

ACCELERATED IMPROVEMENT

AN APPROACH TO IMPROVING
CAMPUS WORK PROCESSES



OFFICE OF
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Accelerated Improvement

This guide to improving work processes describes a proven approach that compresses the overall time spent on planning and designing changes, which meets the need in higher education to realize high impact results with minimal resources. You will find helpful information needed to conduct an Accelerated Improvement project including:

- Definitions
- A detailed step-by-step guide
- Templates for meetings and project reports
- Examples of results achieved by campus projects

It is recommended that groups review and discuss this material before starting a project.

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The Office of Quality Improvement would like to acknowledge Drs. Ian Hau and Ford Calhoun, whose concepts and methods informed the creation of the Accelerated Improvement model.

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Introduction

Is work piling up or taking too long? Are mistakes being made that cause a lot of re-work? Is confusion about who is responsible for what causing lots of stress? Do there seem to be many “right ways” to do the work? It’s easy enough to identify these tell-tale signs of a process that needs improving. But how do you change a troublesome process into one that is effective and efficient?

Accelerated Improvement is a structured approach that enables a group to quickly improve or create a process. Research shows that compressing the time spent analyzing and planning changes to a process maximizes the probability that improvements will actually be implemented.

Accelerated Improvement was developed specifically to meet the need in higher education for quick realization of high impact results with minimal resources. The approach is based on research by Dr. Ian Hau and Dr. Ford Calhoun of SmithKline Pharmaceuticals, which showed that short project duration and high impact results tend to go together. When their *Fast Cycle Change* model was applied to knowledge-based processes in their organization, they found that projects took about one-third as long to complete but delivered three times the impact and required only one-tenth as many resources (*Fast Cycle Change in Knowledge-Based Organizations: Building Fundamental Capability for Implementing Strategic Transformation*, SmithKline Pharmaceuticals Report No. 161, June, 1977).

At University of Wisconsin-Madison, significant improvements have resulted from Accelerated Improvement, including:

- Reduced time required for hiring from 28 weeks to 16 weeks
- Reduced time required to produce an annual report from 32 to 7 weeks

Key Principles

The Accelerated Improvement approach builds its success on four fundamental principles:

1. Design implementation into projects from the beginning
2. Clearly articulate the desired outcomes of the effort
3. Select project team members from those who will be responsible for implementing changes
4. Focus on realizing impacts quickly and then iterate the improvement cycle frequently and rapidly

Success Factors

In order for a project or group effort to be successful, it is helpful to have the support and commitment of top leadership. This happens most easily when project goals are clearly defined and are matched to important organization strategies. Identifying

measures of progress and reporting on them regularly is a strategic way to keep sponsors and other key decision-makers informed, interested and involved in your project.

In Accelerated Improvement, a key concept is compressing the overall time for the project. (In many cases, the goal of the project itself is also about compressing time – the time it takes to complete a full cycle for the process being improved.) Team meeting time is concentrated into a small number of very structured meetings, in which solutions are generated and prioritized and implementation (action) plans are developed. Much of the project work (data collection, flowcharting, planning, etc.) is done outside formal meeting time in order to accomplish multiple tasks simultaneously and to make the best possible use of everyone's time. A team of 6-8 people involved in and most familiar with the process, is the ideal group to focus on a problem and quickly generate solutions.

Roles and Responsibilities

Sponsor (Key Decision-Maker for the Process)

- Sets expectation for change by clearly defining the results to be achieved and the timeframe in which to achieve them
- Empowers the project team to achieve objectives by providing direction and resources
- Provides and communicates top management commitment, visibility and support
- Approves any policy and/or business process change that cannot be resolved by the project team

Team Leader (The Process "Owner")

- Oversees and coordinates all project activities - responsible for success
- Provides momentum for project completion - makes things happen
- Leads planning and preparation for meetings
- Monitors the project schedule, budget and quality and resolves conflicts affecting progress of the project
- Challenges and questions process and policy decisions
- Advises the Sponsor on project status
- Accountable for maintaining and continuously improving the performance of the process once the project is complete

Team Member (Has Hands-on Knowledge of the Process)

- Actively participates in team meetings
- Performs assigned tasks outside of meetings in the time frame assigned

