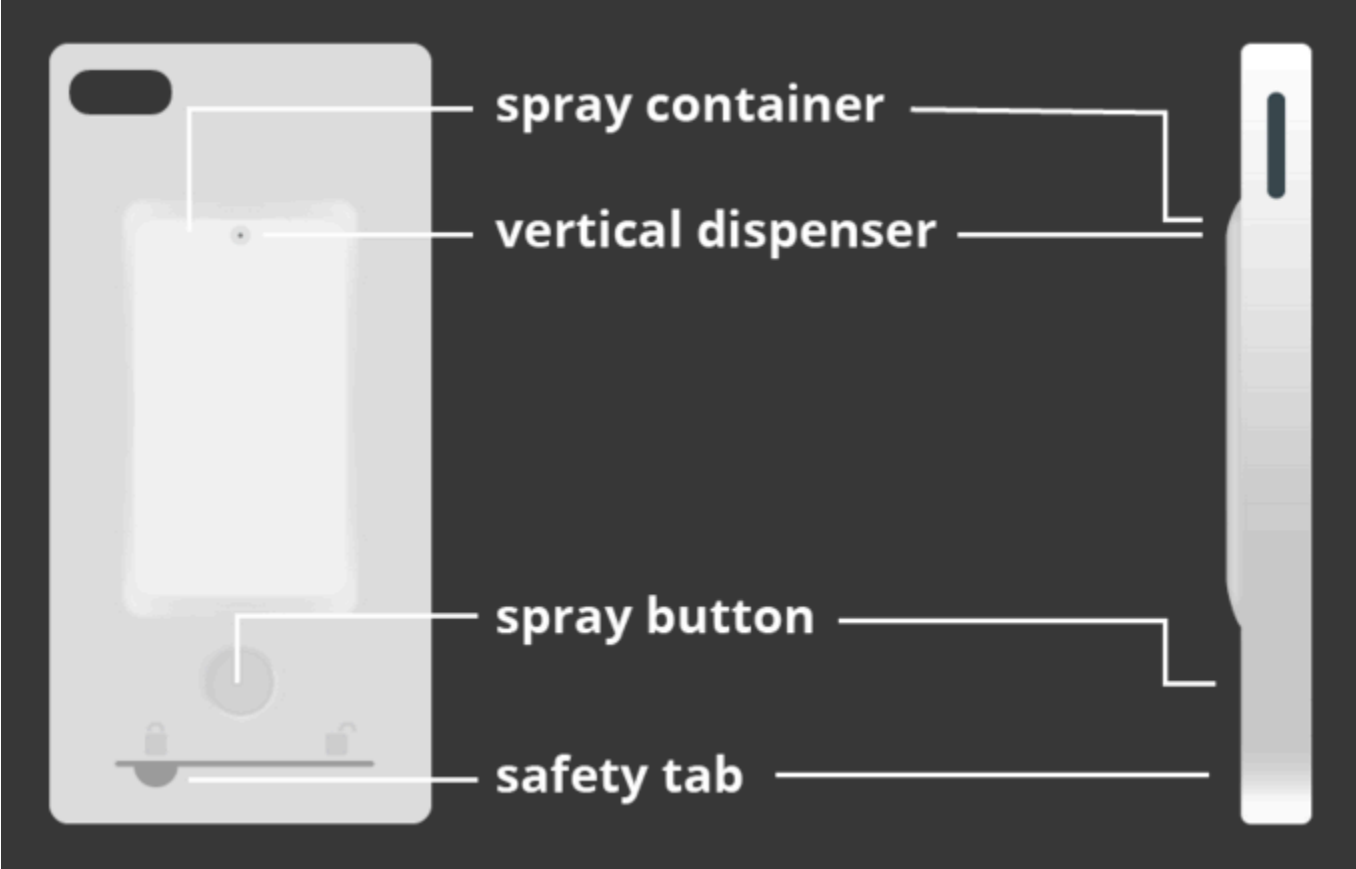
We plan to market *Scorpion* at summer orientation programs and tent giveaways on college campuses. There, we will let customers examine our product before purchase as well as promote our website. As we will note in the Viability section, interstate restrictions on the sale and distribution of pepper spray would limit some of our direct sales to customers, which is why a website of our own will give customers a variety of options for case designs and fits without tampering with regulations. We also want to partner with student stores and mall kiosks to reach our target market of college students and their parents.

