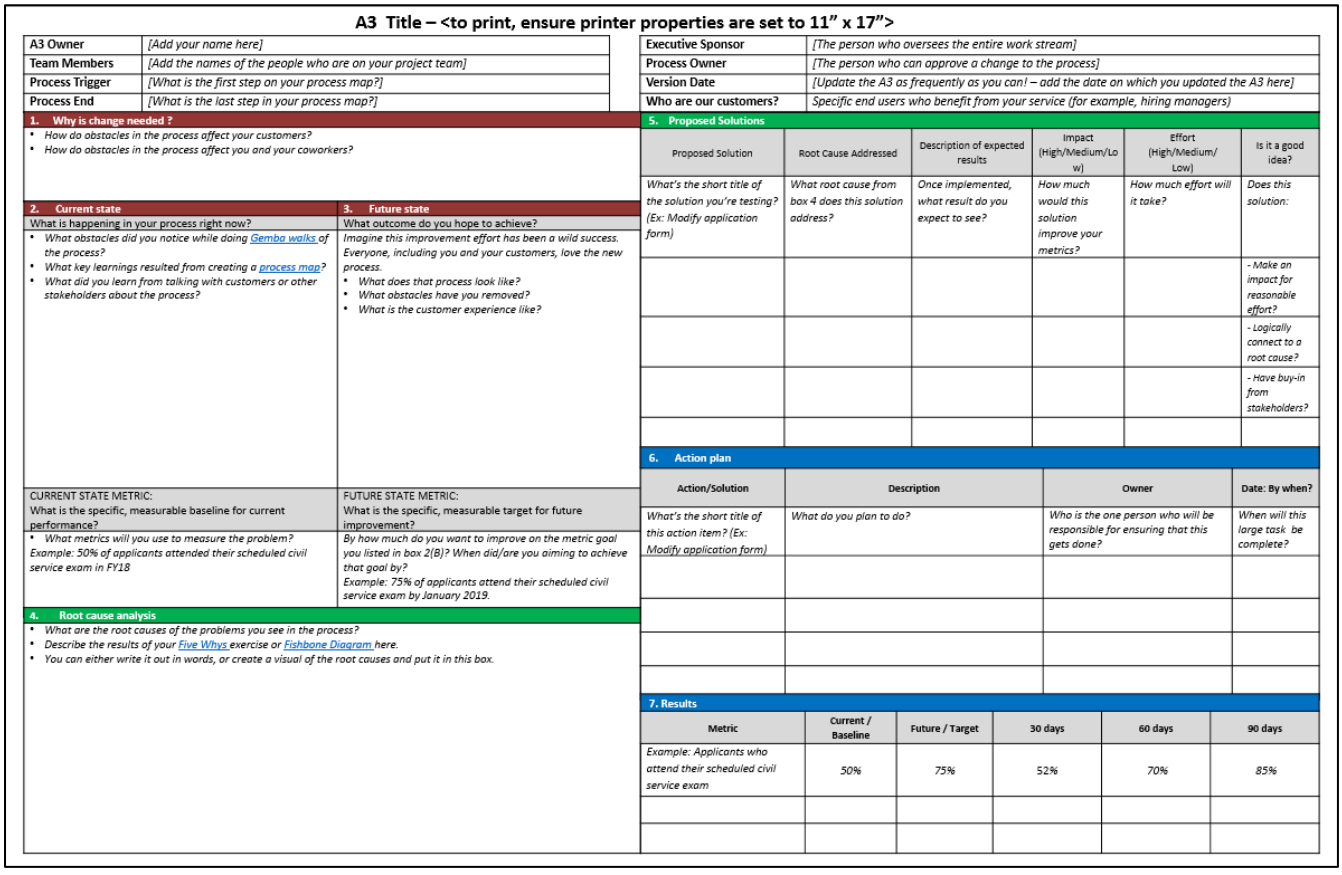
What is an A3?

An A3 allows you to capture all the thinking you've done for your process improvement project on one A3-sized (11x17) sheet of paper. This tool both helps you structure your own thinking about how to make an improvement and communicate the purpose, research, and findings of your project to others. It forces you to slow down and think systematically about your problem and to make sure you're solving the right problem in the first place. The A3 also becomes a consensus-building tool that you'll use to show your colleagues the work and thought that you put in to thinking about the problem you're trying to fix. City Performance typically uses an A3 to guide the Rapid Improvement Event thought process and record and share the team's results, and we coach individuals to problem solve and implement solutions via the A3. You can also show this to your supervisor to attain buy-in on your own improvement project.

