Project Design Phase-I

Problem Solution Fit

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| Date | 13 Nov 2022 |
| Team ID | PNT2022TMID42977 |
| Project Name | SMART FARMER: IoT Enabled Smart Forming Application |

Team ID: PNT2022TMID33194

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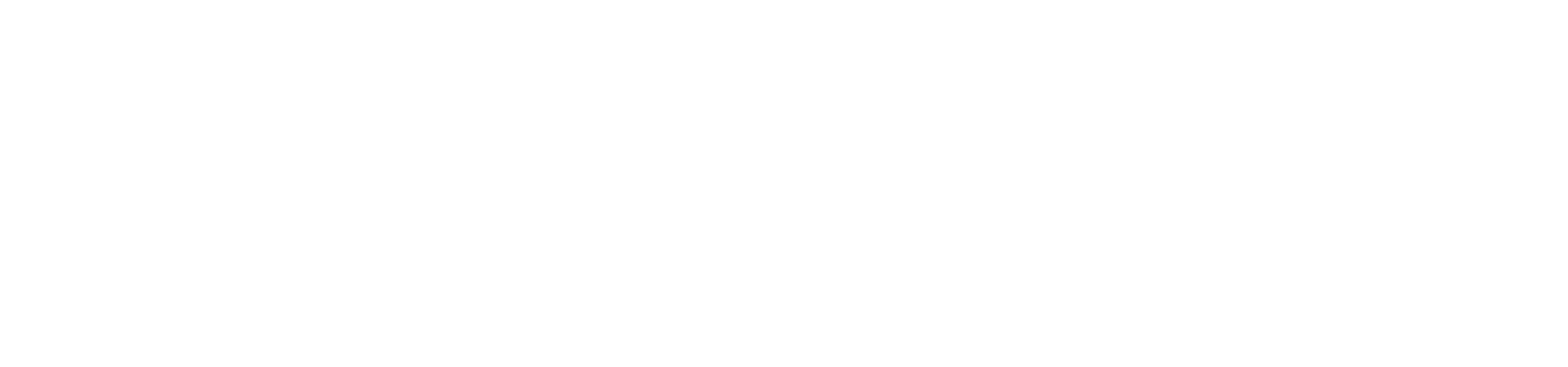