- Participates in gathering data, identifying concerns, generating ideas, and documenting results
- Assists with developing solutions/recommendations and an implementation plan
- Provides regular updates on progress to Team Leader
- Works with Team Leader on issue resolution
- Recommends policy or process changes based on current and future business requirements

Accelerated Improvement Steps

- Phase I: Initiate project
- Phase II: Design solutions
- Phase III: Implement solutions
- Phase IV: Demonstrate impact

Phase I: Initiate Project (3 weeks)

Once a potential improvement is identified and the project is approved, the Accelerated Improvement process formally begins. Proper project initiation is the most important, yet often neglected, aspect of an Accelerated Improvement project. The **Sponsor** and **Team Leader** (together with the **Facilitator**, if one is involved) are responsible for this phase, which includes all the work up to the first team meeting:

1. Mock up the project completion report as if the team has successfully completed the project.
 - Document the performance of the current process
 - Graph the desired impact of the project, as represented by the gap between the current and the anticipated performance
 - Define and describe the work that will be studied and improved (*project scope*)
2. Identify and recruit appropriate team members.
3. Draft current high level process flow describing the major 5-10 steps of the process.
4. Schedule and plan the team meetings for Phase II to produce and implement decisions and actions needed to fill in missing information in the mock up completion report.

Phase II: Design Solutions (3 weeks)

This stage is usually comprised of two full-day team meetings. It begins with orienting the Team to the work done in the project initiation phase, and is complete when the implementation plan that will drive Phase III is approved.

1. Hold first team meeting.
 - Provide a brief overview of the Accelerated Improvement process and key concepts (*Team Leader and/or Facilitator*)

- Review mock up completion report to help clarify the end point of what the project team aims to achieve (*Team Leader and/or Facilitator*)
 - Confirm the project plan and timeline (*Team Members*)
 - Finalize the current high level process flow, highlighting the issues
 - Develop a vision of the ideal process
 - Brainstorm 20-30 ideas to improve the process
 - Organize these potential improvements into 3-5 recommendations, with a description of the parts of the process and the specific issues the recommendation addresses (“Situation”) and the expected results from implementing this recommendation (“Target”)
 - Identify and assign actions to develop the “Proposal” part of the recommendations: the sequence of steps necessary to close the gap between the Situation and Target.
2. Hold team meeting #2.
 - Discuss and finalize the recommendations
 - Consolidate the recommendations into an integrated process map, working out any interfaces among the recommendations
 - Design measures to monitor issues with the process itself as well as with the output of the process
 - Agree on owners accountable for the measures and for taking corrective action
 - Schedule and plan the agenda for the regular meetings during the implementation phase
 3. Submit the implementation plan (built from the minutes of the first two meetings) to the Sponsor for review

Phase III: Implement Solutions (4-6 weeks)

Upon approval by the Sponsor, the project team begins to execute the implementation plan. It typically takes about four to six weeks to make the changes necessary for actual work to be done using the new process design.

Phase IV: Demonstrate Impact (6-8 weeks)

1. Test the re-designed process through several iterations.
2. Compare the performance of the new process with the old.
3. Define a continuous improvement mechanism to ensure that performance is sustained or further improved.
4. Finalize and present the project completion report to the Sponsor.
5. Transfer responsibility for maintaining and continuously improving the process to the process owner, and disband the team.

A Project Plan

Developing a visual representation of the project’s major tasks and timeline can help the team stay on track, and a step chart is one way to represent the project plan. The project phases and steps above are portrayed in the sample step chart below, which highlights the compressed time for the project, particularly the “Design Solutions” phase.

