

Appendix E: Project Definition

Project Name: Self-Defense Tool

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Mission Statement: Design a product to enhance personal safety, educate the user on how to protect themselves from physical attacks, and reduce the anxiety users feel when they leave the safety of their homes. We want to help those who feel targeted, discriminated against, stressed, or unsafe have the confidence to go about their daily lives.

Project Deliverables:

- Final report website
- Final report
- Infomercial
- Prototype

Design Constraints:

- Time
- Money
- Restrictions on weapons

Users and Stakeholders:

- Nighttime commuters
- Asian Defense Alliance
- College students

User Scenario: In an ideal scenario, the users don't have to use the product at all, and it simply acts as a confidence booster. However, it is also key that users can carry this product and defend themselves without worrying about hurting themselves. They should be able to access the tool in the shortest possible time.

On an empty street with dim lights or no light, the user would be able to make it from point A to point B.

On the other hand, in a busy environment, the user should feel safe that they and their belongings are protected.

Some ideal users for our product would range from college students to elderly people. It is most beneficial if the user carries a cell phone daily and wouldn't mind additional accessories on their device.

Project Requirements - Needs, Metrics, and Specifications:

Version 1:

Category	Needs	Justification	Metrics
Function	The product should be portable and easy to carry	From our survey results, many respondents wanted the product to be easily carried.	Shouldn't be bigger than a phone case (maximum 6 inches x 3 inches)
	The product should remind users to carry it every day (or in conjunction with objects they carry every day)	Many respondents expressed how they forget their defense tools at home	Maximum 1.5 pounds, so that when attached to either a phone or worn as jewelry, it won't be too heavy.
	The product should be able to protect the user if used correctly	Self explanatory	The design should be able to inflict a certain amount of force/impulse/stress (pressure)
	The product should be accessible and able to be used at a moment's notice	This adds to effectiveness, as you need to be able to deploy the design rapidly in the event of an attack	The design should be able to go from where it is stored to a usable position within 3 seconds
	The product should provide educational instructions on knowledge of self-defense and the proper usage of the product	More than 70% of respondents don't know about the knowledge of self-defense	The instructional video should be less than 2 minutes, with instructions (with visuals) less than 2 pages. The video and instructions will be in both Chinese and English
	The product should not create any unnecessary harm	Our product is carried by the user on a daily basis, so we don't want the product to accidentally fall out or scratch the user	Using soft materials such as leather
Aesthetic	Users should feel comfortable having the design in public. It can be something that users	Users should feel confident in both their security and their looks.	It should be smaller than an adult-size hand. The phone attachment should

	want to wear or carry, not a sacrifice for the function.		work for most modern cell phones.
Material	The material should be lightweight and durable.	It shouldn't be a burden for people to carry and should not break when put under stress	Below 1.5 pounds
	The material should be as cheap as possible	We want the product to be accessible, and the price shouldn't be a deterrent.	5 dollars
Cost	The final design should be relatively inexpensive. It should be affordable for anyone.	We want our design to be accessible so that the widest range of people can benefit from the product.	We hope that for one "educational" pack, it would cost less than 5 dollars to manufacture