

# SOP Template: Standardized Problem-Solving Process Guidelines

This SOP defines the **standardized problem-solving process** guidelines, including the application of methodologies such as PDCA (Plan-Do-Check-Act) and DMAIC (Define-Measure-Analyze-Improve-Control). It outlines systematic steps for identifying, analyzing, and resolving problems effectively to ensure continuous improvement and consistent results across projects and operations.

## 1. Purpose

To provide structured guidance on problem-solving using recognized methodologies to drive continuous improvement and reliable outcomes.

## 2. Scope

This SOP applies to all employees involved in process improvement, quality assurance, and problem resolution across the organization.

## 3. Responsibilities

- **Team Leaders/Managers:** Facilitate the use of the standardized problem-solving methodology and ensure compliance.
- **Team Members:** Actively participate in problem-solving activities as per guidelines.
- **Quality/Process Improvement Staff:** Provide training and support on problem-solving methodologies.

## 4. Methodologies Overview

Methodology	Key Phases
PDCA	Plan → Do → Check → Act
DMAIC	Define → Measure → Analyze → Improve → Control

## 5. Standardized Problem-Solving Process

### a. PDCA (Plan-Do-Check-Act)

1. **Plan:**
  - Identify and define the problem or improvement opportunity.
  - Collect relevant data and analyze root causes.
  - Develop action plans and set targets.
2. **Do:**
  - Implement the planned actions on a small scale or pilot basis.
3. **Check:**
  - Monitor and measure results against expected outcomes.
  - Analyze deviations and learning points.
4. **Act:**
  - Standardize successful improvements.
  - Plan further cycles if necessary.

### b. DMAIC (Define-Measure-Analyze-Improve-Control)

1. **Define:**
  - State the problem or project goals clearly.
  - Identify stakeholders and team members.
  - Scope the project.
2. **Measure:**

- Gather relevant data on current process performance.
- Establish baseline metrics.

### 3. **Analyze:**

- Investigate data to identify root causes of the problem.
- Validate the analysis with stakeholders.

### 4. **Improve:**

- Develop and implement solutions to address root causes.
- Pilot test the solutions.

### 5. **Control:**

- Establish controls to sustain improvements.
- Monitor process and document standard work.

## 6. Documentation and Reporting

- Use standardized forms/templates to document each phase (**PDCA/DMAIC forms**).
- Maintain records of problem statements, analysis, action plans, outcomes, and follow-up activities.
- Report progress and results to relevant stakeholders regularly.

## 7. Review and Continuous Improvement

- Regularly review the effectiveness of the problem-solving process.
- Incorporate feedback to refine methodologies and tools as needed.
- Update this SOP at least annually or as significant improvements are identified.

## 8. References

- PDCA Guide (ISO 9001 Quality Management System)
- DMAIC Handbook (Six Sigma Institute)
- Internal Process Improvement Toolkit