Project Design
Phase-I
Proposed Solution

Date	08 November 2022
Team ID	PNT2022TMID12351
Project Name	Child Safety Monitoring and Notification

Proposed Solution:

S. No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	More families are now spending time on work and social duties, hence away from their children. This causes increased concerns towards their safety and whereabouts, and has made keeping a track of their activities quite challenging. Crimes against children are increasing year on year. With the lack of availability of affordable child monitoring systems it is hard to monitor the whereabouts of Children. Safety of children is very critical since children cannot protect themselves. A momentary lack in parental supervision should be combated with an appropriate IT solution in context.
2.	Idea / Solution description	Therefore, it is necessary for the proposed system to alert the parents when the child walks too far away and/or outside the "circle of safety" when they are away. In case of an emergency, or in a situation of panic, the child must be able to communicate with their parents. This can be done via live transmission of audio from the device with the child, to the parent's device. If in case the child does go missing or has a fall, the aid of technology can increase efficiency and decrease the time necessary to locate and reach the child.
3.	Novelty / Uniqueness	There are a few ways that the existing solutions work. First, with the use of a smartphone. This method might seem handy, but providing a young child with a smartphone in hand is not an ideal case, counter to the monetary investment for the phone, and the additional responsibility that the child has to take to handle and take care of the phone. This makes it a less feasible solution. The other way is via smartwatches that a child wears on the wrist. This may seem like an ideal solution, but the problem with this arises when the kidnapper is aware of such a device, and immediately removes the device from the child's wrist and destroys it.

		With the proposed solution, we make a discreet-looking device that doesn't look like a tracking device but is always with the child. Because of the way it looks, it does not distract the child, and with its small size, it can be easily attached to any part of the child's clothing.
4.	Social Impact / Customer Satisfaction	This help parents keep track of their children's whereabouts. Children are more readily influenced by their peers these days, and they may be duped or abducted by strangers. This method may be developed to track a child's current position.
5.	Business Model (Revenue Model)	This project proposes a smart IoT Based device that can help reduce parents' insecurity with regards to their children's whereabouts in real-time. The project aims to create a system that allows the parents to keep a track of their children when they are out of their sight. This is done using a concealed WFPS-enabled device worn by the child which is connected to the parents' smartphone using a mobile network. This Child Monitoring system helps monitor or track the child and their activities from anywhere in the world. This system plays an important role. It tracks whether the children are safe. Some prominent features of this system are Geo-fencing, Discrete Panic Button, Long battery life, Real-Time Tracking.
6.	Scalability of the Solution	The application will deal with the device and the parent's web app and is mindful to keep track of the location of the device. The child's account can also be edited by parents. The programe will have a route history trace, which will show the parent the path their child took over a period of time. After a specific period, the Web application on the device will update the location of the kid to the application. By pushing the distinct button that has been introduced, parents may even take action if their kid is unstable or in an inappropriate area. WFPS, a WIFI positioning system that doesn't connect to the internet but connects to Wi-Fi access points, will be used to track the child's whereabouts. As a result, the position of the child is shown on the parents' web app.