Process Improvement and Fixing Problems
UNC School of Government
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Learning Objectives
- Learn a set of simple easy to use analytical tools to elevate your ability to solve problems.
- Practice techniques using data to help focus on key leverage points.
- Learn easy to implement group methods for identifying root causes of problems and mapping processes for better results.

Tools to Sharpen our Focus
1. Learning to see and understand variation in all organizational processes
   - Why do our numbers change from period to period
   - Using **process behavior charts** (also called control charts) to see variation and understand the two causes of variation and how that should shape our improvement efforts.
   - Learn how process behavior charts can also help us better understand variation across individuals or organizational work units.
   - Use **histograms** to see variation outside of the time ordered pattern.
2. Learning how to see the vital few causes that produce the lion's share of results.
   - **Pareto analysis** or the **80/20 rule** to see the key drivers and help focus improvement efforts.
3. You probably have more data than you think. But if you don't have enough, what can you do.
   - **Simple sampling and dirty data**
   - **Stratification**
   - **Segmentation**

Tools to Effect Change
4. Getting past symptoms to root causes
   - Problems have many causes making it hard to know where to focus efforts.
   - **Cause and Effect Analysis** is a simple but powerful tool to improve problem solving.
   - Cause and Effect analysis can used in several different ways to focus on root causes of specific incidents or common cause for stable processes. The analysis may also take a proactive versus a reactive approach with failure modes and effect analysis. Finally the core idea can be used looking at problems but also in a positive manner to look at what causes success.
   - Learn a simple method for doing cause and effect analysis, particularly with groups, that uses post-it notes and a wall work area.
5. Learning to map a process in time or space to improve how you do it.
   - Sequential **Process Maps** help us examine how the what, when, where, and how of our processes are laid out so that we can look to fix problems and streamline the process.
   - **Spaghetti diagrams** are process maps but focused on the movement of people or materials through a physical space to improve physical flow.
   - Learn a simple process using post-its to map your processes particularly when working with a group.

- o Learn key leverage points for improving your existing processes such as rework loops, choke points, and value added steps.
6. Use simple tools such as **checklists, countermeasures,** and **action plans** to take what you have learned from your efforts to focus your problem identification, identify causes, and map processes to lock in place changes to effect change.
7. Learn to look for the **eight causes of waste** in an organization. Use simple worksheets to identify waste and help get rid of that which doesn't add value.

Process Improvement as an Ongoing Commitment
8. Fixing a one-time problem may enough. But even with a one-off, sustaining the fix requires monitoring to make sure you don't fall back.
9. High performing organizations understand improvement is best seen as an ongoing cycle to higher and higher levels of performance that can be sustained.