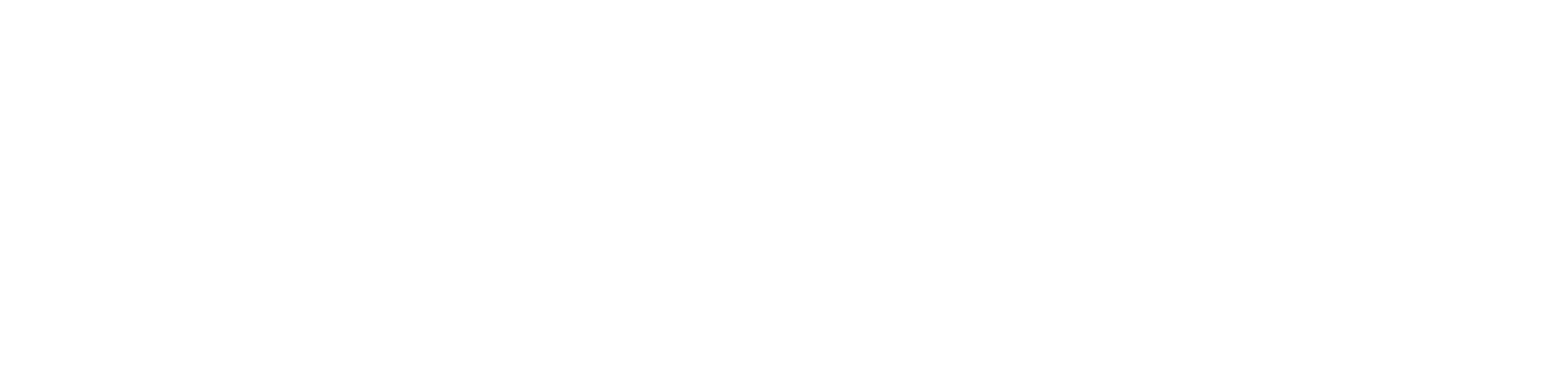
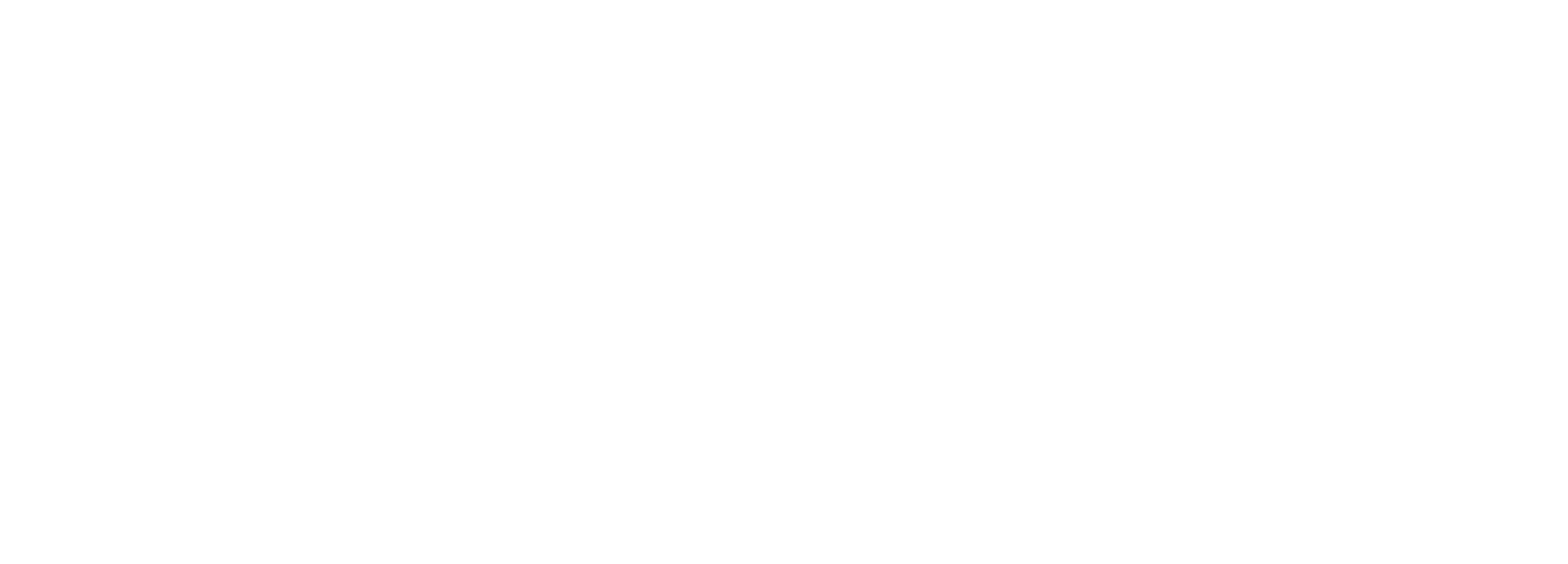
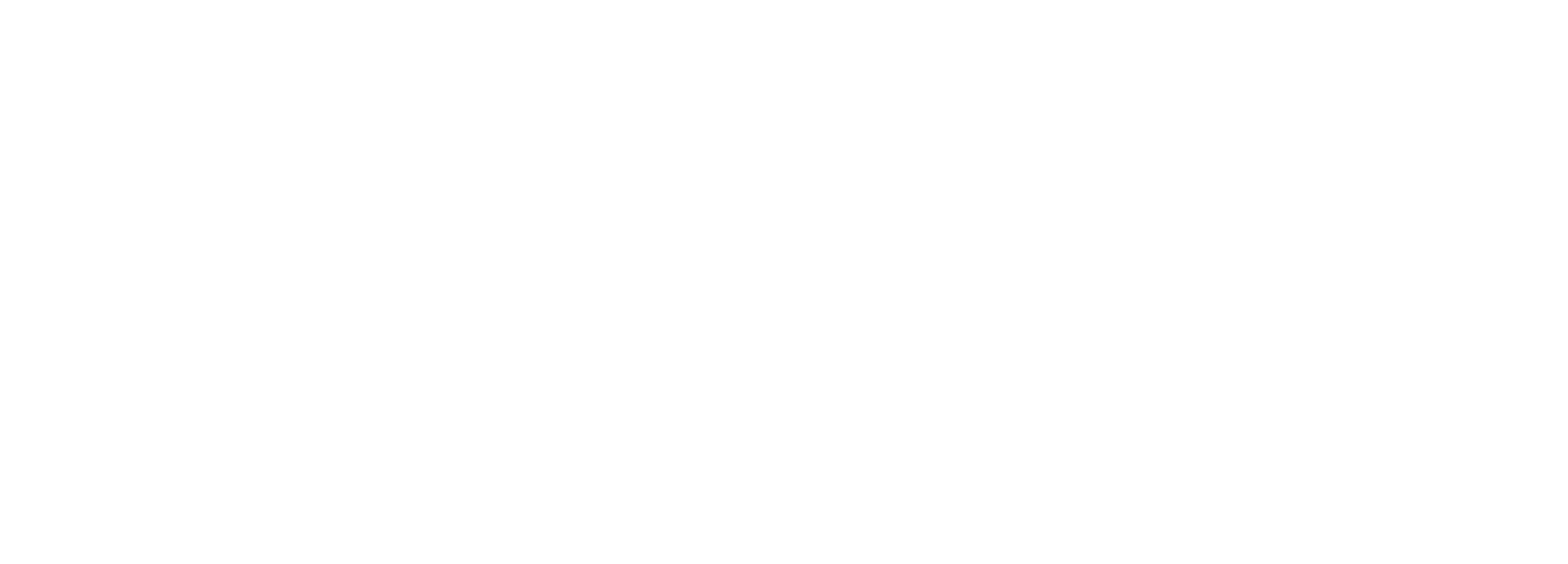
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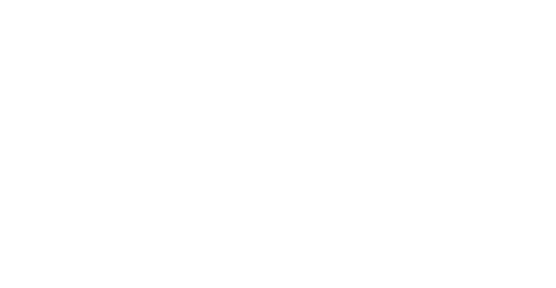
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AS



