FACILITATIVE LEARNING ANALYSIS
IMPLEMENTATION GUIDE

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Abstract The Facilitated Learning Analysis

"Reinforcing High Reliability in Wildland Firefighting by Taking a Hard Look at Near-Miss Incidents"

The "Facilitated Learning Analysis" (FLA) is a modern, contemporary information-sharing and human-performance analysis tool. It is adaptive to its users and their unique situations. The FLA lends itself well for assessing both risk mitigation and human performance factors for near-miss incidents. The FLA process is a high-performance group analysis and facilitative process that helps promote learning and the timely sharing of "lessons learned" throughout the wildland fire community.

The FLA works effectively in that it carries forward the intent of doctrinal thinking and the use of organizational guiding principles and values based upon the hallmarks of a high reliability organization. The FLA also strives to promote a well-defined "learning culture". Given that most, if not all near-miss incidents evoke emotions associated with failure, mistrust, and even fear of retaliation, it is vitally important that the atmosphere in which the FLA occurs is one that acknowledges and supports the precept that all humans make mistakes - and that "to err is human." Wherever the FLA is used, these parameters must be supported. Only in an atmosphere of fairness without "blaming" will trust, open dialogue, and mutual respect be most effective. The FLA process allows each participant to speak in their own voice with equal time for sharing personal insights, observations and perceptions. When the FLA is running at high efficiency –open dialogue will lead to individual understanding and relative agreement among the group about "why" things happened. Resultantly, both individual and collective introspection take hold and the findings emerge as meaningful solutions and recommendations that serve not only the individuals involved, but also the rest of the fire community.

The FLA has many benefits, both qualitative and quantifiable: first, the FLA fills a gap that is missing in order to gather significant knowledge and lessons learned from the field without having to go through more formal, elaborate and costly processes. Second, it provides a venue where people can tell their story without contempt for feeling, blame, or fear of reprisal. Also important, is the role the FLA serves as a catharsis to help participants overcome residual fears and anxieties associated with the incident. Perhaps the most significant benefit of the FLA is its solutions and recommendations and the timely release of these findings among the fire community. The overall benefits of the FLA serve both the intent to foster a meaningful organizational learning culture while concurrently moving the organization forward with increased understanding and respect for ""high reliability organizing."

In summary, the FLA lends itself as a key medium for finding solutions to prevent both near-misses incidents and to learn from them when they do occur. As the wildland fire community seeks to adopt modern fire suppression guiding principles and incorporate doctrinal thinking, so must it pursue adopting the traits of "high reliability organizations." Therefore, with a keen emphasis on improving performance and developing more highly skilled leaders and responsible managers we know now what a proven learning tool we have in the FLA; one that takes us a giant step forward towards achieving our goals.

This FLA Guide provides the information needed to conduct your own analysis. Remember that the process is adaptable, and not all near-misses are ever the same. However you use this guide, remember that "learning" is the objective and sharing the "lessons" in a timely fashion - the hallmark of success.

Facilitated Learning Analysis Implementation Guide

ABSTRACT

The overall effort to develop a progressive organizational "Learning Culture" was prompted by the US Forest Service, Fire Operations Risk Management Council as part of its continuous mission for developing risk management and human performance awareness. The Facilitative Learning Analysis is just one key "tool" in the lessons learned and analysis toolbox. The FLA Guide works toward implementing the principles and values representative of 21st century Wildland Fire Management, Doctrine and organizational Guiding Principles.

I. Introduction

The Introduction as written is to assist readers with understanding the purpose of the FLA and how and why it was developed. The introductory segments, labeled "a" thru "d", each serve to demonstrate the precepts for why this guide exists. The FLA, along with its companion document and guide: the "Accident Prevention Analysis" (APA), also serves to fill critical needs of today's wildland firefighters and fire managers. Simply put, the FLA and APA serve to generate real-life "lessons learned" that will improve our wildland fire culture and keep our people safe. The FLA and APA present a plethora of learning opportunities that exist when people are willing to put asides egos, excuses, and even apathy when things go wrong. Under the beliefs of "to err is human" and "through crisis comes opportunity" were the reasons we now have these tools. (Editors note: Reference Appendix D for additional insights.)

a) Learning versus Blame

Consider a recent tragedy fire where seasoned firefighters failed to post lookouts, didn't communicate critical information or apparently never ground-proofed their escape routes or safety zones. Why did these things happen? Might these failures have occurred on any other given day, on previous fires, or even throughout an entire season? How long did "good luck" prevail – without incident, near-miss, mis-hap or tragedy?

