PROJECT DESIGN PHASE I – PROBLEM SOLUTION FIT

**Project Title: IOT BESED SAFETY GADGET FOR CHILD SAFETY MONITORING & NOTIFICATION Team ID:** PNT2022TMID47892

**Focus on J&P, tap into BE, understand RC**

**Explore AS, differentiate**

**Deﬁne CS, ﬁt into CC**

or need to get the job done? What have they tried in the past? What pros & cons do these solutions have?

IoT sensors can provide various vital data insights that can be used to improve workplace safety by facilitating the following practices: **Faster emergency response**. Better visibility into workers' health, wellness, and productivity. Early diagnosing and preventing future incidents.

**AS**

**5. AVAILABLE SOLUTIONS**

Which solutions are available to the customers when they face the problem

What constraints prevent your customers from taking action or limit their choices

of solutions?

The child safety wearable device can act as a smart device. It provides parents with the real-time location, surrounding temperature, SOS light along with Distress alarm buzzer for their child's surroundings and the ability to locate their child or alert bystanders in acting to rescue or comfort the child.

**CC**

**6. CUSTOMER CONSTRAINTS**

**CS**

**1. CUSTOMER SEGMENT(S)**

Who is your customer?

Consumer refers to **patients (infants, children and adolescents), parents, carers and other family members**. It may also include external providers, such as consumer groups, general practitioners and other health professionals.

**Explore AS, differentiate**

**Define CS, fit into CC**

i.e. directly related: ﬁnd the right solar panel installer, calculate usage and beneﬁts; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)

It consists of inbuilt Wi-Fi, GSM, GPS and Bluetooth modules. The link it one board is similar to the Arduino board and it is termed as all-in-one prototyping board for safety and IoT devices. The link it one is a robust development board for the hardware and also used for industrial applications. Different components such as temperature sensor, heartbeat sensor, panic button, contact switch are connected to the link it ONE board along with built in GSM, GPS modules.

**BE**

**7. BEHAVIOUR**

What does your customer do to address the problem and get the job done?

**RC**

**9. PROBLEM ROOT CAUSE**

What is the real reason that this problem exists? What is the back story behind the need to do this job?

Many numbers of crimes on children are reported nowadays, especially child kidnapping and missing cases. So it becomes inevitable to keep an eye on children, particularly when they are out of the home. As an enhanced solution, the Parents/Guardian needs to be intimated if the child is getting moved out of the stipulated geo-location assigned for the child.

This article is focused on creating a solution with the IoT device which has GPS enabled and making use of cloud services for sending an intimation to the parent/guardian using an email or SMS notification along with the current geo-location of the children.

**J&P**

2. JOBS-TO-BE-DONE / PROBLEMS

Which jobs-to-be-done (or problems) do you address for your customers?

There could be more than one; explore different sides.

We are an impartial and non-partisan organization on the cutting edge, amplifying children’s voices and inspiring breakthroughs focused on achieving immediate and lasting change in children’s lives.

With Save the Children, growing your career is so much more than working for just any nonprofit organization. Our work means investing in children's futures and empowering families to support themselves, with an organization that invests in YOU, too.

**Focus on J&P, tap into BE, understand RC**

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| **Identify strong TR & EM** | **3. TRIGGERS TR**  What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efﬁcient solution in the news.  Security - Kids must feel safe and sound, with their basic survival needs met: shelter, food, clothing, medical care and protection from harm.  Stability - Stability comes from family and community. Ideally, a family remains together in a stable household, but when that's not possible, it's important to disrupt the child's life as little as possible.  Emotional support - Parents' words and actions should encourage kids' trust, respect, self-esteem and, ultimately, independence. | **10. YOUR SOLUTION SL**  If you are working on an existing business, write down your current solution ﬁrst, ﬁll in the canvas, and check how much it ﬁts reality.  If you are working on a new business proposition, then keep it blank until you ﬁll in the canvas and come up with a solution that ﬁts within customer limitations, solves a problem and matches customer behaviour.  For developing the prototype, we have chosen MXChip IoT DevKit (a.k.a. IoT DevKit), which is an all-in-one, Arduino compatible board with rich peripherals and sensors. With this device, we can build the Internet of Things (IoT) solutions that take advantage of Microsoft Azure services.  The IoT kit doesn’t have a GPS module by default, and to enable the same, we will be making use of GPS Module GPS NEO-6M with IPEX Antenna High Sensitivity for Navigation Satellite Positioning. | 1. **CHANNELS of BEHAVIOUR CH**     1. **ONLINE**   What kind of actions do customers take online? Extract online channels from #7   * 1. **OFFLINE**   What kind of actions do customers take ofﬂine? Extract ofﬂine channels from #7 and use them for customer development.  ONLINE  This android app uses global positioning system (GPS) and mobile services to find the child location and secretly stored all the call logs, hort message service (SMS) logs, contact lists, and accurate locations without knowing the children.  OFFLINE  Sensor known as a device measuring physical value and converts it into data. Common sensors like the temperature sensor measures heat of an object. Proximity sensor used to detect nearby objects. For the pressure sensor, it calculates pressure applied |  |
| **4. EMOTIONS: BEFORE / AFTER EM**  How do customers feel when they face a problem or a job and afterwards?  1)before wearing the device they feel dependent/after wearing the device they feel independent  2) Emotional safety in schools refers to how safe a student feels in expressing their emotions in school.  3) Students should feel secure and confident as they express themselves and take on challenges that encourage them to try something new. |