PROJECT STEP CHART SAMPLE
ABC Process Improvement Project

PROJECT STEPS	RESPONSIBLE	SEPT	OCT	NOV	DEC
Phase I: Initiate Project	Sponsor, Team Leader				
1. Mock up project completion report		•			
2. Select team members		•			
3. Flow chart current process (high level)		•			
4. Schedule & plan Team Meetings 1 & 2		•			
Phase II: Design Solutions	Project Team				
1. Hold Team Meeting #1		•			
a. Orient team to project scope & goals		•			
b. Design ideal process		•			
c. Identify potential improvements		•			
d. Develop recommendations		•			
2. Hold Team Meeting #2			•		
a. Finalize process changes			•		
b. Design measures and assign owners			•		
c. Develop implementation plan			•		
3. Obtain approval for implementation plan			•		
Phase III: Implement Solutions	Project Team				
1. Execute implementation plan, including communications, and training as needed					
Phase IV: Demonstrate Impact	Project Team				
1. Test the new process				•	• •
2. Compare performance to baseline data					•
3. Design continuous improvement system					•
4. Issue project completion report					•
5. Hand off to process owner					•
Close Out Project	Sponsor, Team Leader				•

Figure 1: Project Plan Step Chart

Appendix I

Templates

TEMPLATE: Process Improvement Launch Questions
Use to Help Define and Launch a Process Improvement Project

<p>a. Project Name: <i>Describes the work to be done in a shorthand way that is easy to reference and remember</i></p>										
<p>b. Process: <i>Name or description of the process to be improved</i></p>										
<p>c. Project Purpose: <i>What does the project hope to achieve?</i></p>										
<p>d. Sponsor / Decision-Maker: <i>Provides resources, guidance and commitment to the project</i></p>										
<p>e. Data We Need: <i>Use available data and/or create simple tools to collect needed information (how long it takes, who uses, complaints, comparisons, etc.)</i></p>										
<p>f. Team Members: <i>Participate with fellow group members to identify concerns, generate ideas, recommend solutions, and develop implementation / action plans</i></p>	<p>g. Team Leader: <i>Leads planning and preparation for meetings and coordinates the project</i></p> <p>h. Team Facilitator/Consultant: <i>Partners with group leader to facilitate the team's work and to consult in other areas of need (e.g. data collection, project report) [Optional]</i></p> <p>i. Project Recorder: <i>Coordinates the documentation of the Accelerated Improvement project [Optional]</i></p>									
<p>j. Challenges/Problems with current process: <i>(Check all that apply)</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;"><input type="checkbox"/> Too Costly</td> <td style="width: 33%;"><input type="checkbox"/> Takes too long</td> <td style="width: 33%;"><input type="checkbox"/> Other (Describe)</td> </tr> <tr> <td><input type="checkbox"/> Too many "hands"</td> <td><input type="checkbox"/> Missed deadlines</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Too many errors</td> <td><input type="checkbox"/> Volume of Work</td> <td></td> </tr> </table>		<input type="checkbox"/> Too Costly	<input type="checkbox"/> Takes too long	<input type="checkbox"/> Other (Describe)	<input type="checkbox"/> Too many "hands"	<input type="checkbox"/> Missed deadlines		<input type="checkbox"/> Too many errors	<input type="checkbox"/> Volume of Work	
<input type="checkbox"/> Too Costly	<input type="checkbox"/> Takes too long	<input type="checkbox"/> Other (Describe)								
<input type="checkbox"/> Too many "hands"	<input type="checkbox"/> Missed deadlines									
<input type="checkbox"/> Too many errors	<input type="checkbox"/> Volume of Work									
<p>k. How does this process link to the organization's mission and priorities?</p>										
<p>l. Who would benefit from improvement? How would you know?</p>										
<p>m. What are the needs of those who use the process?</p>										
<p>n. Flowchart/describe current process: <i>Create a pictorial representation showing all of the steps of a process</i></p>										
<p>o. Flowchart ideal process: <i>Draw a picture of how the process would operate in the perfect situation; based on customer feedback</i></p>										
<p>p. Expected products/measures of success: <i>What are the criteria that show the impact of our work? The measures may be quantifiable or qualitative, but they are observable in some way.</i></p>										

Figure 2: Launch Questions

TEMPLATE: Project Charter & Sponsor Agreement

Project Title:

Creation Date / Version:

Project Description: (What are we trying to accomplish):

Business Justification: (Why is this important?):

Project Boundaries (Scope / Limitations / Assumptions, How far can we go):

Measurable Results (How will we know):

Milestones	Timeline / Date

Project Team	Role
	Project Manager
	Project Resource
	Project Resource
	Project Resource
	Consultant, Project Facilitator

Project Budget	
Planning	\$
Development	\$
Implementation	\$

Project Sponsor Approval:

Name / Title	Date

Figure 3: Charter and Sponsor Agreement

TEMPLATE: Project Completion Report

ABC Process Improvement

Project Report

You can use this template throughout the Accelerated Improvement process to build your project report step-by-step, entering each "piece" indicated in the template as it is completed. This way, your project report will automatically be complete at the project's end.