It is human nature to make assumptions when a near-miss happens, and we know from experience that they often do; however, we also know when tragedy occurs, that blame will follow. When things go wrong, questions are asked: "How many times were these duties performed without oversight; where were the mitigation actions; and of course - who was in charge? At all times we have to ask ourselves, "Why are oversights significant? What reasons make lack of oversight "significant?" In a "learning culture" where people automatically and instinctively ask these questions of themselves and peers, can they fully acknowledge that there are *"potential consequences of error."* When an individual, crew or team reaches this understanding, only then can they acknowledge what it means to be part of a learning organization.

"*Sharing the Error* "is the next key component of a learning organization. There is a huge difference between recognizing the attributes of a learning organization and not recognizing the consequences of failure. This issue of 'sharing error' tugs at the crux of the matter that either defines or blinds an organization's culture. When there are no incentives other than "being in trouble" or "carrying the blame" when errors occur - where is the desire to report or divulge mistakes? At the heart of the issue is how can learning take place in a culture that forfeits learning opportunities in exchange for oversight and accountability that only focuses on blame. Wherever there is pure intent for creating a learning culture, it must be recognized and openly acknowledged from the highest levels that people are not immune from making mistakes. In a true learning culture, errors from mis-haps or near-misses – especially those that openly identified and discussed will be embraced for their true learning capacity. When situational errors are equally shared and analyzed, and when solutions are discovered and recommendations emerge that work for the benefit of the whole, only then will error-resistant practices begin to replace the complex and entangled procedures that reside in waiting, next to "blame" and punishment.

Wildland fire agencies conduct on average 15 to 25 Serious Accident Investigations (SAI) annually and possibly up to 10,000 After Action Reviews (AAR). Until development of the FLA and APA – there were few "learning opportunities" in-between. Dr. Karl E. Weick and Dr. Kathleen M. Sutcliffe, in their book: "*Managing the Unexpected: Assuring High Performance in an Age of Complexity*" – presented a detailed study of 'High Reliability Organizations. One of the key things it helped us with is identifying and correcting errors when they are mere 'weak signals' or non-events.

Although SAIs purport to be for learning, the reality from surrounding complexities such as bereaved families, lawyers, agency concerns for liability, and professional and peer embarrassment, including the fear of criminal liability – tend to encumber and complicate what any of the "learning" opportunities that should be shared. Is it any wonder that firefighters today are now buying professional liability insurance and referring investigators to their attorneys, or worse – removing them selves from accepting future assignments regarding crew welfare? When the specter of "blame" begins to loom, the chance for meaningful learning are more frequently lost. This is an issue that all to often organization must face, and unfortunately, the lessons learned come to late, or in hindsight are presumably known and nothing changes.

b) Filling the Gaps on the "Learning" Continuum

On one end of the spectrum we have business as usual: things are going well, no "big deals" are occurring and all about things appears apparently "safe". At the spectrum's other end: sheer disaster, broken lives, broken careers, tragedy and tragic consequences are rampant, and highly visible.

Ironically, our willingness to visit, analyze, learn, and improve ourselves is defined by what we do when things seem to be going well. Even when there are no accidents, chances are things are still not perfect. In fact, some of the best opportunities for preventing tragedies are by creating habits picked up from these minor errors and misunderstandings when we "assume" things are going well. These are the "weak signals" - early warning signs of ingrained individual or even organizational cultural flaws. Although the "After Action Review" is a great tool to improve performance at this level - since there apparently are no 'big deals' at the time, open discussion and problem solving can take place relatively easy at the crew or team level, and clearly without unwarranted intrusions while remaining "underneath" anybody's radar.

Moving up a notch on the spectrum, consider what could happen when a near-miss occurs. While an AAR is still a good learning tool, the nature of the near-miss at some point can provide greater benefits; however, often outside help is needed. Progressing from "What's said here stays here," as in the AAR process, enlightened leaders know that transparency, an outside perspective, and even a facilitated discussion will take the group further than bearing the load in continued isolation.

c) The Facilitated Learning Analysis

An FLA is considered by some to be a "super-charged" After Action Review. Guided by doctrinal "intent" versus rigid protocol, the FLA with its variety of techniques may be the appropriate tool to fill the spectrum gaps. The FLA premise of "Intent" thinking vs. "rules" thinking will spawn learning techniques and other avenues for sharing.

Guided by the willingness to learn rather than blame*, near-miss* situations can be addressed and rightfully resolved by acknowledging them as an *opportunity with potential* for learning. In fact, there may be a positive situation with positive behaviors and a positive outcome that is ideal to demonstrate, reinforce, and promote outstanding performance. Instead of reactively showing people 'how not to do things', we can jump at the chance to proclaim that safe, effective firefighting is not only possible, but provide examples of what it looks like!

