

Project Design Phase 2

Functional Requirements

Team ID PNT2022TMID06812

Project Name IOT based safety gadget for child safety monitoring and notification

Maximum marks 2 marks

Functional Requirements:

- Notification Parents want to be notified when their child is too far away from them.
 - o Sensitivity: The alarm sensitivity should be adjusted by the parent; this is preferred to a fixed alarm sensitivity setting. Example: At a public outdoor beach where the water is close and there are no walls or obstructions, the alarm needs to be triggered earlier.
- Trustworthiness / Reliability
 - o False positives should be minimized
 - o The timing of the notification directly affects how the effectivity of the system is perceived.
- Security / Privacy
 - o Encryption of data
 - o Any personal data should be deleted as soon as the child is found by the parents; alternatively interviewees suggested data may be stored for up to 24h.
- Navigation
 - o Parents want the fastest route to their child.
 - o Interviewees prefer to be guided by either voice or map navigation. Generally a map was preferred however two users preferred a car-like voice navigation.
- Fastened / Secure device
 - o Interviewees suggested for the device on the child to be difficult to remove
 - o The device should be attractive to the child (colourful design). Possibly serve with an alternative function that will keep the child engaged.

Must Have:

- Early Alarm notification to help keep child in range Variable sensitivity

Should Have:

- Local Ranging/Positioning (Within the domain of the venue)
- Information Privacy / Encryption 19

Could Have:

- Child Node with child friendly design

Won't Have:

- Voice/Other Navigation
- Child Node with alternative function to engage/interest the child
- Child Node embedded into clothing or locked to child
- Absolute (Outdoor GPS style) positioning