I. Phase I – Initiate Project

- Completed "Project Plan" or step chart (Figure 1)
- Completed "Process Improvement Launch Questions" worksheet (Figure 2) identifying the project purpose, description of the process to be improved, measures of success and team members, along with their specific roles and responsibilities.
- Completed "Charter and Sponsor Agreement" (Figure 3)
- Data/information documenting the performance of the current process
- Graph of the gap between the current and anticipated performance
- Flowchart of current process (see page 18)

II. Phase II – Design Solutions

- Flowchart of ideal process
- Brainstormed list of possible solutions
- Proposal for implementing the selected recommendations, including a description of the situation and the targeted results.
- Integrated process map showing how the recommendations work together

III. Phase III – Implement Solutions

- Implementation plan and timeline or step chart
- Measures that will be used to monitor the changed process and procedure for taking corrective action

IV. Phase IV – Demonstrate Impact

- Data comparing the performance of the new process with the old
- Official transfer of responsibility for the process to the process owner
- Project closeout documentation

Figure 4: Final Report

TEMPLATE: Agenda for Team Meeting #1

Meeting Aims

- Confirm, refine mock up completion report and project plan
- Finalize current high level process flow
- Draft the ideal process
- Develop and prioritize solutions/ideas to close the gap between current and ideal process
- Assign team members to analyze solutions, including customer reactions to “ideal”

Agenda

Time

Agenda Item

Introductions & overview

Leader

- Overview of the *Accelerated Improvement* process and key concepts
- Review project scope, goals and timeline
- Confirm/identify “customer needs” – why is the change needed?

Check “current” flowchart

- Is this the way the process generally works now?
- Are these the problems or obstacles with the current process?

BREAK

Develop “ideal” flowchart

- How well does the proposed ideal process address the problems?

Develop recommendations

- Brainstorm: What solutions would improve the process so it is closer to the ideal?
- Select and prioritize solutions

Next steps

- Assign group members to analyze solutions, get customer/user feedback, and document recommended steps for making changes
- Summarize and remind team of next meeting

Materials:

- Mock up project completion report
- Flowcharting “how to” information
- Square Post-its™
- Markers
- Overheads of current high level process flow

Figure 5: AGENDA – Team Meeting #1

TEMPLATE: Agenda for Team Meeting #2

Meeting Aims

- Agree upon solutions to close gap between current and ideal process and finalize recommendations
- Develop an integrated map of the new process
- Design measures to monitor progress and assign responsibility
- Develop implementation plan, including timeline, responsibility and communications

Agenda

Time

Agenda Item

Recap previous meeting and progress to date

Leader

Discuss and finalize recommendations

- Summarize customer/user feedback and other analysis
- Integrate recommendations into a new process map
- Identify and select measures

BREAK

Draft implementation plan

- Identify major phases and corresponding implementation steps
- Establish timeline
- Assign responsibilities
- Develop communication plan

Wrap up

- Prepare for sponsor presentation
- Plan implementation meetings

Next steps

- Review the implementation plan with Sponsor

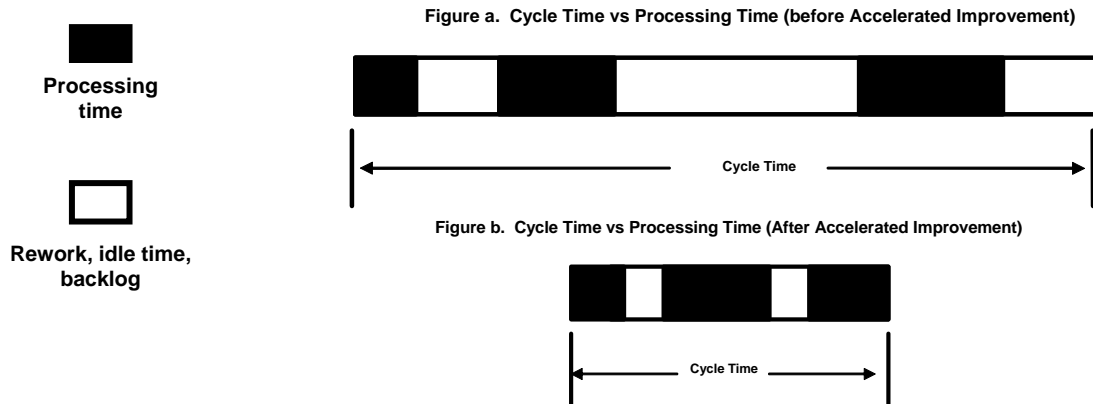
Materials to send ahead to members:

