

After-Action Review:

A Process for Improvement

by Roger E. Rowe



Developing a process for continuous quality improvement in an organization can be both time-consuming and expensive. Use of this simple after-action review can jump-start a continuous quality improvement process with minimum training and expense.

This process has been formatted as a standard operating procedure for use by any facilities services organization to improve their work processes. The AAR concept was originally developed by the U.S. Army in the 1970s to review and improve combat operations and related military training. Dave Grimes, a trained continuous quality improvement (CQI) facilitator, helped to develop and implement the facilities-oriented AAR process at Miami University of Ohio in the early 1990s.

Standard Operating Procedure for After-Action Reviews

Purpose and Scope: To establish a policy and procedure to determine when a Facilities Services Department After-Action

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Review (AAR) will be conducted and the format for conducting departmental AARs. The purpose of an AAR is to capture lessons learned from a project, event, or incident. A lesson learned is a “good work practice” or innovative approach that is captured

and shared to promote repeat application. It may also be an adverse work practice or experience that is captured and shared to avoid recurrence.

Policy: AARs can be held on any project, event and/or incident. However, as a minimum, departmental AARs should occur on:

- Closeout on all construction/ renovation over \$10,000 and/or multi-disciplined projects involving numerous departments.
- Recurring activities, incidents and/or events that could be improved by conducting an AAR.
- Safety accidents, injuries, and/or incidents that resulted, or could have resulted in death or serious injury.
- Weekly shop-area review of operations, activities and events.

Procedures

What is an After-Action Review: An AAR is a structured review process that allows participants to discover for themselves what happened, why it happened, and how it can be

improved. An AAR is not a critique—the objective is to identify methods for improvement.

Types of After-Action Reviews:

- **Project AARs:** Attempt to capture the successes and experiences of project managers, architects, engineers, construction personnel, participating departments, customers, and users. The issues and actions generated from the AAR can have a dramatic impact upon future projects.
- **Safety AARs:** Are an important tool for reducing the risks associated with our work activities. They assist in identifying administrative and engineering procedures, training, and personal protective equipment requirements. These AARs should occur whenever a serious accident/injury occurs or the potential for serious injury is discovered.
- **Weekly Shop/Area AARs:** Are a tool for continually improving the operations, receive “input” from employees and in many cases provide immediate feedback in order to change/improve the way we go about business of providing top quality to our customers.

Guidelines for Formal After-Action Review

Who should be involved in the AAR? A representative group of participants, who were directly involved in the incident, project, or event should be involved in the project AAR. All viewpoints are relevant and beneficial.

Specific Project AAR Session Deliverables: To capture improvement opportunities, two questions should be answered:

- What went well in the project/event? How can we institutionalize the success?
- What went poorly in the project/event? How can we ensure it doesn't happen again?

Action Items: Capturing action items is the most important reason for holding an AAR! The outcome of an AAR should be either an action plan to remedy an issue or the identification of issues or problems that require further study before a corrective action can be implemented. The resultant actions will either prevent recurrence of a less than desired act or institutionalize a success.

These actions must be identified and then monitored until completion. Other issues are more complex, requiring discussion among many people. These issues should be captured and forwarded to the associate vice president for prioritization and coordination.

The far-reaching nature of some of the concerns raised in the AAR may necessitate further study by a cross section of Facilities Services Departments. Once again, send to the associate vice president.

Different Methods for Conducting an AAR

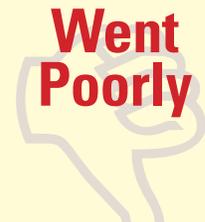
The number of participants will determine the method to conduct your AAR. For smaller groups (five participants or fewer), preparing an agenda for discussion may be all that is

needed. For larger groups (more than five participants) or projects, storyboarding may be the best method to conduct the session.

Small Group AAR (5 participants or less)

Even though you are dealing with a smaller group or project, there are still valuable lessons to be learned from an AAR. It is important that all action items and issues be captured and followed through on. To help keep the discussion focused, consider using flipcharts. Refer to Figure 1.

