

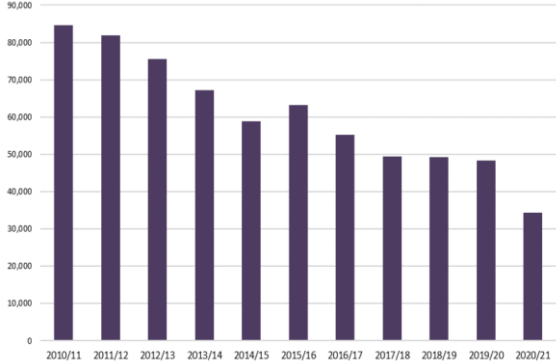
**Project Design Phase-I**  
**Proposed Solution Template**

Date	19 September 2022
Team ID	PNT2022TMID29660
Project Name	Industry-specific intelligent fire management system
Maximum Marks	2 Marks

**Proposed Solution Template:**

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	<ul style="list-style-type: none"><li>Reducing false alarms and improving the accuracy of fire detection.</li><li>The cost of the fire detection system is usually high. So, building the model at an affordable price is required.</li></ul>
2.	Idea / Solution description	<ul style="list-style-type: none"><li>We can use machine learning algorithms and convolutional neural networks (CNN) to analyse data such as variations in temperature, and smoke level to time to predict the possibilities of fire in the room.</li><li>Implementing fuzzy logic to avoid false alarms.</li><li>We can use CO (carbon monoxide) detectors combined with smoke detectors to improve fire detection accuracy.</li></ul>
3.	Novelty / Uniqueness	<ul style="list-style-type: none"><li>The app is designed to monitor temperature and status 24/7.</li><li>Notifications and alarms are pushed to owners and customers through messages.</li><li>Automatically informs the fire department authority about fire detection.</li></ul>
4.	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"><li>Can be reliable, stress-free, and peaceful for the security of the home in fire incidents.</li><li>Can be used to build smart and fire-secured industries and cities.</li><li>Fire incidents can be prevented from incurring huge losses.</li></ul>

5.	Business Model (Revenue Model)	<ul style="list-style-type: none"><li>• Free software updates for supported devices.</li><li>• Providing free installation and maintenance service routinely at a cost.</li><li>• With free home fire insurance with premium purchases.</li></ul>  <table><caption>Revenue Data (Estimated)</caption><thead><tr><th>Year</th><th>Revenue</th></tr></thead><tbody><tr><td>2010/11</td><td>85,000</td></tr><tr><td>2011/12</td><td>82,000</td></tr><tr><td>2012/13</td><td>75,000</td></tr><tr><td>2013/14</td><td>68,000</td></tr><tr><td>2014/15</td><td>60,000</td></tr><tr><td>2015/16</td><td>63,000</td></tr><tr><td>2016/17</td><td>55,000</td></tr><tr><td>2017/18</td><td>50,000</td></tr><tr><td>2018/19</td><td>49,000</td></tr><tr><td>2019/20</td><td>48,000</td></tr><tr><td>2020/21</td><td>35,000</td></tr></tbody></table>	Year	Revenue	2010/11	85,000	2011/12	82,000	2012/13	75,000	2013/14	68,000	2014/15	60,000	2015/16	63,000	2016/17	55,000	2017/18	50,000	2018/19	49,000	2019/20	48,000	2020/21	35,000
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6.	Scalability of the Solution	<p>We can expand the sensor networks without any tedious process and can be combined with modern sensors to improve efficiency and detection in the future.</p>																								