- Agenda for Meeting #2
- Customer feedback on proposed solutions
- Notes from Meeting #1
- Analysis of solutions
- Current and ideal flowcharts
- Any new data
- Sample *Project Plan Step Chart* (Figure 1)
- Sample “Institutional Measures of Success” (See page 23)

Figure 6: AGENDA – Team Meeting #2

Appendix II: Definitions

- **Process** – A series of steps aimed at accomplishing something (producing a product or providing a service).
- **Cycle Time** – Total elapsed time from the beginning to the end of a process, from request initiated to product/service received by the client/customer. Cycle time includes processing time, rework, idle time, and backlog. As Figure a. illustrates, rework, idle time and backlog often add significantly to cycle time. Reducing these non-value added components of cycle time can improve quality, improve service to the stakeholder, and decrease resources used (see Figure b.).



- **Flowchart** – A pictorial representation showing all the steps of a process.
- **Step Chart** – A chart that lists the steps of the process/plan with a timeline/calendar

Appendix III

Tools

TOOL: Project Selection Guide

Criteria for Selecting Improvement Projects*

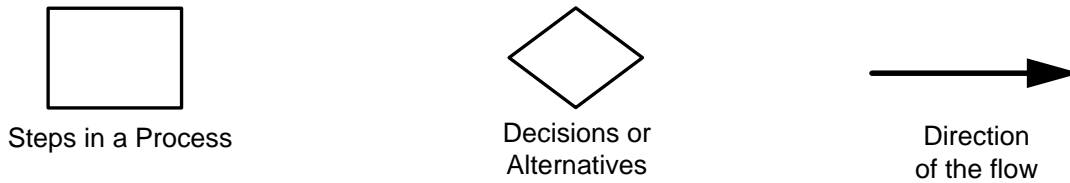
YES	NO	
		1. This process/program has a direct and perceptible impact on “customers.”
		2. This is a relatively simple process or a relatively small network of processes. It is not a large, complex system. (A large, complex system must first be broken down into small components.)
		3. There is a good likelihood of success in improving this process.
		4. The persons involved in this process would willingly cooperate in the improvement efforts.
		5. This process has definable starting and ending points as well as clearly identifiable “customers” and “process owners.”
		6. The process is such that team members will have a more or less consistent understanding of the definition and inner workings of the process.
		7. This is a new initiative with flexibility for design.
		8. There will be resources for implementation.

* The more “yes’s”, the better chance for success.

Figure 7: Project Selection Guide

TOOL: Flowcharting

Commonly-used Symbols



Common Flowchart Types and Uses

- ✓ **PROCESS FLOWCHART:** The steps of the process are identified from beginning to end and are arranged in the order in which they are completed. This type of chart identifies major activities and decision points along with the important inputs and outputs of the process. It is the most commonly-used type of flowchart.