The A3 can be a powerful storytelling tool that lets you clarify and refine your own thinking. A3's can come in many different forms, but the precise format of the document is not important. What is important is that your A3 demonstrates a clear, systematic description of a problem, backed up by data, followed by an analysis of why the problem is happening and solutions that clearly follow from your analysis.



A3 Title – <to print, ensure printer properties are set to 11" x 17">

A3 Owner	*[Add your name here]*
Team Members	*[Add the names of the people who are on your project team]*
Process Trigger	*[What is the first step on your process map?]*
Process End	*[What is the last step in your process map?]*

Executive Sponsor	*[The person who oversees the entire work stream]*
Process Owner	*[The person who can approve a change to the process]*
Version Date	*[Update the A3 as frequently as you can! – add the date on which you updated the A3 here]*
Who are our customers?	*Specific end users who benefit from your service (for example, hiring managers)*

1. Why is change needed ?

- *How do obstacles in the process affect your customers?*
- *How do obstacles in the process affect you and your coworkers?*

2. Current state

What is happening in your process right now?

- *What obstacles did you notice while doing Gemba walks of the process?*
- *What key learnings resulted from creating a process map?*
- *What did you learn from talking with customers or other stakeholders about the process?*

3. Future state

What outcome do you hope to achieve?

Imagine this improvement effort has been a wild success. Everyone, including you and your customers, love the new process.

- *What does that process look like?*
- *What obstacles have you removed?*
- *What is the customer experience like?*

CURRENT STATE METRIC:
What is the specific, measurable baseline for current performance?

- *What metrics will you use to measure the problem?*

Example: 50% of applicants attended their scheduled civil service exam in FY18

FUTURE STATE METRIC:
What is the specific, measurable target for future improvement?

By how much do you want to improve on the metric goal you listed in box 2(B)? When did/are you aiming to achieve that goal by?

Example: 75% of applicants attend their scheduled civil service exam by January 2019.

4. Root cause analysis

- *What are the root causes of the problems you see in the process?*
- *Describe the results of your Five Whys exercise or Fishbone Diagram here.*
- *You can either write it out in words, or create a visual of the root causes and put it in this box.*

5. Proposed Solutions

Proposed Solution	Root Cause Addressed	Description of expected results	Impact (High/Medium/Low)	Effort (High/Medium/Low)	Is it a good idea?
What's the short title of the solution you're testing? (Ex: Modify application form)	*What root cause from box 4 does this solution address?*	*Once implemented, what result do you expect to see?*	*How much would this solution improve your metrics?*	*How much effort will it take?*	*Does this solution:*
					- Make an impact for reasonable effort?
					- Logically connect to a root cause?
					- Have buy-in from stakeholders?

6. Action plan

Action/Solution	Description	Owner	Date: By when?
What's the short title of this action item? (Ex: Modify application form)	*What do you plan to do?*	*Who is the one person who will be responsible for ensuring that this gets done?*	*When will this large task be complete?*

7. Results

Metric	Current / Baseline	Future / Target	30 days	60 days	90 days
Example: Applicants who attend their scheduled civil service exam	*50%*	*75%*	*52%*	*70%*	*85%*

A3

When should I use it?

- When you need to document the preliminary thinking you've done for a process improvement project
- When you need to communicate ideas to get feedback or build consensus for a process improvement project
- To hold your thought process and make a coherent case for improvement ideas

How do I facilitate or create it?

The A3 is the container for the entire lean improvement process. For an approachable but detailed overview on using the A3 for problem solving, read *Managing to Learn* by John Shook.

When using an A3, we have found it helpful to develop the first three boxes in advance with executive leadership. These boxes address the questions "What change are we trying to make?" and "How will we know if we are successful?" The subsequent boxes focus on the "How are we going to make this change?"; those are the responsibility of either you and/or the improvement team to complete. Your A3 is a living, breathing document that you're constantly revising to reflect what you have learned about your problem.

1. **Develop your "why" statement (box 1)**. The why statement should provide your A3 audience with a compelling reason for why change is needed in the process you're working on. A good why statement clearly defines the problem, discusses the impact of the problem on customers and the people who do the work.

A few questions to consider as you develop your why statement:

- What is the problem? Frame the problem in terms of your unit's core business functions.
- Why is change needed?
- What is the customer's chief complaint?
- Why should I care?
- How do obstacles in the process affect your customers as well as you and your coworkers?
- Are there places where staff pain points and customer pain points converge? If so, that could be a good place to start.

