

# **WHITE PAPER ON THE LESSONS LEARNED PROCESS**

## **Incorporating Guidance from the U.S. Army After-Action Review Process**

By

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In the past decade, enterprises have enjoyed some impressive performance gains, especially in the corporate sector. Many organizations have made fundamental performance improvements, ranging from drastic reductions in costs and spending to thoroughgoing business process redesign.

Even so, scalability of improvement gains has been uneven. Many factors are involved in performance challenges, including the increasing speed of Internet commerce, growing complexity of business systems, a volatile global marketplace with unprecedented opportunities and risks, evolving competitive business models, a new marketplace that demands hybrid competitive/collaborative business arrangements, and more. All these have translated into continuing performance challenges..

To address these concerns, enterprises are undertaking a number of practices under the general rubric, "Lessons Learned," to optimize their own intellectual capital. Knowledge management processes, such intentional knowledge-mining approaches as "learning histories" pioneered at MIT's Sloan School of Business and Systems Thinking launched by Peter Senge, Jay Forrester, and Ari de Geus, also at MIT. Foremost these approaches is the business adaptation of the 20+ year history by the U.S. Army of After-Action Reviews by such industry leaders as Shell Oil, BP-Amoco, General Electric, J.M. Huber, Steelcase, and others.

### **Army After Action Reviews**

The U.S. Army began the process they defined as After Action Reviews to embed improvement and organizational learning processes in their teams, projects, and units. Once initiated, After Action Reviews (AARs) were as much a formal part of training and performance activities as operational and battlefield capabilities. The Army uses AARs to improve performance and readiness, develop leaders, and evolve doctrine. One of the key characteristics of AARs, in fact, is that the AAR is not seen as a separate event or tool but an ongoing practice – a disciplined process to improve performance over time. The AAR is a real-world experience-based knowledge discovery process that prepares soldiers for both combat duty and peacetime operations.. Very different from a post-mortem or retrospective that delivers reports, only to collect dust on the shelf, AARs are a vital practice that has immediate impact on changed ways of doing business and policies to support those changes.

### **How Do AARs Make a Difference in Operations and Policy?**

The fundamental principles for AARs include:

- A firm commitment to prevent wasting valuable lessons

- Accessing knowledge and intellectual assets from everyone in the organization to the greatest extent possible
- Making decisions on shared knowledge based on analysis of action and experience.
- Installing the process of lessons learned at the beginning – rather than the end – of an exercise or new activity
- Continuing that process throughout the lifecycle and into the next such activity.

AAR provides a disciplined approach targeted at driving continuous improvement. The core goal of AARs is to encourage learning the right skills and the right knowledge to achieve the right results. With their substantial background of experience, the practice of Army AARs has revealed some key success factors, and benefits derived from AARs, as shown in the following table:

Success Factors	Benefits
Inserts learning review points during operations, sharpening focus on events that are otherwise often blurred and lost.	Course corrections can be made timely – immediately, mid-term, and for subsequent lifecycles, as appropriate.
Contrasts initial objectives and intended results with actual outcomes.	Continuous improvement becomes part of the “lifeblood” of an enterprise/
Focuses the project or unit to discover root causes for their results – both positive gains and areas for improvement.	Participants gain confidence in their ability to share insights with each other and create a fuller, better picture of what actually happened.
Targets what to retain and what to improve in the next cycle.	High-stakes projects can take advantage of ongoing insights and improvements.
Links local action to overall organizational strategic goals and current/emerging situations.	Participants gain and provide their strategic perspectives so that local actions no longer occur in a vacuum, and stovepipes diminish.
Captures and leverages assets gained and validated by direct experience.	The enterprise expands its knowledge base of standards, best practices, and successful innovations.