. AVAILABLE SOLUTIONS

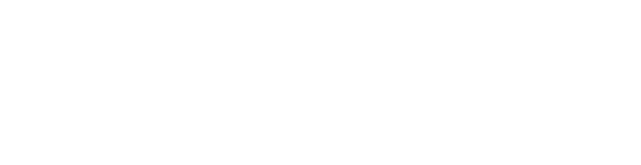
5

The irrigation process is automated using IoT. weather data and field

parameters were obtained and processed to automate the process

of irrigation. The drawbacks are high cost of installation, efficient

only for short distance, difficulty in storing the data.



Deployment of huge number of sensors is difficult. It requires an unlimited or

continuous internet connection to be successful.



CC

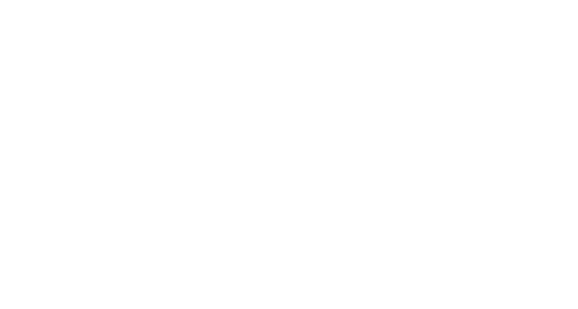


. CUSTOMER CONSTRAINTS

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CS



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. CUSTOMER SEGMENT(S

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The customers of this product are the farmers who cultivate crops. Our

aim is to assist, aid and help them to monitor the field paramet

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remotely and to keep track of the parameters. This product saves the