If you are facilitating the creation of the A3, make sure to develop a detailed, impactful why statement by asking numerous clarifying questions. For example, many individuals begin their why statements by saying "the process is frustrating." But what is the impact of that frustration, in terms of time, money, or poor business outcomes? How does that frustration impact customers or other staff members?

Example of a good why statement:

- "In the current PSR process, customers do not feel valued because they often do not hear back from the agency, and staff spend a lot of time investigating PSRs that have insufficient information, or are not rule violations" (from SFMTA Muni Customer Service Rapid Improvement Event)

2. **Develop current-state metrics (box 2)**. Metrics are time-bound quantifiable measures that are used to track and assess business processes. Measuring the current state of your process provides benchmarks that enable you to measure the effects of your improvement efforts and see how close you are to your future state goals. As part of identifying the current state, you will need to figure out what is going on in your process, by asking "what is happening now?". Sometimes the answer is "I don't know," which is normal. In that case, you must observe the process in real time through a Gemba walk to gather data on your current state. Additionally, you should talk to the relevant stakeholders to gather more information about the process.

If you or the staff you are facilitating are having trouble thinking about metrics, use the concept of T-E-A-M. Metric development generally falls into four categories: time, errors, amount, and money (T-E-A-M).

- Time: develop metrics to assess how long the process or parts of the process take. You can also think about:
  - What percentage of the overall process time is the customer or product waiting?
  - What percentage of the overall process time is "touch time," or time spent working directly on the product or with the customer?
  - How long does the customer or product sit untouched?
- Errors: You can measure error metrics by counting the number of times a process was not completed correctly the first time. You can also think about:
  - Counting *types* of errors
  - Counting number of times customers ask clarifying questions about a process
- Amount: amount metrics should capture the information about how many items are produced or customers are served in the process.
- Money: Money metrics measure the cost of the process. You can count soft costs, such as labor costs) or hard costs (such as the costs of the raw materials used in the process).

In addition to capturing TEAM metrics, you can also capture qualitative metrics, such as customer satisfaction, in this box. You can also include takeaways from observing the process as well as key learnings from creating a process map.

2. Current state
What is happening in your process right now?
• *What obstacles did you notice while doing Gemba walks of the process?* • *What key learnings resulted from creating a process map?* • *What did you learn from talking with customers or other stakeholders about the process?*
CURRENT STATE METRIC: What is the specific, measurable baseline for current performance?
• *What metrics will you use to measure the problem?* *Example: 50% of applicants attended their scheduled civil service exam in FY18*

3. **Develop future-state metrics (box 3)**. Take time to think about what outcomes you hope to achieve. Imagine the improvement effort is a success where everyone, including you and your customers, love the new process. Consider these questions:

- What do you want to see in the new process?
- What makes the process work better?
- What is the customer experience like?

- What do your colleagues say about the improved process?

You will also want to identify a specific, measurable target for future improvement. Take each of the current-state metrics you measure and estimate how much you think you can improve on those metrics once the process is improved. Your future state goals should be reasonable. For example, if your customers are currently waiting several days or weeks to receive a service, it's not likely that you'll be able to reduce their wait time to zero after only one improvement project. Reducing wait times that span days or weeks will likely require multiple improvement projects. Also, it's important to keep your future state goals reasonable so that your project team doesn't become demoralized by not achieving the goals. Focus on getting quick wins that can motivate your team. Write down your future-state estimates for each of your metrics in box 3. Ensure that metrics are clearly defined and achievable.

Questions to consider while facilitating the creation of future-state metrics:

- How much time do you think you can save upon improving the process? For example, if customers are waiting 30 minutes to speak with a case worker, how long might they have to wait after you've improved the process?
- How many errors do you think you can prevent? For example, if 90% of customers are completing their forms incorrectly, what percentage of customers do you think will complete the form correctly once you've improved the form?
- How much more of the product or service do you think you can produce?
- How much money can you save? For example, can you stop printing certain documents or reports? How much would you save in reduced printing costs? Or, can you stop ordering duplicate materials or supplies?

