# Problem-Solution fit canvas 2.0

Purpose / Vision

Define CS, fit into CC

### 1. CUSTOMER SEGMENT(S) — CS

Who is your customer?
i.e. working parents of 0-5 y.o. kids

Farmers who are responsible for food production of a country

### 6. CUSTOMER CONSTRAINTS — CC

What constraints prevent your customers from taking action or limit their choices of solutions? i.e. spending power, budget, no cash, network connection, available devices.

Low internet connectivity, High cost, lack of awareness for old farmers,fear of crop damage by radiation, power consumption

### 5. AVAILABLE SOLUTIONS — AS

Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? i.e. pen and paper is an alternative to digital notetaking

IoT based farming solutions for fertilizer management has soil intelligence platform which uses data from geographic information systems(GIS) and IoT sensors to analyze data, use of drones

Explore AS, differentiate

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

### 2. JOBS-TO-BE-DONE / PROBLEMS — J&P

Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.

Declining soil fertility has become a threat in agricultural productivity and agro-economic scenario. Floods, drought, soil type can affect crop protection. Also pests,weeds can cause low productivity.

### 9. PROBLEM ROOT CAUSE — RC

What is the real reason that this problem exists?
What is the back story behind the need to do this job?
i.e. customers have to do it because of the change in regulations.

Soil fertility decline occurs when the quantities of nutrients removed from the soil in harvested products exceed the quantities of nutrients being applied.Excessive cultivation, Salinization, or the accumulation of salts in the topsoil have a deletrious effect on soil productivity. Soil erosion is caused by floods. Infertile land leads to drought.

### 7. BEHAVIOUR — BE

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

Farmers are facing these problems over the past 50 years frequently.
Farmers's activities: Destruction of crop residues, deep plowing, crop rotation, use of fertilizers, strip-cropping, irrigation, scheduled planting operations,till their soils, rotate their crops, scout their fields, and carefully consider factors such as plant density and planting dates.

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

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.

Crop protection in IOT can save time,reduce labour cost,decrease damage to crop

### 4. EMOTIONS: BEFORE / AFTER — EM

How do customers feel when they face a problem or a job and afterwards?
i.e. lost, insecure > confident, in control - use it in your communication strategy & design.

Traditional methods do not have real time monitoring, very difficult in pest control, widespread of disease.After IOT,farming can be made easy , prevention of attacks, quick detection and solving of problems

### 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.

Helps farmers to achieve increased production and reduced costs by enabling better management of land resources by GIS software which will meet cultivator's requirements.

### 8. CHANNELS of BEHAVIOUR — CH

**8.1 ONLINE**
What kind of actions do customers take online? Extract online channels from #7

Remote sensing , smart control , use of IOT for crop protection are done via online

**8.2 OFFLINE**
What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.

Traditional methods of crop protection can be done via offline.

Extract online & offline CH of BE

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