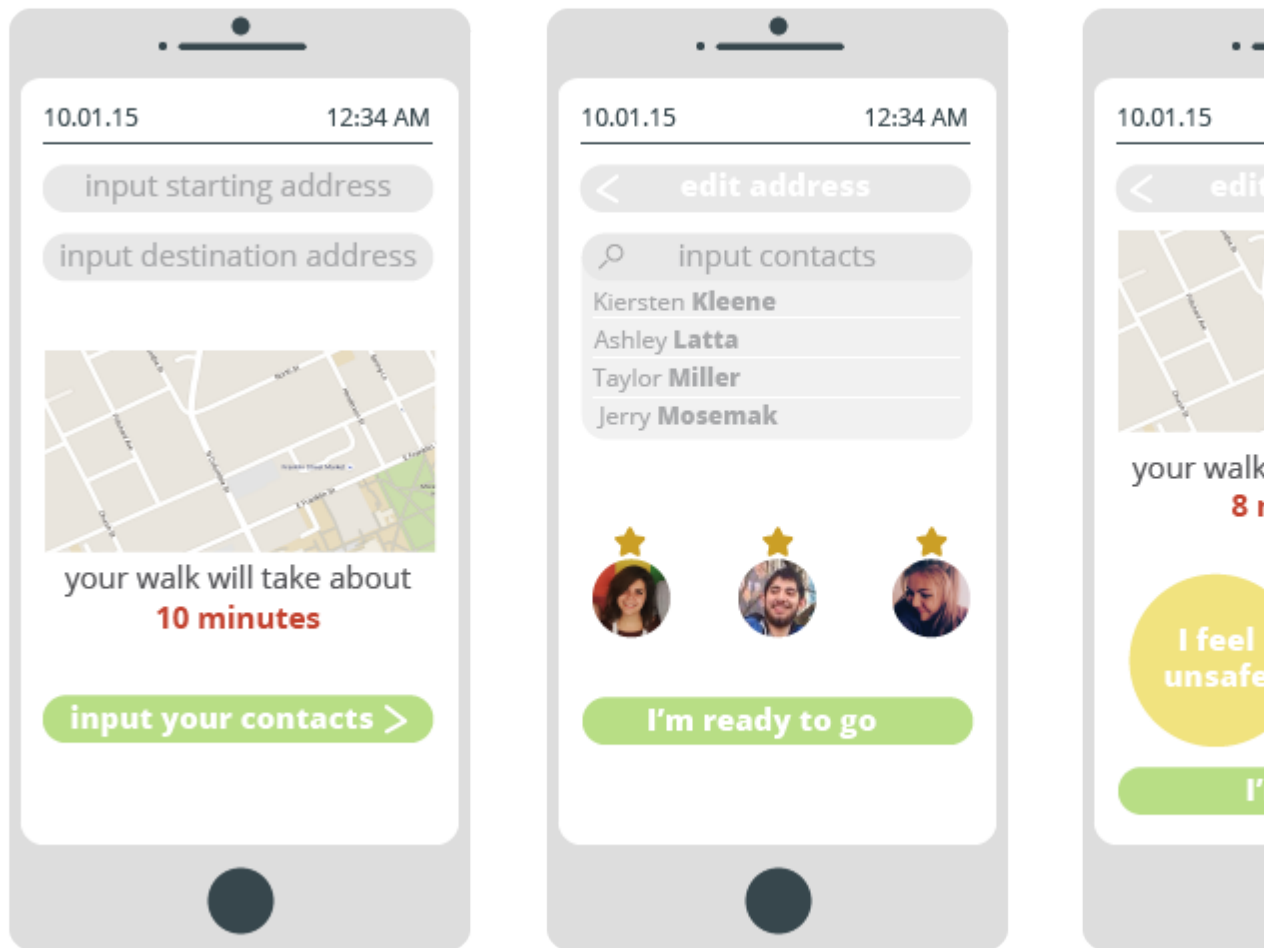
Overall, three quarters of the customers we spoke with would purchase a quality case that protects their phone and themselves. At a time when campus safety issues are frequently discussed topics and documentaries like “The Hunting Ground” are bringing sexual assault issues to the forefront, the importance of our product is immense.

