

Project Design Phase-I - Solution Fit Template
Project Title: A Novel Method for Handwritten Digit Recognition System
Team ID: PNT2022TMID53487

Define CS, fit into CC	<div>1. CUSTOMER SEGMENT(S) Who is your customer? i.e., working parents of 0–5-year-old kids</div> <div>CS</div> <div>People across the globe, especially customers who deal with handwritten digits, for example, banking sectors, schools and colleges.</div>	<div>6. CUSTOMER CONSTRAINTS 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.</div> <div>CC</div> <div>Errors in detection, image clarity, network connectivity issues might pose a problem</div>	<div>5. AVAILABLE SOLUTIONS 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 are an alternative to digital notetaking</div> <div>AS</div> <div>Google drive provides the service to convert handwritten number images to digital numbers, but there are very few widely used software's to detect handwriting.</div>	Explore AS, differentiate
	<div>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.</div> <div>J&P</div> <div>Handwritten digits can be difficult to understand and interpret at times, there must be features to help the visually challenged. It might also cause errors when it comes to bad writings. So, there must be improved accuracy when it comes to prediction.</div>	<div>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?</div> <div>RC</div> <div>Different people might have different styles, size, orientation of handwriting, lack of accuracy in some test cases.</div>	<div>7. BEHAVIOUR 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</div> <div>BE</div> <div>Upload the image and obtain the result in a click of a button to gain efficient results.</div>	
Focus on J&P, tap into BE, understand RC				Focus on J&P, tap into BE, understand RC

3. TRIGGERS

TR

What triggers customers to act? i.e., seeing their neighbor installing solar panels, reading about a more efficient solution in the news.

Faster, accurate and highly efficient prediction of digital numbers from handwritten images of numbers.

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.

Before: The customers feel annoyed the handwritten digits are not legible or when the paper is wrinkled.

After: The customers feel frustrated for having to scan the images.

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 behavior.

Our application aims to make the task of digit input easier, by reducing it to a simple procedure of scanning the paper the digits are written in, while the system handles the extraction and storage of the values. This avoids any chance of manual input errors during the process.

8. CHANNELS of BEHAVIOUR

CH

8.1 ONLINE

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

8.2 OFFLINE

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

Online: Using software that is available on the internet, all the uploading and prediction of results will be done in online mode.

Offline: Obtaining assistance from people in order to recognize the digits.