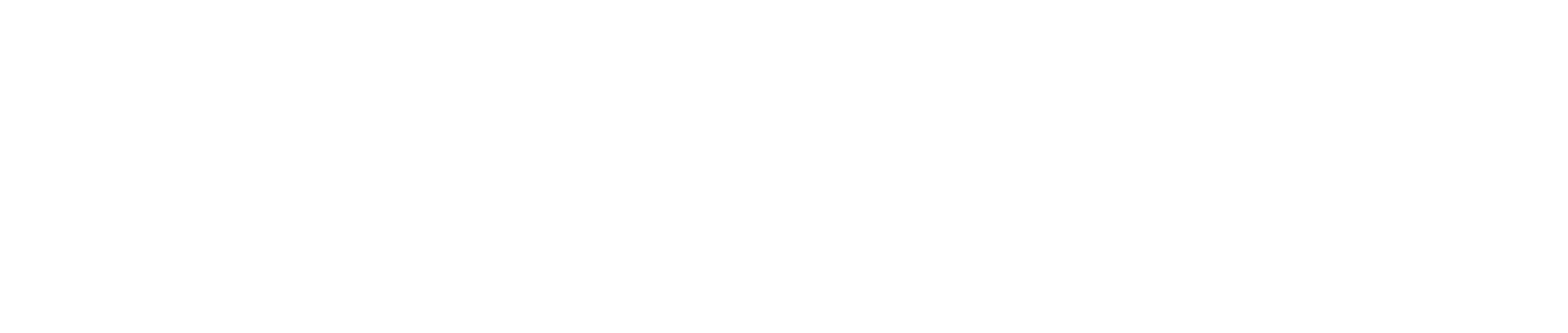
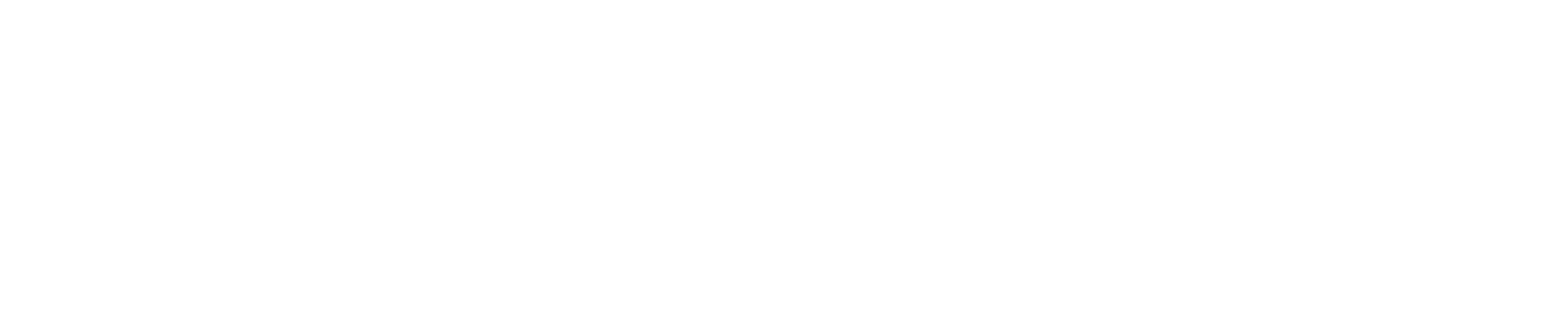
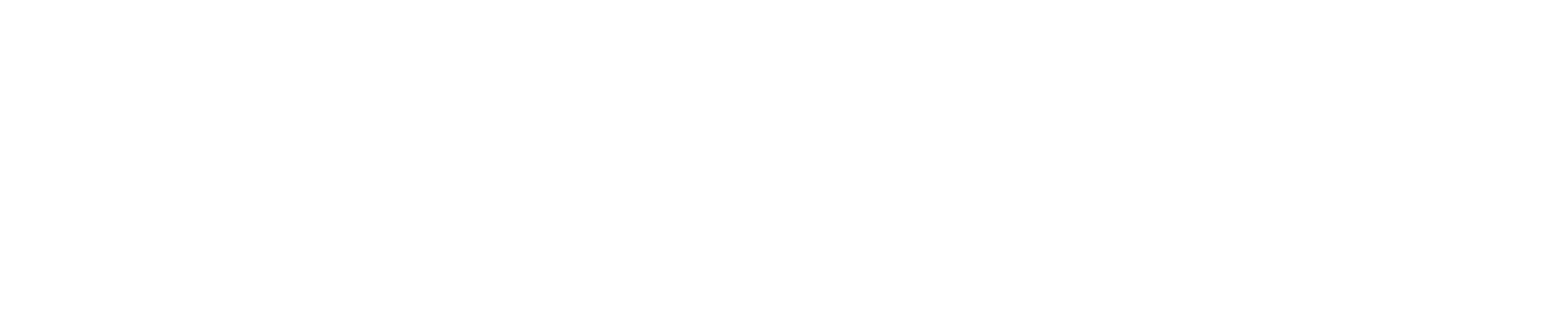
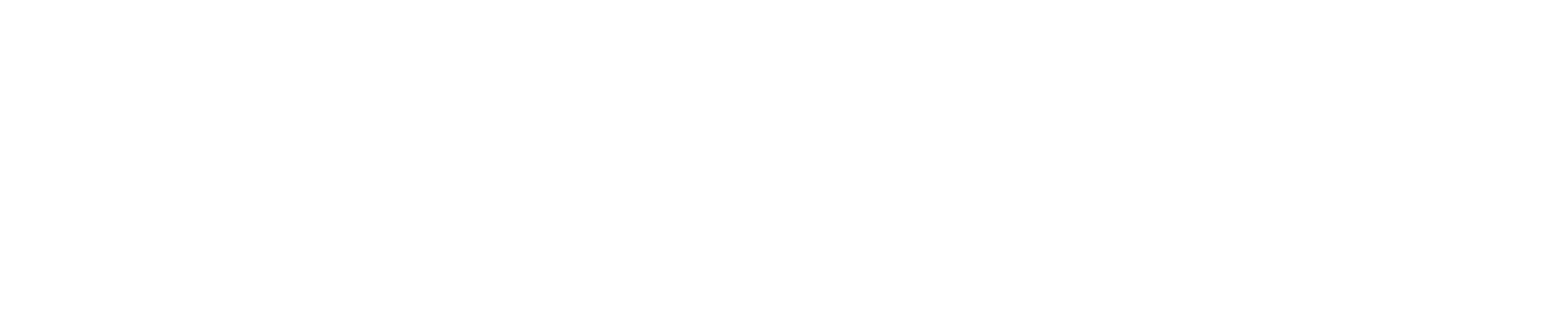
agriculture from extinction.