3. Future state
What outcome do you hope to achieve?
Imagine this improvement effort has been a wild success. Everyone, including you and your customers, love the new process. • *What does that process look like?* • *What obstacles have you removed?* • *What is the customer experience like?*
FUTURE STATE METRIC: What is the specific, measurable target for future improvement?
By how much do you want to improve on the metric goal you listed in box 2(B)? When did/are you aiming to achieve that goal by? *Example: 75% of applicants attend their scheduled civil service exam by January 2019.*

4. **Analyze root causes of problems (box 4)**. The root cause analysis is your evaluation of the root causes of the obstacles you observe in your process. Identifying your current state is not enough to inform solutions. You may have complex problems that have more than one root cause. You can use a

process map, fishbone diagram, five whys exercise, spaghetti diagram, and/or communication circle to conduct a root cause analysis. Once you've completed the root cause analysis, figure out what it tells you. This is an important section of the A3, where figuring out the root causes should also include getting relevant stakeholder input on why these things are happening in order to inform your proposed solutions. Expect that a robust improvement project will spend most of its time here – if you get clarity on root causes that are directly related to your problem, solutions will come quickly from there!

Document your findings in box 4. You can write up a summary of your findings, or you can even add photos of the tools you used to conduct the gap analysis. The gap analysis should answer the following questions listed in box 4.

4. Root cause analysis
• *What are the root causes of the problems you see in the process?* • *Describe the results of your Five Whys exercise or Fishbone Diagram here.* • *You can either write it out in words or create a visual of the root causes and put it in this box.*

5. **Brainstorm improvement ideas and document them in Box 5: Proposed Solutions**. You can begin brainstorming ideas by writing them on post-it notes in an "**If we…Then we…"** format. For example, "**if we** eliminate the unnecessary step of double-checking signatures, **then we** reduce the contracting process by two days." When facilitating a brainstorm, encourage team members to write down as many possible ideas as they can, and get creative with it! You will want to make sure that your proposed solutions are logically linked to a root cause.

   Remember: solutions should be tightly linked to root causes. Can you draw a clear line from the problem you've defined to a root cause of that problem to a countermeasure (solution) that addresses that root cause? If not, you've gone off course somewhere – this is a good moment to make sure you're addressing the real problem, that you've really arrived at true root causes, and that you aren't presupposing a solution and composing an analysis to support it after the fact.

   Your brainstormed improvement ideas can live in box 5, showing what root cause the solution addresses, the results you expect see, how the solution will improve metrics, and how much effort the solution will take.

   You will also want to determine if the solution is a good idea by answering if the solution:
   - Makes an impact for reasonable effort?
   - Logically connects to a root cause?
   - Has buy-in from stakeholders?

   Once you've gathered strong improvement ideas linked to root causes, you can evaluate together with your project sponsor and the stakeholders that will be affected which to implement. Next steps on the ideas you will move forward with should live in your action plan.

5. Proposed Solutions					
Proposed Solution	Root Cause Addressed	Description of expected results	Impact (High/Medium/Low)	Effort (High/Medium/ Low)	Is it a good idea?
What's the short title of the solution you're testing? (Ex: Modify application form)	*What root cause from box 4 does this solution address?*	*Once implemented, what result do you expect to see?*	*How much would this solution improve your metrics?*	*How much effort will it take?*	*Does this solution:*
					- Make an impact for reasonable effort?
					- Logically connect to a root cause?
					- Have buy-in from stakeholders?

6. **Develop your action plan (box 6)**. Turn the successful experiments you documented in box 5 into long-term plans by breaking them down into specific action items. Assign a team member to each action item (Owner), and assign a due date. Questions to think about:

    - What do we need to do to make the successful experiments that we conducted standard practice in our division?
    - What needs to happen in the next 30, 60, or 90 days for us to be successful with this project? Even better, what needs to happen next week for us to be successful?

6. Action plan			
Action/Solution	**Description**	**Owner**	**Date: By when?**
What's the short title of this action item? (Ex: Modify application form)	*What do you plan to do?*	*Who is the one person who will be responsible for ensuring that this gets done?*	*When will this large task be complete?*

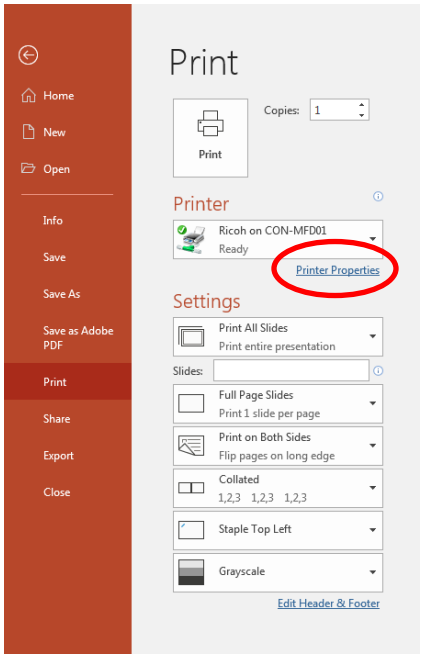
7. **Document your results (box 7)**. Once you implement steps of your action plan, measure what happens! Our default template assumes follow-up assessment at 30, 60, and 90 days, but you can flex the follow-up to match the scale of your problem.