### Where Has AAR Been Proving Itself of Value?

Success of tactical operations in Desert Storm, Haiti, and Bosnia (<http://www.fas.org/man/dod-101/ops/docs/bosrep2a.htm>) have been attributed to the AAR approach – compounded by an identifiable leap in soldiers’ capabilities and commitment. The **“Joint Statement on the Kosovo After Action Review,”** presented to the Senate Armed Services Committee in late 1999 provides an excellent example of a robust, formal AAR ([http://www.defenselink.mil/news/Oct1999/b10141999\\_bt478-99.html](http://www.defenselink.mil/news/Oct1999/b10141999_bt478-99.html)). In December 2000, the

Army provided a summary of the AAR of Disclosure 2000, the Army's Foreign Disclosure Officer Conference, a good example of AAR recommendations for action based on the AAR discovery process.

In addition to its 21-year history of AAR in the U.S. Army, the model has now been leveraged to a number of corporate environments, for example:

- **Harley-Davidson:** The company is integrating the AARs into the production process to learn what was done right, what needs improvement, and what shifts in basic assumptions and approaches need to be made. The AAR process begins at the start of the build, documenting initial assumptions – on costs, timing, issues expected to arise throughout the build -- in project plans. The process is repeated several times prior to the build until they are confident they can perform to standards for the first full production run, and continued throughout the lifecycle to allow for course corrections, changing requirements, etc.
- **Shell Oil:** Business planners meet midway through their process to hold a “Before Action Review” to anticipate “ground truth” (a term borrowed from the Army AAR to mean observable events as reported by both instruments and human observers) for the next phase and plan their next AAR to leverage lessons learned forward.
- **Geerlings & Wade:** This company conducts quarterly operations AAR teleconferences to review key events, in addition to routine one-on-one lessons and innovations capture sessions with warehouse managers as these occur. Together, these practices expand and “raise the bar” on performance.
- **Fidelity Investments:** The firm applied the AAR process to changing core strategy for a division, and continue to combine AAR with “real-time dashboards” to assess current status, validate rationale and objectives, and promote execution of their vision.
- **Power Construction:** The business brings together key players to identify challenges, build an expected timeline integrating multiple projects, and define relevant past experience to draw on, where applicable. Since many projects face unprecedented situations, the AAR process allows them to mine and take advantage of one another's learning in real time. The resulting experience-based body of knowledge strengthens the company and increases shared accountability for results.
- **The State of Alaska:** Apply an AAR process to analyze fall floods, the State improved effectiveness of their disaster and emergency preparedness procedures.

Still, as cautioned by performance and strategic change experts at M.I.T. including Peter Senge, George Roth, Bryan Smith, and others, AARs in isolation are insufficient to sustain critical enterprise learning. They must be supported by organizational policies, infrastructure, strategic direction, and culture changes necessary to ensure the acceptability and operationalizing of AARs

and their findings. U.S. Army AARs are part of a larger infrastructure specifically designed to cultivate and implement applications of AARs toward performance improvement throughout the Army – from simulations designed to enhance skills, to integrated national training centers, to widespread coaching and mentoring systems. The Army approach recognizes that techniques cannot effectively be implemented in isolation; rather, they are effective when integrated into a self-reinforcing enterprise system.

A quotation in the Fifth Discipline resource guide, **The Dance of Change**, says:

“...A joke I heard recently goes: ‘If the army is an organization in training, waiting for action, then corporations are organizations in action – waiting for some kind of effective training.’ With all the reverence that people in corporations have for the military (and the number of military alumni in prominent positions in companies), it’s startling how little of the army’s integrated approach to learning has carried over to the business world.”

### **What Is the Actual Process of an AAR ?**

The remainder of this White Paper provides a streamlined adaptation of the Army AAR process, as outlined in **A Leader’s Guide to After-Action Reviews** issued by the U.S. Army Combined Arms Command. (<http://call.army.mil/products/trngqtr/tq1-98/table.htm>). The information below has been leveraged to describe how an AAR may occur in any business or organizational context, and describes a high-level of the defined process, steps, and tips for conducting an AAR.