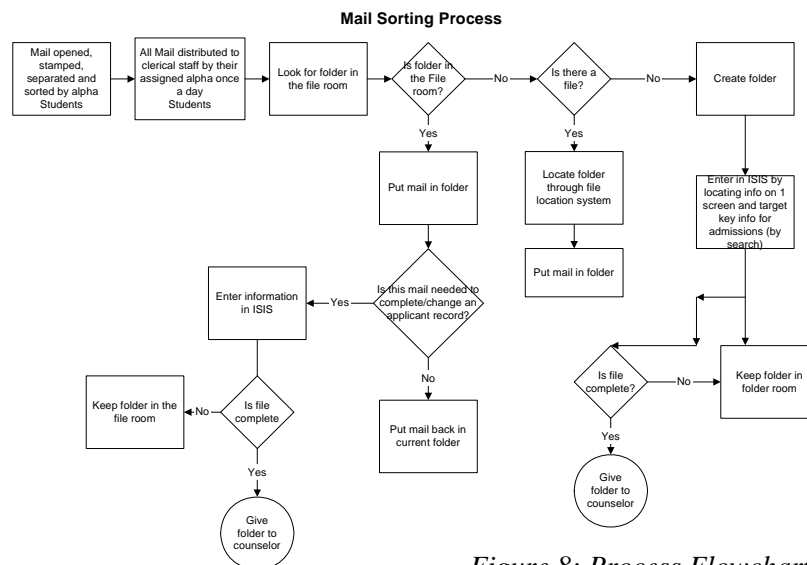


Figure 8: Process Flowchart

- ✓ **DEPLOYMENT FLOWCHART:** A deployment flowchart shows the key players across the top as column headers (A-E). Key players can be functional units or individuals. In the column underneath each key player are shown the steps that person carries out or for which they are responsible. The process flows from left to right.

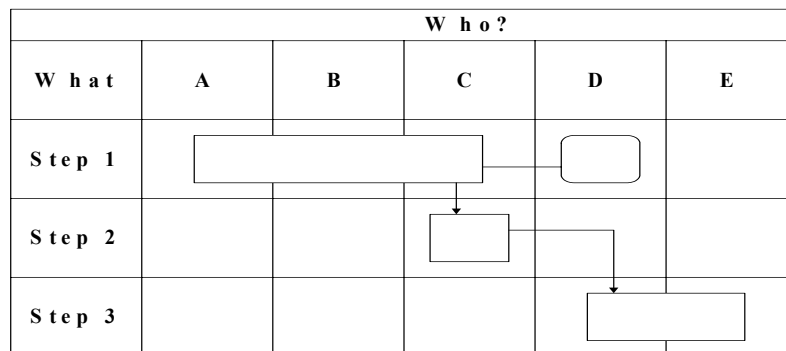


Figure 9: Process Flowchart

TOOL: Brain Writing 6-3-5

Brain Writing 6-3-5 for More Creative Solutions

When we are faced with a problem to solve or a process to be improved, it is usually not easy to think of options that are quite different from what we have always done.

Brain Writing 6-3-5 is a tool that anyone can use to identify new ideas or solutions. The process for silent brainstorming was developed by King and Schlicksupp (1998). The goal is to generate as many creative ideas as possible.

The tool can be used with groups as small as 6 or as large as 60. The process is conducted in “rounds” of five minutes or less.

The question or problem is stated at the top of the worksheet (E.g. “How can we increase customer satisfaction?”). At first, each participant writes three ideas in the top three squares. The worksheet is passed on to the next participant who adds three more ideas. By the time the worksheet has been passed to the sixth person, it will have 18 ideas and the group of six will have well over 100 ideas.

A variation is to provide a sheet 8.5 x 17” with blank self-stick notes attached. Ideas are written on the notes rather than a worksheet and can easily be grouped into themes.

After the rotations, each participant is asked to contribute ideas from the worksheet. These are recorded on a flip chart. When all the ideas have been recorded, they are narrowed down to a few priorities. Combining items, grouping into categories, ranking, or voting with stickers may be used. The pros and cons of each idea may be discussed. Depending on the situation, more sophisticated prioritizing tools may be used such as the interrelationship diagram or priority matrix.

The silent work ensures that highly verbal people do not overwhelm quieter members. It also enables individuals to see what others have written. Brain Writing 6-3-5 and other creativity tools are found in *The Idea Edge: Transforming Creative Thought Into Organizational Excellence* (1998).

Brain Writing Worksheet

Figure 10: BrainWriting Worksheet

TOOL: Dot Voting

Setting Priorities: A Quick and Easy Method

Objective: This is a very simple and quick method for groups to use in setting priorities when there are many options for where to begin to address an issue, which project to start first, what is our top core value, etc.

Time: 30 minutes

Steps:

1. Brainstorm Possibilities! Suppose you have a group, which has generated a list of all the things, they believe they should address this school year. They know they can't do it all. This method would help give a sense (albeit it unscientific) of which items are most important and should be addressed first.

