

Project Design Phase
Problem – Solution Fit Template

Date	15 February 2025
Team ID	LTVIP2025TMID32013
Project Name	SMART SDLC-AI-ENHANCED SOFTWARE DEVELOPMENT LIFE CYCLE
Maximum Marks	2 Marks

Problem – Solution Fit Template:

The Problem-Solution Fit in the “Smart SDLC – AI-Enhanced Software Development Life Cycle” project demonstrates how the identified issue in traditional software development is effectively addressed by an innovative AI-driven solution. In many development environments, teams struggle with inefficient communication, unclear requirements, manual processes, and repeated errors at various stages of the SDLC. These problems often lead to delays, mismanagement, and higher costs. Our solution integrates an AI-powered chatbot into the SDLC process, enabling smart automation, intelligent recommendations, and seamless collaboration across all phases — from requirement gathering to deployment. The AI assistant understands natural language, making it easier for both technical and non-technical stakeholders to contribute meaningfully. It ensures that tasks like requirement analysis, testing support, documentation, and debugging are faster, smarter, and more accurate. This significantly reduces the development cycle time and improves overall software quality. By analyzing user behavior and aligning with the need for simplicity and automation, the solution fits perfectly into the developer’s workflow. It offers real-time support, enhances decision-making, and empowers teams to work more efficiently. Thus, the Smart SDLC chatbot not only solves the identified problems but aligns exactly with what developers need — making it a strong example of a successful problem-solution fit.

Purpose:

- ☐ Solve complex problems in a way that fits the state of your customers.
- ☐ Succeed faster and increase your solution adoption by tapping into existing mediums and channels of behavior.
- ☐ Sharpen your communication and marketing strategy with the right triggers and messaging.
- ☐ Increase touch-points with your company by finding the right problem-behavior fit and building trust by solving frequent annoyances, or urgent or costly problems.
- ☐ Understand the existing situation in order to improve it for your target group.

Template:

Define CS, fit into CC	1. CUSTOMER SEGMENT(S) CS Who is your customer? I.e. working parents of 0-5 y.o. kids	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.	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	Explore AS, differentiate
	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.	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.	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. Greengespice)	
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.	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.	8. CHANNELS of BEHAVIOUR CH 8.1 ONLINE What kind of actions do customers take online? Extract online channels from #7	Extract online & offline CH of BE
	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.		8.2 OFFLINE What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.	

References:

1. <https://www.ideahackers.network/problem-solution-fit-canvas/>
2. <https://medium.com/@epicantus/problem-solution-fit-canvas-aa3dd59cb4fe>