



**Class:** FY BSc

**Subject :** Problem solving & Critical thinking

**Subject Code:** PUSASQF106

**Chapter:** Unit 2 Chpt 1

**Chapter Name:** Understanding the Problem: Framing and Defining the Issue

# Today's Agenda

## 1.1 What is a problem?



A problem is an obstacle which makes it difficult to achieve a desired goal, objective or purpose.



## 1.1 How to identify a problem?

Difficult problems are those that are ill – defined. They have some characteristics that are typical.

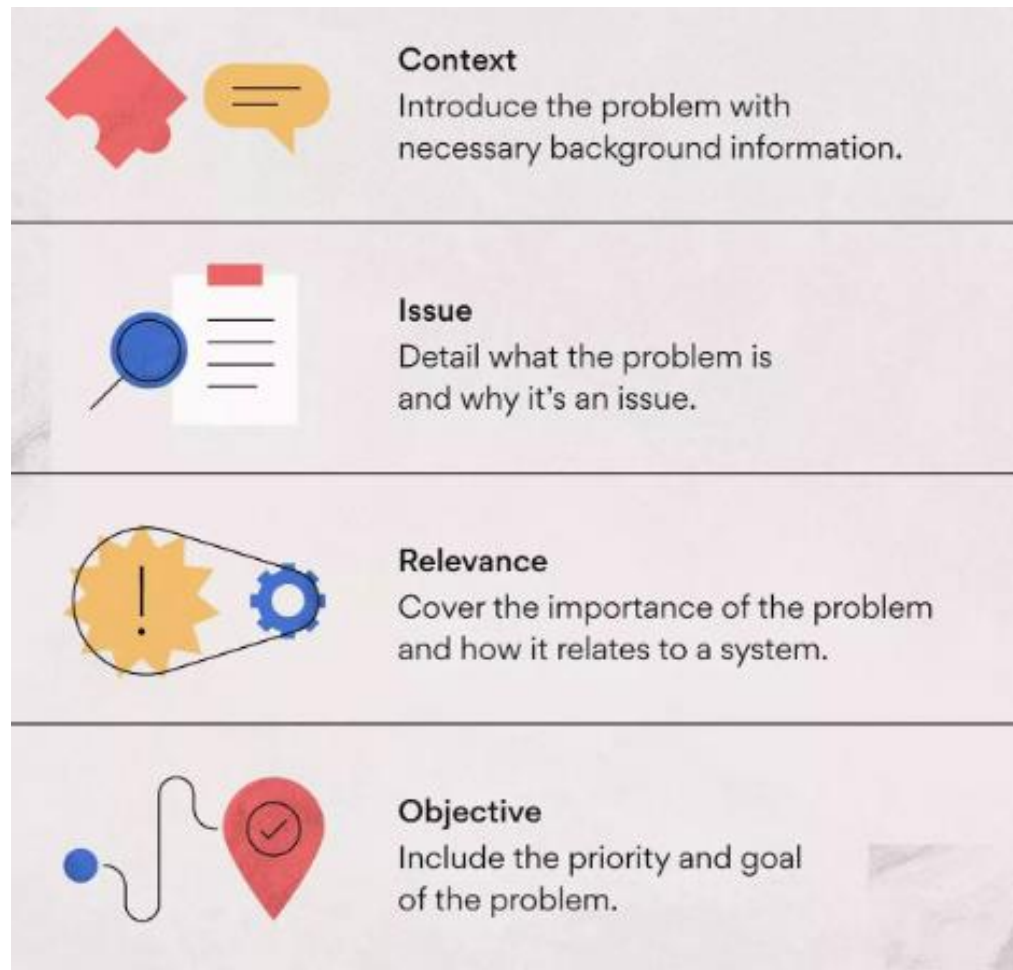


## 1.1 What is a problem statement?

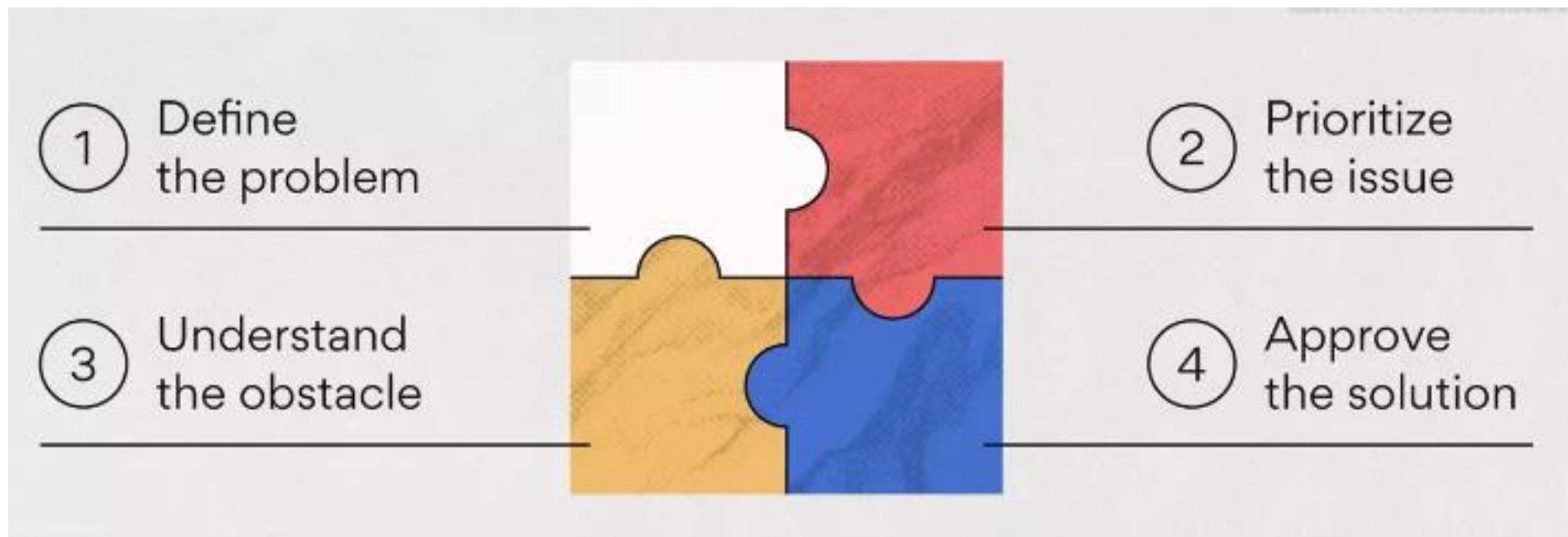


A problem statement is how a problem is communicated to team members. An effective problem statement is framed in a way that provides context and relevance so it's easy to comprehend. This is the initial step in the problem framing process.

## 1.1 How to frame a problem statement



## 1.1 4 steps of the problem framing process



## 1.1 Problem framing



Problem framing is a process of discovery to understand and define a problem. Problem framing is not problem solving. It is challenging preconceived assumptions and considering different perspectives to a problem. Understanding the problem correctly makes solving the problem easier.



## 1.1 Why is problem framing crucial?

### 1. To find a problem worth solving

There's an urban legend about how NASA used a lot of money to create a pen that can work in zero gravity conditions. On the other hand, the Soviet Union spent nothing and simply used a pencil in space.

This is what problem framing does — establishing whether you even have a problem to begin with. If you do find a problem, it may or may not be worth solving for your business. The entire process clears your mind and allows your teams to have important discussions earlier before everybody plods along the wrong path.

### 2. To align perspectives

You can take any issue and have different perspectives from everyone in the room. How you understand and approach a problem may vary wildly from your boss or colleagues.

Perspective is powerful because it shapes the outcome. Problem framing is a means to get everybody seeing and understanding the same thing, so that you can work towards a solution together.

