EXCERCISE NO. 1

AIM: To prepare PROBLEM STATEMENT for any project.

REQUIREMENTS:

Hardware Interfaces

- Core*i* CPU 3.0 GHz, 4GB RAM
- Screen resolution of at least 800 x 600 required for proper and complete viewing of screens. Higher resolution would not be a problem.
- Pen drive / cloud storage

Software Interfaces

- Any window-based operating system (Windows 10)/ MAC OS
- WordPad or Microsoft Word

THEORY:

The problem statement is the initial starting point for a project. It is basically a one to three page statement that everyone on the project agrees with that describes what will be done at a high level. The problem statement is intended for a broad audience and should be written in non-technical terms. It helps the non-technical and technical personnel communicate by providing a description of a problem. It doesn't describe the solution to the problem.
The input to requirement engineering is the problem statement prepared by customer.
It may give an overview of the existing system along with broad expectations from the new system.
The first phase of requirements engineering begins with requirements elicitation i.e. gathering of information about requirements. Here, requirements are identified with the help of customer and existing system processes. So from here begins the preparation of problem statement.
So, basically a problem statement describes **what** needs to be done without describing **how**.

Conclusion: The problem statement was written successfully by following the steps described above.

Problem statement 5WH model to write the statement

What? Define the problem.

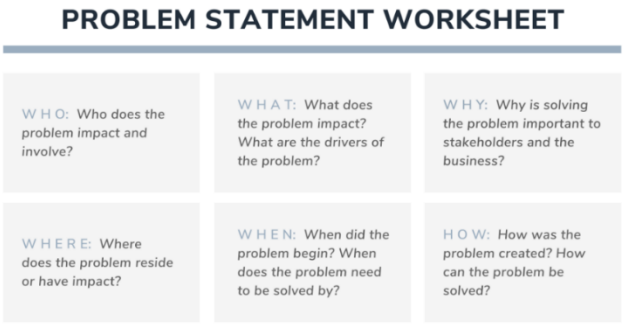
Why? Reason for the problem's occurrence.

When? When the problem began or was first noticed.

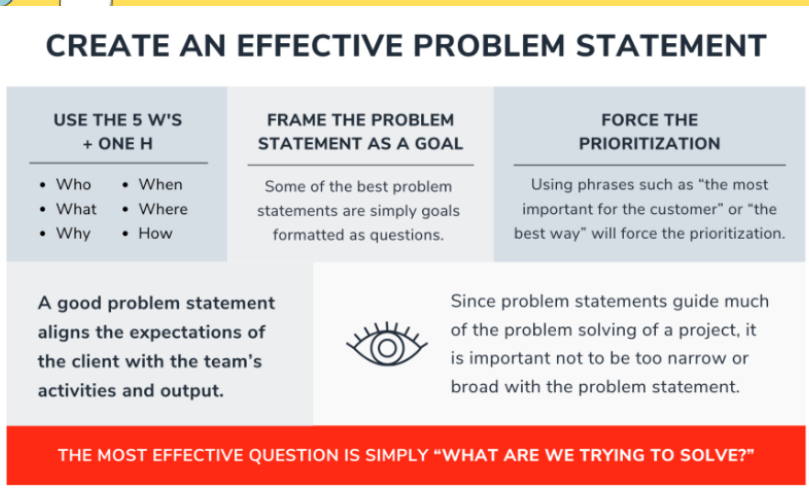
Where? Place of the problem's first occurrence or sighting.

Who? The person or thing that the problem affects.

How? The sequence of events that resulted in the problem.



How To Write A Problem Statement?



A problem statement needs to communicate the extent of an issue and the resources you require to solve the problem. Thus, it is required to be accurate and clearly written. Here are the key steps you are required to follow closely when crafting a problem statement:

1. Put the problem in the context

Before you write, you require to have a clear picture of the problem itself. Since you are addressing individuals with no background on the topic, you require to provide adequate context for them to understand the scope and urgency of the issue. In other words, you are required to describe how things should work.

At this stage, you want to discuss the what, where, when and who, regarding the problem. Think about these additional questions to help you frame an impactful problem statement:

Is the problem limited to a certain demographic or region?

Which people have attempted to solve the issue?

What do people already know about the issue?

Related: The 8D Problem-Solving Method: What It Is And How To Use It

2. Explain the relevance of the problem

The problem statement is required to address not only what the problem is but why it is important to solve. This is the part where you grab the reader's attention by specifying the seriousness of the issue. You require to communicate why it matters to them and the potential dangers if it goes unsolved. Sometimes a problem's relevance is not immediately obvious; that is why doing your due diligence in defining and describing the problem accurately is an important first step.

To clarify why your problem is significant, address the following questions:

Who would feel the consequences of the problem?

What is the financial impact of the problem?

Does the problem have any relevance to other areas of the business?

Does the problem impact the wider society?

How would solving the problem increase our understanding of the business?

Related: How To Use Deductive Reasoning

3. Backup your claims

Quantifiable data ensures people understand the relevance and scope of a problem. Using evidence to back up your problem statement would make people take the issue seriously. Knowing your numbers also boosts your credibility. It can also mobilise a faster response to the problem. For example, if a problem has diminished sales in the past few weeks, showing these statistics immediately communicates the extent of the issue.

4. Propose a solution

After doing a thorough investigation into the problem, you would have a solid grasp of how the problem occurred. Thus, you require to propose a practical solution or suggest several approaches to understanding and rectifying the issue at this stage. State your objectives by suggesting well-thought-out plans for combating the issue.

5. Explain the benefits of your proposed solution(s)

Demonstrate why the solution would work with practical examples of how it might effectively address the problem. Explain how solving the problem would benefit the organisation. Focus on the financial benefits of solving the problem and the impact on customer satisfaction.

Read more to write effective problem statement:

https://blog.teamairship.com/build-a-better-problem-statement