FEASIBILITY

While assault can not necessarily be “solved,” there are ways to make people feel safer when in situations that may present a threat. *Scorpion* integrates hardware with technology by providing users with a defense mechanism that is practical and unintrusive — a pepper spray phone case. The case is durable, yet slick, and is raised slightly in the back where refillable pepper spray can be laid. A button on the back of the case must be pressed to activate the spray, but only once the sturdy safety lock is switched into the ‘unlock’ position. When the spray is released, the integrated case opens a live audio and video recording app on the user’s phone. This footage can be sent to the cloud, saved on the phone, or sent to preset emergency contacts.

The *Scorpion* app also features a safewalk function that alerts the user’s selected contacts as to when they’re walking, where they’re going, and if they feel safe along the way. The user interface is quick and easy to use, and provides users with “I feel unsafe” and “I need help” buttons to be used if needed. Clicking the “I feel unsafe” button automatically sends a message to the selected contacts notifying them of the user’s location. “I need help” records the user’s location and immediately dials 9-1-1.





We tested this solution by asking customers for feedback about the best way to integrate safety into their everyday life. By constantly showing customers our app mockups, prototypes, and ideas, we molded *Scorpion* into a product that would be highly desired by our target market.

VIABILITY

Scorpion's cost structure promises to be lucrative after the initial start-up costs are incurred. Based on research with comparable cases, such as OtterBox, producing the actual case should cost no more than \$9. Pepper spray is extremely cheap, so we've estimated producing it for our case will be no more than \$2. As noted previously, it is important *Scorpion* operate its own website, which will require monthly maintenance of about \$100. App maintenance will equal around \$3,000. Advertising is of extreme necessity in the first few years of a venture, which will total about \$1,000. Total monthly costs will therefore average around \$4,100 without factoring in production costs (which will be applied based on the number of cases sold).

Because *Scorpion* includes a safety app, the company will incur a \$55,000 charge for creating it. We reached this conclusion by speaking with an app developer, who said the cost will vary between \$50- and \$70,000 depending on the complexity of the app. The cost of creating a website should total \$6,000. Start-up costs will total \$61,000 for year one.

Each case will sell at a retail value of \$59.95, with \$11.99 from each case going charities, making our actual revenue \$47.96.

Scorpion estimated this value based on customer feedback, in which three-fourths of college students and their parents said they would pay for this phone case as they already pay between \$40 and \$60 for a quality case that promises to protect their phone.

Scorpion's profit will come entirely from sales. We estimated our customer base conservatively, with the knowledge that as a new product it might take a while for our brand to gain recognition. If just 50 cases were sold in the first month, provided the company pockets \$47.96 from each one, our revenue would equal \$1,848.00 [(50 x \$47.96) - (50 x \$11)]. Nearly \$600 (50 x 11.99) would go to charity, and once the \$4,100 average monthly costs were factored in, the company would incur -\$2,252.00 in profits for month one.

But we plan to attract customers by targeting colleges and universities. Through company partnerships, we'd do product demonstrations at first-year orientations. We also plan to use tent giveaways during the first few weeks of school in order to get our product into the hands of students quickly.

Scorpion predicts making an average sales gain of ten more customers every month for the first six months, and an average of 15-20 more customers every month for the remainder of the first year. By the end of year one, with 1,415 cases sold, our profits would total \$3,098.40.

	A	B	C	D	E	F	G	H	I
1	Monthly Costs								
2	App maintenance	\$3,000							
3	Case production	\$11		Startup Costs for 1st year					
4	Website	\$100		App creation	\$55,000				
5	Advertising	\$1,000		Website creat	\$6,000				
6	Total w/out production	\$4,100							
7									
8	Cost of 1 Unit Sold	\$59.95							
9	Charity	\$11.99							
10	Actual Revenue	\$47.96							
11									
12		Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month7	Month 8
13	Customers	50	60	70	80	90	100	120	:
14	Revenue	\$ 1,848.00	\$ 2,217.60	\$ 2,587.20	\$ 2,956.80	\$ 3,326.40	\$ 3,696.00	\$ 4,435.20	\$ 5,174.
15	Charity	\$ 599.50	\$ 719.40	\$ 839.30	\$ 959.20	\$ 1,079.10	\$ 1,199.00	\$ 1,438.80	\$ 1,678.
16	Costs	\$4,100	\$4,100	\$4,100	\$4,100	\$4,100	\$4,100	\$4,100	\$4,100
17	Profit	\$ (2,252.00)	\$ (1,882.40)	\$ (1,512.80)	\$ (1,143.20)	\$ (773.60)	\$ (404.00)	\$ 335.20	\$ 1,074.

