A3 Problem Solving Tool Guide

The A3 is a tool used to systematically think through the Plan-Do-Study-Act (PDSA) cycle. It is a structured way to organize thoughts in one place where the depth of a problem and possible solutions can easily be seen and linked. This tool should be used with a group of stakeholders and should represent the customer's point of view. The left side of an A3 will take about 70% of your time and should be completely developed before moving on to the right side. This guide will help lead you through each step of the A3 process.

A3 Section	What question are you answering?	What information goes here?	QI Tool(s) you can use
Left Side: Understanding the Problem			
Problem (Reason for Action)	**What is not working?** *Why are we building this A3? What is the specific "pain" (waste) that is preventing us from doing what needs to happen (process) for our desired outcome (customer)?*	• A concise specific statement of the problem which includes the **customer** affected, the **process** under study, and the **waste** that is created • Do not include or infer a cause/solution or point fingers or blame	
Background/ Measurement	**How broken is it and how long has it been going on?** *How do we know it is broken (baseline vs. target measures)?*	• Provide factual background information • Include data or a timeline to help tell the story (how often? how big?) • State how the issue is connected to strategy	• Customer Satisfaction Survey • Employee Satisfaction Scores • Historical Data and/or Timeline
Current State	**Where is it broken? How does it look now?** *What does the process look like? What specifics within the process steps are problematic?*	• Use graphics to show the current process or what the condition looks like and what some of the issues are • Label 1-2 significant wastes (e.g., rework, confusion, waiting) • Give a comprehensive view of the condition, not a high level summary • Involve views from all stakeholders including the customer	• Process Map/Flow Chart • Value Stream Mapping • Spaghetti Diagram • SWOT (Strengths, Weaknesses, Opportunities, Threats) Analysis • Data Graphs (Pareto, Bar, Pie)
Root Cause Analysis	**Why is it this way?** *Have you explored deep enough into why something is happening to get to a root cause?*	• Investigate each waste item identified – ask 'Why?' or 'What causes that?' • Clear, factual, and actionable causes • If the problem analysis doesn't fit in the space then the issue is bigger than a single A3	• Five Why's • Fish Bone/Cause and Effect Diagram

 Funding to produce this resource was provided by the Colorado Gaining Ground Initiative.

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Right Side: Creating and Implementing Solutions			
Target State	**What should it look like?** *What will change from the current state? How will you know you are successful?*	• Graphically depict how the new, better process flow will look after one improvement cycle (where do you want to be in 60-90 days) • Highlight improved features • Graphical projections/new target	• Process map • Data Graphs (Pareto, Bar, Pie) • SIPOC (Suppliers, Inputs, Processes, Outputs, Customers)
Countermeasure	**What can we change/fix?** *What solutions are you going to try to address each of the root causes?*	• Changes that can be made to address each root cause • Specifics about the changes that will be made to move from the current state to the target state • Check logic, ensure it links to the root causes	• Prioritization Matrix • PICK (Possible, Implement, Challenge, Kill) Chart
Rapid Experiment	**What can we try today?**	• Small scale tests • Plan out experiment in detail - identify locations, time frames, and results of experiments	
Completion Plan	**How should we do it?** *What are the concrete tasks that need to be taken to implement the countermeasures/solutions?*	Document the steps taken to implement the countermeasure/solution: • What are the specific action items • Who will perform that action (single point accountability) • When will these action items be completed • What is the outcome to indicate if you are successful or not	• Checklist • Five S's • Standard Work
Cost/Benefit	**How much does it cost? Is it worth the effort?**	• Identify the both hard and soft costs needed to implement the countermeasures/solutions • Identify savings and returns in finances, time, improved quality, and improved satisfaction • Compare to baseline data (Background/Measurement)	
Follow-up	**Did it work?**	• Summarize results 30, 60, 90 days after implementation • Document additional actions or adjustments based on follow-up and how you will ensure the improvement is sustained	

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