7. Results					
Metric	**Current / Baseline**	**Future / Target**	**30 days**	**60 days**	**90 days**
Example: Applicants who attend their scheduled civil service exam	*50%*	*75%*	52%	*70%*	*85%*

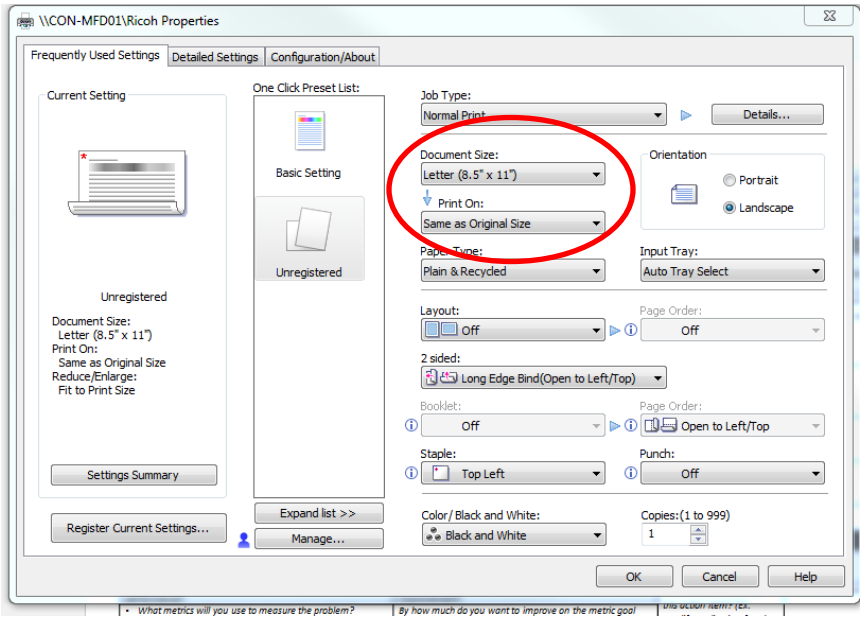
Printing

If you are having trouble printing your A3 on large-format paper (i.e., it is printing on 8.5" x11" paper instead of 11" x 17"), try these steps: (may look slightly different in other versions of Office):

- Go to Print → Printer Properties



- Check that the “document size” is set to 11x17 and force the “print on” setting to 11x17 as well



Tips

- **The A3 is a living, breathing document**. Update your A3 as the process improvement project unfolds! The point is not to fill out each box and be done, but rather to use the A3 to guide your thinking. As you talk with process stakeholders and gain a deeper understanding of your problem, you should revise your problem statement, description of the current state, and root cause analysis. A strong A3 should have been revised many times over the course of a project -- if you write it once and say you’re done, you have certainly not understood your problem deeply enough.
- **The specific format of the A3 doesn’t matter**. There are a lot of A3 templates out there – or you can start with just a blank sheet of paper! What’s important is the problem-solving process that underlies the A3 and that you have a way to convey your diagnosis of the problem and proposed solutions concisely to stakeholders. You can even flex the format of the A3 to reflect where your current thinking is at. For example, when uncovering the current state of the problem, you could allow Boxes 1-3 to fill the whole page.
- **We develop future-state metrics to quantify our aspirations**. Future-state metrics aren’t measures of exactly how much improvement needs to be done in a certain timeframe; they’re meant to help you and your team set your sights on tangible improvement. If you or the team you’re facilitating don’t reach your future-state metrics at project completion, figure out why, and then keep improving!

Additional resources

- *Managing to Learn* by John Shook is one of our favorite books laying out the problem-solving process underlying the A3
- Lean.org has many example A3s in various formats to get your thinking going.

Lessons learned

- Teams struggle with developing compelling why statements and metrics. Often, people are quick to identify the intellectual reason for why change is needed, but struggle with identifying the feelings. One

way to help teams get to the emotionally compelling why statement is by asking the team how the problem makes people *feel*. When you get to feelings, you are closer to your why statement.

- Regarding metrics, many people don't think about their processes in terms of measurements. Asking people to collect data on their process is likely a new endeavor and requires some additional assistance, but it is an especially useful exercise in helping people attain some distance from the process and view the process through a more scientific, exploratory lens.