

1.2 Customer Needs

The customer needs were analyzed by surveying two experts: a guidance counselor and a FBI agent in charge of monitoring drug trafficking at the USA-Mexico border. The responses and corresponding needs are analyzed below:

Psychology Expert:

Questions	Customer Statement	Interpreted Need
<p>What traits or lifestyles make a child most susceptible to be a victim of trafficking or abuse?</p>	<p>Traffickers often taken advantage of a situational variable that makes the child vulnerable, such as visiting a popular tourist location. Additionally, abusers take advantage of their power and it affects children across races, socioeconomic status, and sex.</p>	<p>The device will be designed to allow for seamless implementation in public area “hot spots” and can be understood by children of different lifestyles.</p>
<p>Do you believe that most children that are victims of tracking or abuse would have the courage to speak up and ask for help?</p>	<p>Most young children lack the ability to express their experience and the trauma of abuse often manifests itself as behavioral or emotional issues at school. However, their abusers are often adults they know, which makes the act of coming</p>	<p>The device will be incognito to the traffickers – it will be visible to the eyes of the victims.</p>

	forward more complicated.	
Do you believe that most children that are victims of tracking or abuse would have the courage to physically interact with a device to get help if the aggressor is absent?	If they have the cognitive ability to understand what happened to them and they perceive that the threat will not occur again, they may utilize that device or contact the authorities.	The device will alert authorities immediately after victims signals it too. The device will be user friendly to best suit the child's cognitive abilities.
What do you believe is the age range that a child is most susceptible to tracking or abuse?	Girls between 12 and 14 are most likely to be trafficked.	The device will be designed such that a 14-year-old child will be able to read the sign to get help, as well as younger children.

Law Enforcement Expert:

Questions	Customer Statement	Interpreted Need
How long did it take for you or your other colleagues to get to the scene?	15 seconds, we have a team of 10 federal officers on scene.	The device will be able to alert authorities as soon as a victim is spotted.
How did/do you obtain information about a child trafficking victim?	Phone Call and Surveillance camera	The device will allow for the authorities to gather information regarding the situation.
What technology would you deem most helpful in a	Surveillance via cameras, I worked on the border, so we could see when	The device will allow for the situation to be captured in some

trafficking scenario?	individuals would illegally cross into the U.S. with children.	way, be visually or auditorily.
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The customer needs statements were generated by creating two separate surveys for people who are familiar to some extent with trafficking. The first survey created was a psychological survey. This was sent to a school guidance counselor to help gauge the mental capabilities children who are victims of abuse or trafficking.

The survey asked the following questions:

Q. Do you believe that most children that are victims of tracking or abuse would have the courage to speak up and ask for help?

A. Traffickers often taken advantage of a situational variable that makes the child vulnerable, such as visiting a popular tourist location. Additionally, abusers take advantage of their power and it affects children across races, socioeconomic status, and sex.

N. The device will be designed to allow for seamless implementation in public area “hot spots” and can be understood by children of different lifestyles.

Since the counselor emphasized the fact that children are often taken due to situational variables and that trafficking is less dependent on lifestyles, it is important for the device to be accessible to children of different walks of life, and for the device to be designed such that it can blend in in a multitude of environments. This way, it will be easier for a child to access the device.

Q. What traits or lifestyles make a child most susceptible to be a victim of trafficking or abuse?

A. Most young children lack the ability to express their experience and the trauma of abuse often manifests itself as behavioral or emotional issues at school. However, their abusers are often adults they know, which makes the act of coming forward more complicated.

N. The device will be incognito to the traffickers – it will be visible to the eyes of the victims.

Since abusers are often adults that the child knows, it is pivotal that the device be designed such that the abuser will not realize that it is being used to save the child. This means that the device will be designed to appear as something that a child may use and be inconspicuous to the abuser.

Q. Do you believe that most children that are victims of tracking or abuse would have the courage to physically interact with a device to get help if the aggressor is absent?

A. If they have the cognitive ability to understand what happened to them and they perceive that the threat will not occur again, they may utilize that device or contact the authorities.

N. The device will alert authorities immediately after victims signals it too. The device will be user friendly to best suit the child’s cognitive abilities.

Since the cognitive ability of a child who is the victim of trafficking or abuse seems to be very fragile, the device will be designed such that it is user friendly for the child to operate, thus making it easier for a child with cognitive issues to access and reach help. Additionally, the device will alert authorities as soon as the child initiates the response. If the child would mainly use the device when they perceive that the threat will not happen again, it could mean that the child and the abuser are parting ways, thus making it more pivotal to alert authorities to guarantee the child’s safety.

Q. What do you believe is the age range that a child is most susceptible to tracking or abuse?

A. Girls between 12 and 14 are most likely to be trafficked.

N. The device will be designed such that a 14-year-old child will be able to read the sign to get help, as well as younger children.

Since girls between the age of 12 and 14 are most likely to be trafficked, the device will be designed such that a 14-year-old child will be able to recognize the device. This will only be used as a range and dictates the upper end of the range. This device will also need to be accessible for younger children as well. The device incorporates a lenticular sign (which is outside of the scope). This will affect the device by helping to define the upper end of the target (ie, positioning of the sign such that a 14-year-old child will be able to read it).

The second survey created was targeted towards a trafficking expert. This was sent to an FBI agent in charge of monitoring drug trafficking at the US-Mexico border. This expert has firsthand experience responding to cases where children were used to traffic drugs across the border. The feedback from this survey helps to gauge the response of authorities in the event of a trafficking issue.

The survey asked the following questions:

Q. How long did it take for you or your colleagues to get to the scene?

A. 15 seconds, we had a team of 10 federal officers on the scene.

N. The device will be able to alert authorities as soon as a victim is spotted.

In trafficking situations, time is crucial and law enforcement will be needed to respond quickly depending on the severity of the situation. The device will need to have the ability to alert the authorities to have them on the scene in a timely manner and deal with the situation accordingly. This impacts the device by not only requiring the capability of contacting authorities into the design, but also requires coordination with law enforcement to ensure their quick response to the situation.

Q. How did/do you obtain information about a child trafficking victim?

A. Phone Call and Surveillance camera

N. The device will allow for the authorities to gather information regarding the situation.

Information is a great help in trafficking situations and allows for victims suffering in silence to be noticed. The device will need a way to gather information for the authorities to use regarding each situation to bring to their attention what is going on as these things aren't always easy to detect from face value. It will allow for the authorities to understand the situation and figure out the best approach to ensure the safety and wellbeing of the victims involved.

Q. What technology would you deem most helpful in a trafficking scenario?

A. Surveillance via cameras, I worked on the border, so we could see when individuals would illegally cross into the U.S. with children.

N. The device will allow for the situation to be recorded in some way, be visually or auditorily.

Since authorities in trafficking situations find video recordings to be the most helpful, the device will be able to be able to record the situation in some way. This changes the design of the device because it requires the device to be large enough to implement the electronics needed to record or requires the device to be able to interact with previously existing electronics in the community to record a situation.