FIGURE 1



- High amount of internal planning by users meshed with architect
- Major contractor met target dates
- Good communication
- Drawing review—more time
- Needed programmable AC controller
- Larger UPS for network
- User group surprised that things cut out

Large Project or Group AAR (over 5 participants)

Meetings involving larger groups of people must be carefully thought through. The success of your meeting often depends upon the amount of time you spend in *planning* for the meeting. In general, plan to spend approximately the same amount of time planning for the meeting as the meeting is long.

Making your AAR go more smoothly

- Consider using a facilitator. The facilitator should be neutral. A neutral facilitator will work to ensure that all viewpoints are expressed. A facilitator's job is to keep the meeting focused and moving. The facilitator does not critique nor judge the success or failure of the incident being discussed.
- Consider what supplies will be needed? (flipchart, storyboard and supplies, handouts, etc.)
- One of the hardest aspects of dealing with large groups is keeping the meeting focused. When generating improvement ideas, discourage debates. Because of the nature of the meeting and the individuals involved, some people may feel threatened. Your focus should be on how to improve the situation. Most problems are system or process related. It is never productive to try to “single” an individual out as the cause of the problem.
- Encourage everyone to participate.

- Let the participants identify the situation for themselves (including their mistakes and successes), the facilitator/leader does not critique.
- To encourage participation, the facilitator should use leading questions such as:
 - “What would you like to see happen again?”
 - “What would have been a better way of handling the situation?”
 - “In your opinion, what would have been the ideal way of doing that?”
 - “How could communication have been better?”
 - “What is the root cause of the incident?”
 - “Next time, what would you do differently?”
 - “What are some ways we could have prevented the incident from occurring?”
- In order to prevent an issue being brought up more than once, use “group memory.” Group memory is simply some method for visually capturing the ideas as the meeting progresses. Storyboarding is an excellent group memory technique. People will continue to reiterate their viewpoint until they feel the audience has “gotten the message.” The quicker you validate them, the quicker the issue can be put to rest.

Sample AAR Agenda

1. Introductions
2. Explain Session Rules (“rules of the game”)
3. Review the agenda
4. Work through Main Header Cards
5. Draw out any action items in process (Person responsible, Task, Target date)
6. Identify any issues that an action plan can’t be made for during that meeting; forward them to the associate vice president.

Guidelines for an Informal After-Action Review

Purpose: An informal AAR is much less structured than a formal AAR. An informal AAR is simply a review of the week’s activities and a discussion of improvement ideas between you and the staff. The purposes include:

- To allow your staff input on how to improve the effectiveness of your operation.
- To help the department take meaningful actions that are “ground-level specific” so the employee can see improvements occurring within their own area.
- To generate improvement actions that will be monitored for completion.

Time Commitment: The time to conduct an informal AAR will vary week to week but, on average, should take only between 10 to 20 minutes.

Session Outcome: The ideas generated during the review should be captured and actions should be generated on improving your area.

Project AAR Headers (Example)

Construction Project AARs

- Planning Phase (POR through Design):
 - What Went Well
 - What Could Be Improved
- Construction Phase:
 - What Went Well
 - What Could Be Improved
- Move-in:
 - What Went Well
 - What Could Be Improved
- Hand-off/Close-out:
 - What Went Well
 - What Could Be Improved
- Difficulties Meeting Customer’s Expectations
- Issues to take back to Facilities Services

Safety AARs

- How did the accident/injury occur
- How could the accident/injury have been avoided
- What training could have prevented the accident/injury
- What personal protective equipment should have been used
- What procedures or policies should be developed

Who should be involved in the AAR: Informal AARs should be conducted at every level in Facilities Services Departments. Every manager and supervisor should hold an informal AAR with their direct reports.

Frequency of informal AARs: Ideally, each work week would conclude with an after-action review. Informal AARs should be held on a regular basis. As a minimum, an informal AAR with our staff should be held monthly.