### **What Is an After-Action Review?**

*An after-action review (AAR) is a professional discussion of an event, focused on performance standards, that enables soldiers to discover for themselves what happened, why it happened, and how to sustain strengths and improve on weaknesses.* It is a tool leaders and units can use to get maximum benefit from every mission or task. It provides--

- Candid insights into specific soldier, leader, and unit strengths and weaknesses from various perspectives.
- Feedback and insight critical to battle-focused training.
- Details often lacking in evaluation reports alone.

After-action reviews (AARs) help provide soldiers and units with feedback on mission and task performances in training and in combat. After-action reviews identify how to correct deficiencies, sustain strengths, and focus on performance of specific mission essential tasks list (METL) training objectives.

Key is the spirit in which AARs are given. The environment and climate surrounding an AAR must be one in which the soldiers and leaders openly and honestly discuss what actually transpired in sufficient detail and clarity that not only will everyone understand what did and did not occur and why, but most importantly will have a strong desire to seek the opportunity to practice the task again.

Because soldiers and leaders participating in an AAR actively discover what happened and why, they learn and remember more than they would from a critique alone. A critique only gives one viewpoint and frequently provides little opportunity for discussion of events by participants. Soldier observations and comments may not be encouraged. The climate of the critique, focusing only on what is wrong, prevents candid discussion of training events and stifles learning and team building.

### **Is There a General Process for AARs?**

All AARs follow the same general format, involve the exchange of ideas and observations, and focus on improving training proficiency.

Step 1. Planning

Step 2. Preparing

Step 3. Conducting

Step 4. Following up (using AAR results)

### **What Specific Process Guidelines Govern Effective AARs?**

The leader should begin with some type of "attention getter" -- a joke, an appropriate anecdote, or a historical example that relates to the training, exercise, event, or conduct of the AAR. Then, if necessary, he reviews the purpose and sequence of the AAR to ensure everyone understands what an AAR is and how it works. His introduction should include the following thoughts:

- **An AAR is a dynamic, candid, professional discussion** of training which focuses on unit performance against the Army standard for the tasks being trained.
- **Everyone can, and should, participate** if they have an insight, observation, or question which will help the unit identify and correct deficiencies or maintain strengths.
- **An AAR is not a critique.** No one, regardless of rank, position, or strength of personality, has all of the information or answers. After-action reviews maximize training benefits by allowing soldiers, regardless of rank, to learn from each other.
- **An AAR does not grade success or failure.** There are always weaknesses to improve and strengths to sustain.

### **What Are the Specific Steps in Conducting an Actual AAR?**

The following table defines the process for conducting an AAR. The process steps are discussed in the section following the table.

## **Recommended Process for Conducting an AAR**

- 1. Introduction and rules**
- 2. Review of objectives and intent**
  - Training objectives
  - Commander's mission/intent (what was supposed to happen)
  - OPFOR commander's mission/intent
  - Relevant doctrine, tactics, techniques, and procedures (ITTPs)
- 3. Summary of recent events (what happened)**
- 4. Discussion of key issues**
  - Chronological order of events
  - Battlefield operating system (BOS)
  - Key events/themes/issues
- 5. Discussion of optional issues**
  - Soldier/leader skills
  - Tasks to sustain/improve
  - Statistics
  - Others
- 6. Discussion of force protection (safety)**
- 7. Closing comments (summary)**

### **AAR Process Description**

#### **1. Introduction and Rules**

The AAR leader should review unit training objectives for the training mission(s) the AAR will cover. He should also restate the tasks being reviewed as well as the conditions and standards for the tasks.

#### **2. Review of Objectives and Intent**

Using maps, operational graphics, terrain boards, and so on, the commander or discussion leader should restate the mission and intent of the exercise.

### 3. Summary of Events

The AAR leader now guides the review using a logical sequence of events to describe and discuss what happened. He should not ask yes or no questions, but encourage participation and guide discussion by using open-ended and leading questions.

