

Problem Statement Workbook





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About this Workbook

You selected your new system, perhaps you've piloted successfully at a single site or maybe the system has already been fully implemented? The future should be smoothsailing, but the truth is, your deployment and sustainment journey has just begun.

The purpose of this workbook is to serve as a planning resource for the rollout and sustainment of your new system followed by ideas and strategies for mitigating common issues during this process.

You will find dtailed sections and techniques for indentifying areas for improvement along with advice and tips for making your deployment successfull.

Meet the Authors



Grant Foster
Software Senior Manager

Grant is an Architecturally-trained engineer, specializing in full-stack mobile and web development. His specialties include React, integrating with API's, and automating rote tasks with python. During his career he has developed dozens of API's and web applications for stakeholders in the building industry. Grant is proficient in test driven development, continuous integration, and version control and has produced production level add-ins for Revit and Google.



Francisco Maranchello
Software Manager

As an Architect that codes, he has broadened his skillset through a passion for technology and innovation. Always learning and leveraging cutting-edge technologies to seek new answers, he brings a holistic approach when facing new challenges. Involved in BIM and software products, projects, and implementations across scales, from design automation to full-fledged apps. Fran is passionate about design & technology, especially finding common ground between the two.



“A Problem Well Stated is Half Solved”

Charles Kettering

How to define a problem statement?

The Induction method is one of the most popular ones to make a good problem statement.

The questions you must ask yourself first are:

1. What is the problem you are trying to solve?
2. Think about the symptoms that you're perceiving in your day-to-day work.
3. Do you know what are the causes of the issue that this project aims to solve? Describe them in the most specific way you can.
4. What are your requirements and needs based on this problem?
5. Add diagrams or flowcharts that describe the logic you follow nowadays in your daily work and where do you think this problem presents.

A well defined problem

Clearly presents the start condition and issue. Is quantifiable.

Makes a hypothesis about how the issues can be solved.

Makes people care enough to try to solve it - states the magnitude and impact (e.g. time, money). Doesn't jump to solutions!



Problem Statement Structure

If you're not sure to how define your problem statement structure use the following example as a guidance:

Task 'T' takes an average of X hrs/week/project. If we can reduce this by Y%, we could save Z hours per year across the company.

Task T clearly presents a start condition and issue. Time X quantifies that issue. Y creates a hypothesis that a solution can bring about a quantifiable improvement. Z is a magnitude so high that we can't help but care

Let's see an example:

Sorting and finding files takes an average of 5 hrs per person per week. If we can reduce this by 50%, we could save 19,500 hours per year across the company.

$150 \text{ people} \times 5 \text{ hrs} \times 52 \text{ weeks} = 39,000 \text{ hrs} / 2 = 19,500 \text{ hours}$



Time to write your problem statement!

Complete the structure to better define your problem.

Task _____ takes an average of — hrs per week/project.
If we can reduce this by — %, we could save — hours per
year across the company.

Describe you problem and explain it, step by step.