Therefore, begin by brainstorming all the options. List these on a flip chart in any order. Typically this works best with 10 or fewer items. Leave enough space between the items for the sticky dots.

2. Give each person in the group 10 dots (for this exercise, color is irrelevant). Instruct them that to choose their priority, they are to use "all 10 dots but no more than 4 on any ONE item." Therefore, 4 dots would indicate their top priority. Some items will have no dots. Participants actually walk up to the flips and place their dots under the items. (If you have a larger group, split the items on 2 flip charts on opposite sides of the room so as not to take too much time or cause congestion. Start half the group on each side.)
3. When everyone has placed his/her dots, count them for each item and make a priority listing on a new flip chart page. There usually are a few clear winners. You may then discuss with the group if they agree those should be top priorities on which to start working. It does not mean the others are eliminated.

Summary: This exercise creates a "fun" activity, good visual, and limits discussion if it has gone on too long as well as getting input from the entire group. Typically, for a group of 10 this would take 20-30 minutes to complete.

TOOL: Zero to Ten Ranking

Zero to Ten: An Efficient Method for Rating Items

Suppose you get stuck on what things units want to do or include in their plans, or a code of conduct, or ground rules. This method is a very simple and yet visual way to give the group feedback on how they as a group rate these items.

Imagine a group setting a “Code of Conduct” for itself and there are differing opinions on whether or not an item is necessary to include. Follow these steps.

1. Having discussed with a group all the items they want included in the topic and perhaps have used the sticky dot prioritizing method to determine most important items, list these on a flip chart with a scale underneath each as shown below.

(0 _____ X _____ 10)

2. Explain that the scale means that zero is the lowest (we are doing awful as a group on this team e.g. “treating each other with respect”). A ten would mean “We could not be better!” etc.
3. Have each person come up to the flip chart and place a dot on the scale where they feel the group rates on each item. (Tip: If there are trust or confidentiality issues with the group, turn the flip around and have each person go up individually to place their dot. Sometimes the facilitator even puts his/her mark there first so that no one knows where the first person placed it. This is in extreme cases of distrust or uneasiness with disclosing opinions to the group).
4. You then end up with a good visual of where there are clusters of agreement. It gives the group a quick way to say, “Let’s not spend time on all the items that are 8-10 but let’s put our energies where we all agree we need help (the zero to 4 group).”
5. Another way to use this is to show a group that they are “all over the board” in terms of what each thinks is most important to the group. This is a very good discussion point particularly if you tend to have some vocal folks who say “The whole group thinks this...” or I’m sure we all agree...” etc.

Summary: A typical next step would be to take those top items and assign small groups to address how they should approach the item, get the project done, address the concern or whatever. Get real action teams!

Sample Institutional Measures of Success

The following measures of institutional success are from Dolence, Rowley, and Lujan (1997). The term they use is “key performance indicators” or KPIs.

Key Performance Indicator (KPI)	Definition
Undergraduate FTE enrollment	Number of total units attempted divided by 15
Graduate FTE enrollment	Number of total units attempted divided by 12
Tuition revenue	Tuition revenue collected net of institutional financial aid
Graduation rate	Percentage of full-time undergraduates who graduate in 4 [or x] years
Minority enrollment	Percentage of all enrolled students who are minorities
Placement rate	Percentage of graduates employed or in advanced study one year after graduation
Student-faculty ratio	Number of FTE students divided by number of FTE faculty
Recruitment yield	Percentage of students offered admission who enroll
Retention rate	Percentage of students who maintain satisfactory progress
Break-even major index	Total revenue deriving from students in each major minus the attributable cost of the major department
Average debt burden	Total value of loans divided by the number of loan recipients
Student satisfaction	Composite a score from annual students needs and priorities survey
Average SAT score	Average SAT score of incoming freshmen
Value of endowment	Book value of endowment at the end of each quarter
Deferred maintenance	Dollar value of maintenance backlog

From: Dolence, Michael G., Rowley, Daniel J., and Lujan, Herman, D. (1997). *Working Toward Strategic Change*. San Francisco: Jossey-Bass, Inc.