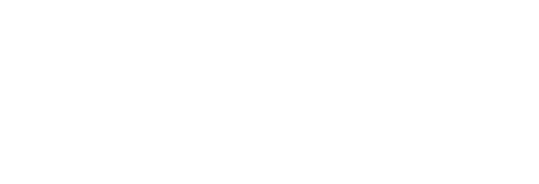
Explore AS, differentiate



Define CS, fit into CC



BE



. BEHAVIOUR

7

Using proper drain system to overcome

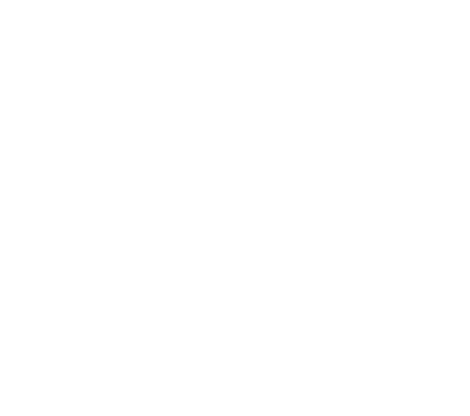
the effects of excess water

due to heavy rain. Using hybrid varieties of crop that are resistant

to pests.



RC



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. PROBLEM ROOT CAUSE

The frequent change or unpredictable weather

and climate, made it difficult for the farmers to

do agriculture.

These factors play a major role

in making decision whether to water the plant

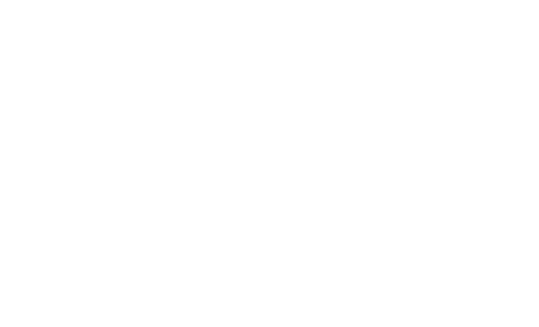
or not. The monitoring of the field is hard

when the farmer is out of station, thus leading

to crop damage.



J&P



. JOBS

2

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TO

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BE

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DONE / PROBLEMS

The objective of this product is to obtain the different field

parameters using sensor and process it using a central processing

system. Cloud is used to store and transmit the data by using IoT.

Weather APIs are employed to assist the farmer in making

decision. The farmer could take decision through a mobile

application



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



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

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Identify    strong TR & EM |  | | |  | | |  | | | Extract online &  offline    CH of BE |
| 3. TRIGGERS | TR |  | 10. YOUR SOLUTION | SL |  | 8. CHANNELS of BEHAVIOR | CH |  |
|  |  |  | Our product collects the data from different types of sensors and it sends the value to the | |  |  |  |  |
| Farmers facing issues in providing proper irrigation. No proper supply of water leads to reduced production which affects the profit level of the farmer. Farmer’s struggle to predict the weather. |  |  | ONLINE: Providing online assistance to the farmer, in providing knowledge regarding the pH and moisture level of the soil. Online assistance to be provided to the user in using the product    OFFLINE: Awareness camps to be organized to teach the importance and advantages of automation and IoT in the development of agriculture. |  |  |
| main server. It also collects the weather data from API. The ultimate decision whether to water the crop or not is taken by the farmer using a mobile application. | |  |
| 4. EMOTIONS: BEFORE / AFTER  BEFORE: Lack of knowledge in weather forecasting  →Random decisions →low yield.  AFTER: Data from reliable source  → correct decision →high yield | EM |  |