#### What is the Importance of Open-Ended Questions?

**An open-ended question has no specific answer and allows the person answering to reply based on what was significant to him.** Open-ended questions are also much less likely to put him on the defensive. This is more effective in finding out what happened. For example, it is better to ask,

“SGT Johnson, what happened when your Bradley crested the hill? What were you aware of at that time?”

rather than—

"SGT Johnson, why didn't you engage the enemy tanks to your front?"

### 4. Discussion of Key Issues

**The AAR is a problem-solving process.** The purpose of discussion is for participants to discover strengths and weaknesses, propose solutions, and adopt a course of action to correct problems. The discussion may be structured in a number of ways, including:

- By chronological order
- By the seven Battlefield Operating Systems (BOS) elements (a proscribed Army analytical framework of such issues as intelligence, maneuver, fire support, etc.)
- By key events, themes, issues, an approach which focuses discussion on critical training events which directly support training objectives the chain of command identified before the exercise began.

#### How Flexible is the AAR?

In any event, one of the strengths of the AAR format is its flexibility. The leader could use the chronological format to structure the discussion, then, if a particular BOS seems to have systemic issues that the group needs to address, follow that BOS across the entire exercise. Once that topic is exhausted, the AAR could proceed using the chronological format. Each technique will generate discussion, identify unit strengths, weaknesses, and training the unit needs to improve proficiency. However, the leader must remember to:

- Be specific, avoiding generalizations.
- Be thorough.
- Not dwell on issues unrelated to mission accomplishment.
- Focus on actions.
- Relate performance to the accomplishment of training objectives.
- Identify corrective action for areas of weakness.
- Continually summarize.

## 5. Discussion of Optional Issues

In addition to the key issues, the leader may want to include optional issues for discussion, such as:

- Soldier and leader skills

Through discussion, the unit can identify critical soldier and leader skills which affected unit or individual performance. The leader should note these skills for retraining or for future unit training. (Often it is best to discuss leader skills in a separate meeting or AAR specifically for that purpose. This allows for a candid discussion of leadership issues without wasting unit AAR time best spent on reviewing the entire training exercise.) The AAR leader for follow-on meetings should be a member of the unit so participants can candidly address key training issues without fear of airing dirty laundry in front of outsiders.

- Tasks to Sustain/Improve

This technique focuses on identifying tasks on which the unit is proficient and tasks on which they need further training. The intent is to focus training on mission-essential tasks and supporting soldier, leader, and collective tasks which need improvement rather than training to known strengths. Although it is important to sustain proficiency on tasks whose standards the unit has met, it is more important to train to standard on new or deficient mission-essential tasks. Train to weakness, not to strength.

- Statistics

Statistics is a double-edged sword. Effective feedback requires participants to measure, collect, and quantify performance during the training exercise. Statistics supply objective facts which reinforce observations of both strengths and weaknesses.

**The danger lies in statistics for statistics' sake.** Chart after chart of ratios, bar graphs, and tables quickly obscures any meaning and lends itself to a "grading" of unit performance. This stifles discussion and degrades the AAR's value. Statistics and statistics-based charts should *identify critical trends or issues and reinforce teaching points*. (An example for an armored unit would be to link the number of rounds fired to the number of enemy vehicles destroyed. This would provide a good indication of unit gunnery skills.) Judicious use of statistic feedback supports observations and provides a focus to AAR discussions.



- Other Issues as Appropriate and Important to the Unit and Leader

## 6. Force Protection/Safety Issues

Safety should be specifically addressed in every AAR. **Safety issues need to be discussed in detail when they impact unit effectiveness or soldier health.** The important thing is to treat safety precautions as integral parts of every operation.

## 7. Closing Comments/Summary

During the summary, the AAR leader reviews and summarizes key points identified during the discussion. He should end the AAR on a positive note, linking conclusions to future training. He should then leave the immediate area to allow unit leaders and soldiers time to discuss the training in private.