## 1.1 Why is problem framing crucial?

### 3. To avoid wasting time and money

This one is a no-brainer. You don't want to be pouring money, resources and time into a project that won't bring you much success. You want to be solving a problem for the long-term, not to hack a quick solution that will quell the issue for a little while.

## 1.1 Problem framing techniques and tips

### 1. Focus on users

This exercise is putting yourself in shoes of who you're solving the problem for. You will fill up 4 quadrants — what a user thinks, feels, does and says. Mapping them out will give you a better picture of the problem.

### 2. Not too broad or narrow

A problem statement shouldn't be too generic or specific. Being too broad makes problem solving much harder because you're trying to solve too many issues in one instance. A broad statement can be further divided into smaller statements, to tackle one by one.

A narrow problem statement will limit creativity. Usually, a narrow statement is when you have included assumptions about the solution before solving the problem. Writing that your user needs a better app means you're already assuming the answer is a mobile app, limiting the possibilities.

### 3. Try different settings

Imagine the problem in a different environment, severity, size, and with different types of users. Seeing a problem under different scenarios will broaden your mind to see it from multiple points of view. Testing it under varying conditions can help you go deeper into the problem and untangle complex issues.

## 1.1 Problem framing tips

### 4. Do it early, do it together

It sounds like common sense, but a lot of companies leave it too late to frame a problem, skip it altogether, or have one person dictate and define everything. This defeats the purpose. Problem framing is an exercise that needs to be done as early as possible, and with the relevant stakeholders. You should involve people with authority, knowledge of the matter and, ideally, an open mind.

## PROBLEM FRAMING CANVAS: Defining the Right Problem

MITRE | Innovation Toolkit

|              |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                    |                                                                                                          |                                        |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------|
| Look Inward  | <b>What is the problem?</b><br><i>Describe it</i>                                                                                                                                                                                                                                        | <b>Why haven't we solved it?</b><br><input type="checkbox"/> It's new<br><input type="checkbox"/> It's hard<br><input type="checkbox"/> It's low priority<br><input type="checkbox"/> Lack of resources<br><input type="checkbox"/> Lack of authority<br><input type="checkbox"/> A (situational) inequity<br><input type="checkbox"/> Other: _____<br><br><i>Explain more...</i> | <b>How are we part of the problem?</b>                                                                                                                                             | <b>Who experiences the problem?</b><br><br><i>When and where do they experience it?</i>                  |                                        |
|              | <i>List some symptoms</i>                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                   | <b>What assumptions and biases surround this problem?</b> <i>Individual, system, explicit, implicit...</i><br><br><i>Which of these might be redesigned, reframed, or removed?</i> | <i>What consequences do they experience?</i><br><br><i>How do lived experiences of the problem vary?</i> |                                        |
| Look Outward | <b>Who else has it?</b> <i>Colleagues, competitors, other domains, etc.</i>                                                                                                                                                                                                              | <b>Who does not have it?</b><br><i>Colleagues, competitors, other domains, etc.</i>                                                                                                                                                                                                                                                                                               | <b>Who has been left out so far?</b> <i>Let's broaden our perspective...</i>                                                                                                       | <b>Who benefits when...</b>                                                                              |                                        |
|              | <i>How do they deal with it?</i>                                                                                                                                                                                                                                                         | <b>Why not?</b><br><input type="checkbox"/> Avoided<br><input type="checkbox"/> Mitigated<br><input type="checkbox"/> Solved<br><input type="checkbox"/> Transferred<br><input type="checkbox"/> Other: _____                                                                                                                                                                     |                                                                                                                                                                                    | <b>...this problem exists?</b>                                                                           | <b>...this problem does not exist?</b> |
| Reframe      | <b>Stated another way, the problem is:</b> _____                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                    |                                                                                                          |                                        |
|              | <b>Make it actionable:</b> How might we _____ as we aim to _____?<br><div style="display: flex; justify-content: space-between; font-size: small;"> <span>(action that addresses the stakeholder/user problem)</span> <span>(objective / desired condition to be achieved)</span> </div> |                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                    |                                                                                                          |                                        |