How to conduct an informal AAR: An AAR can be done at the end of regular staff meetings. The ideas generated should be captured to enable them to be prioritized and acted upon. Some of the key questions to ask are:

- What went well this week? How can we institutionalize (continue) the success?
- What went poorly this week? How can we ensure that it doesn’t happen again?

Some different methods for capturing the ideas are:

- On flipcharts (happy face or plus sign for things that went well; sad face or minus sign for things that went poorly)
- Writing the ideas under the proper titles
- Use storyboard cards

The following format is an effective way to list and manage action items:

ACTION ITEM LIST

PERSON	ITEM	DEADLINE

ENCLOSURE 1 (EXAMPLE OF AFTER-ACTION REVIEW)

Sample Project After Action Review Minutes

AAR for: Community Resource Center
Date: April 14, 2006
Location: Commons
Time: 2:00-4:00
Session Owner: Iam Smart

ATTENDANCE			
NAME	PRESENT	NAME	PRESENT
Jim West	Yes	J. Paladin	Yes
Josh Randal	Yes	Gil Hanley	Yes
William Kirby	Yes	Bret Ponset	No
Jack Moffitt	Yes	Don Blake	Yes
Artemus Gordon	Yes		

Issue Generation Phase

How could communication have been better?

- Did not have enough time to review drawings
- Furniture company shipped earlier than agreed
- Tile subcontractor did not notify of extended setup time of tile
- Users in East Wing should have been notified that garage door needed to be left open

What went well?

- Users involved in process
- Project scope well laid out
- Project manager burned midnight oil to see job done on time
- Move schedule well planned

- Landscape people notified well in advance—saved tree
- Contractor site kept clean

What could be improved?

- Fish aquarium should have been left to experienced personnel
- Low light in foyer
- Safety barriers not put up around all construction areas
- Room numbers not specified in a timely manner
- In the very beginning get the plat done as soon as possible
- Consider if doorbells are needed for side entrances and if a louder bell or bells in different location are needed (e.g., think if there is committee meeting held in the fellowship hall with no one in the office to answer the door in the evening or at night)

- Do not assume that all the COLD water pipes in the attic or above the ceilings will be insulated. Doublecheck the contract or drawings
- If garbage disposal is not included in the construction contract, make sure the drain pipe under the kitchen sink is low enough for later installation. Likewise for other appliances not roughed in by the contractor
- If there is a serving window opening to the fellowship hall from the kitchen, make sure the counter top extends beyond the edge of the wall and tile floor is installed under the window. Consider painting the wall with semi-gloss paint
- If sprinkler system is to be installed, make sure sleeve pipes (e.g., 4" PVC) are laid under the parking lots or walkway during construction for later installation of the sprinkler system

- Take full pictures and/or video of all areas inside the building right before insulation. It will help to locate wires and pipes if anything goes wrong in the future
- As soon as framing for partition has been completed, “feel” the size of all rooms and closets and then determine

In summary, the use of the after-action review not only identifies improvements in work processes, but also involves your key people who participated in the project, event, or incident in a positive, action-oriented manner. The AAR really is a process that will jump-start any CQI initiative! 🏰

ACTION ITEM LIST

Assign Action Items for the implementation of the lessons learned

PERSON	TASK	DEADLINE
Ralph M.	Talk to city about speeding up permit process	April 24, '06
Richie C.	Repair the main door to side room	April 24, '06
Potsie W.	Contact contractor for replacement tiles	May 24, '06
Howard C.	Negotiate cost to install new sink fixture	May 4, '06
Arnold	Change out to bigger disposal unit	April 28, '06

ISSUES REQUIRING PRIORITIZATION AND FURTHER CONSIDERATION

Assign Action Items for the implementation of the lessons learned

ISSUE
Designing for maintainability—how to coordinate divisions?
Itemized billing for users
Which services to charge back for?
Contractor screening—how to keep records?
Drawing review process needs improved
Who is the real customer? How to decide between competing interests?
Training for new equipment put into contract
OEM manual process