WHO ARE WE?

Rachel Horowitz is a UNC sophomore from Raleigh, N.C. studying Strategic Communication in the School of Media and Journalism. She is currently on the media services team at The Daily Tar Heel and the events and sponsorship team for Crash Campaign. This year, Rachel plans to continue her studies in the MJ-school and hopes to secure an internship doing advertising or public relations for a nonprofit business so that she can financially support her Med. Deli addiction. You can usually find her attempting to sneak her dog into her dorm or inadvertently tripping over a brick in the Pit.

Zach Walker is a UNC senior who was born and raised in Charlotte, NC. He is studying Graphic Design in the university's Journalism School, and hopes to someday work as a designer for a major news outlet. He currently works as a Senior Designer at The Daily Tar Heel. Zach has an unhealthy obsession with pugs, and his goal is to someday adopt one, name it Loaf, and love it unconditionally. In between drinking dangerous amounts of caffeine, he enjoys hiking, roadtripping, barhopping, rock climbing, and snapchatting.

Hayley Fowler is a UNC senior from Mooresville, N.C. studying journalism with a concentration in reporting. She is also a German minor, but she hasn't quite figured out how that's relevant to her future. With approximately 372 career aspirations and absolutely zero definitive plans, she hopes to pursue a life of travel and writing. Hayley is currently the State and National editor at The Daily Tar Heel where she enjoys making bad puns and obsessing over the Board of Governors. In her free time (wut is that), you'll find her binge watching *Friends* on Netflix, eating an inordinate amount of mac and cheese, and stalking sloths and/or weiner dogs on the internet.

Nader Hilmi is a UNC senior who was raised in NYC. He is studying Public relations in the University of journalism school. He currently works as a freelance photographer, and hopes to someday work for the National Geographic. Nader enjoys coaching soccer, surfing, and longboarding during his free time.

FAQ's

1. Where can I buy Scorpion?

We will be selling Scorpion in retail stores and mall kiosks but will have the majority of our products available through our website. The website products can be shipped directly to any United States location.

2. Is there a warranty included?

Yes! Scorpion comes with a one-year limited warranty that covers if the phone case cracks or if the pepper spray function stops working.

3. Why does it cost more than an Otter Box case? An Otter Box only protects your phone. Our case is meant to protect your phone and yourself, and a portion of the proceeds is going to charities that help victims of sexual assault.

4. Will the pepper spray accidentally goes off? There is a security lock on the case so that the spray will not automatically go off in your pocket or your bag. This lock must be disabled before

the pepper spray will work, but it is designed in a way that will make it fast and easy to disable in a dangerous situation.

5. What if the pepper spray runs out? The case comes with two free refills. You can also order more refills from our website.

6. Can I bring the case on an airplane? Pepper spray is allowed on an airplane if inside a checked bag. If you are nervous, it is acceptable to alert the ticketing agent when you check your baggage.

7. Isn't it illegal to carry pepper spray in some states? Pepper spray is legal in all 50 states, but many states do have restrictions on the size and quantity of the spray. Our spray is designed to comply with regulations in any state.

8. Where is the donated portion going?

The 20% donation will go to charities that work to reduce the backlog of rape kits that police have not been able to test.

9. Are there any similar products on the market? There are pepper spray and mace cases on the market, but Scorpion is the only product with an automatic audio and video component. Our app adds additional features, such as a map and “safe walk” function that differentiate us from our competitors.

10. How protective is the case? The case is completely durable and unlikely to crack from dropping the phone. However, its slick design ensures that it won't take up too much space in your pocket while still adequately protecting your phone.

11. Can I buy a case for my Android phone? Right now, we only have case designs for iPhones but are planning to expand our product line in the future.

12. What if I don't want audio or video automatically sent to the police? You can specify this when you create your profile on the app.

13. Are you marketing this case as a way to prevent sexual assault? Absolutely not – there is no straightforward solution to the issue of sexual assault. However, we can make women – and men – feel safer walking alone at night.

14. Will the pepper spray still work if the battery dies? Yes. It is designed to operate separately from the app in situations where your phone is not able to work.

15. Where are you planning to market the case? We are focusing on areas around college campuses or towns with a younger population, since these are mainly the customers who feel like they would feel safer an extra level of protection. This case is meant to fit seamlessly into their daily lives.

16. Is this product geared mainly toward women? Although women are more commonly victims of sexual assault, this case is meant to protect anyone – from the college student walking home alone at night to the twenty-something living in a crime-ridden part of town.

17. How easily can I use the spray? Each case comes with a set of instructions on how to use the spray. As long as the spray function is pointed directly at your opponent, the spray can work from a distance of over five feet away.

18. How effective is the pepper spray? The effects of pepper spray will last around thirty to forty-five minutes, with side effects lasting for a number of hours later.

19. Can I customize the phone case? Right now, you can choose from a variety of designs on our website. We are considering adding a “design your own” option in the future.

20. I already have a phone case – why should I buy a new one? Scorpion will ensure that you have the protection that you need in your hand at all times. Your phone is a part of you, and we want to ensure that you feel safer no matter where you are going.

TIMELINE (Zach)

1. September 3
 - a. Formed group — began brainstorming possible ideas to fit prompt.
2. September 10
 - . Settled on idea to create a dog app that would allow users to rent their dogs out for a short period of time for playdates, walks, or nursing home visitation.
3. September 13
 - . Began gathering customer feedback for dog renting app
4. September 15
 - . After receiving wavering customer support, we changed our app to be a dog caretaking service that incorporates the user’s social circles. The user would post on the app, and friends would take the dog for walks, feed it, etc.
5. September 17
 - . Gathered more customer feedback for new dog caretaking app. We found that many users were very interested in this kind of service, so we began fleshing out the details of the app.
6. September 22
 - . After further research, we discovered that there were many similar apps that were already on the market. This competition had very little need for improvement, so we concluded that it was wiser to target a new market with a completely different idea.
 - a. Presented our findings to the class and announced our decision to start over from scratch.
7. September 24
 - . Started brainstorming completely new ideas.
8. September 29
 - . Created *Scorpion* prototype design.
9. September 30
 - . Settled on new product — a phone case that integrated pepper spray into its design.

- a. Began gathering feedback for our new concept and asked users for input as to the most effective way of designing this product.
 - 10. October 5
 - . Reported back with customer feedback. Discovered that many students were interested in this product, but were concerned about the reliability of the case and how much it would cost.
 - 11. October 6
 - . Created cost spreadsheet to better understand our product's revenue stream and projected profits.
 - 12. October 12
 - . Gathered feedback from parents rather than students. Discovered that parents were very likely to buy a product like this for their child regardless of price.
 - 13. October 20
 - . Pitched *Scorpion* to the class and received feedback as to feasibility, desirability, and viability.
 - a. Recorded questions / suggestions and deliberated on the best way to improve our product.
 - 14. October 27
 - . Crafted a pitch script and further researched the feasibility of *Scorpion*
 - 15. October 29
 - . Pitched *Scorpion* to the class
 - a. Refined script and recorded class suggestions and questions
 - 16. November 3
 - . Pitched improved script to class
 - a. Gathered more customer feedback
 - 17. November 9
 - . Created pitch slide deck and pitched to class with visuals
 - 18. November 10
 - . Improved slides based off of class feedback
 - a. Improved pitch script
 - b. Further researched information about sexual assault and pepper spray
 - 19. November 12
 - . Compiled FAQ sheet and addressed problems with script / product
 - 20. November 16
 - . Made final pitch to class with revised slides and script
 - 21. November 18
 - . Presented *Scorpion* to a panel of judges for consideration

Appendix (MLA format)

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