Presenting an icebreaker such as a sand table demonstration is one technique available for reviewing a significant event, perhaps constructed upon an event experienced by the facilitator. Sand Table exercises provide unique opportunities to recreate the terrain and surrounding features of an event, perhaps even the near-miss at hand. In an FLA, with the input of the participants, walk through the event, with the intent of figuring out how to avoid 'unmitigated risk' can be very productive. Although it may be impossible to completely avoid risk, especially in such an inherently risky occupation such as wildland firefighting, risks must still be identified, assessed and mitigated to facilitate learning.

"An FLA helps move difficult operations from a 'High Risk – Low Frequency' mode (the most dangerous) towards a 'High Risk – High Frequency' mode (where risks are readily recognized and mitigations understood)." Dr. Jennifer Ziegler

d) The Facilitated Learning Analysis Report

Should a written factual 'report' be generated? Look for the intent, and then look at available horsepower (qualified resources). "Ten to 15 Serious Accident Investigation(s)" (SAI) take a lot of work, time, and money. They are also required by Policy based on set criteria at all levels in the Agency. However, over the course of many SAI reports we recognize that there are few *new* ways of hurting people.

Investing in many lower intensity, informal FLA, (perhaps 50 to 100 over the course of a calendar year), may provide unique and intense learning experiences that other mediums cannot match. In addition, for near-misses – there is a benefit to eliminating the need for lengthy detailed formal analyses and time consuming reports. Within the FLA the report will focus on the *facilitative processes* used, with the summary report limited only to the number of pages needed to convey the educational intent. A non-constrictive, standard format for FLA documentation should have the capability to assist others with developing their own *learning process and intent* relevant to the near-miss event they may develop.

Having said all this, envision a component of the Lessons Learned Center where a collection of case studies can reside describing how people achieved learning from numerous situations. Through the Lessons Learned Center, case studies are available for anyone visiting the site for ideas, and to share their particular approach or process.

Towards the 'complex end' of the previously mentioned spectrum (but not 'sheer disaster'), consider these the fire shelter deployments related to the "*I-90 / Tarkio Incident*," the "*Little Venus 'Peer Review*," and the "*Nuttall Fire*". While hardly "low fruit" - [low-intensity / low complexity] - these near-miss incidents are noteworthy examples of evolutionary hard looks at near misses.

[Editor's note: Prior to adding the FLA to the "spectrum" or "gaps in reporting tools", these incidents were original referred to as "peer reviews", they <u>were</u> well funded, experimental efforts with extraordinary intent to not only fill "reporting" gaps but to help re-engage wildland firefighters' faith in the investigation process; especially after an extraordinarily indictment of a wildland firefighter on criminal charges related to an adjunct investigation of a federal wildland fire.]

USFS policy dictates that an SAI be performed for: a fatality, three or more serious injuries, *or* any fire shelter deployment or entrapment event. However, in instances where no one was hurt and there is little chance of claims or administrative reviews, an interesting opportunity emerges with an FLA: the freedom to explore human factors, and focus on salient learning opportunities by other analysis means. *This is the realm where agencies may shift their response towards the principles and objectives of a FLA.*

These analyses can resemble an SAI format, but practical experience suggests people respond differently when the investigation or review process focuses on learning rather than blame*. When blamed we tend to rationalize why our actions were right, but when engaged as thinking, learning people we are willing to explore other options and decisions.* The fact that no co-workers were hurt makes this easier to process. Firefighters are willing to share "What should I or we do differently next time?"

When 'Corrective Actions' come from participants, the lessons seem personal and become ingrained; they are not perceived as coming from above. Consequently, we have facilitated a deeper, intrinsic learning process. Instead of being 'coerced' in a cloud of blame, firefighters, supervisors, and management can now come together and contribute to solutions, all with positive gain – a win-win solution.

By policy, an SAI is still required for truly tragic events involving serious injuries; loss of life, significant claims to the agency, and potential for administrative, personnel or legal actions. The credibility of the FLA will be torpedoed if information gathered in an open FLA is used for punitive purposes.

In summary, by utilizing an FLA, supervisors, managers, and program leaders move us towards a 'Learning Culture' and high reliability organizing. Following routine operations, minor misunderstandings, close-calls, or significant near misses, firefighters and managers have an opportunity to apply proven and enlightened leadership to further define the emerging culture. Again, documentation is intended to help others navigate through FLA and other case studies.

> "The objective is not the library; the objective is to create a movement using this new practice." Dr. Jennifer Ziegler

II. Intent

The intent of a Facilitated Learning Analysis is to improve performance by generating individual, unit, and organizational learning by willingly conducting any of a growing number of analysis techniques to capitalize on the participants shared experiences. In an FLA, the hallmarks of High Reliability Organizations are illuminated and reinforced.

Assuming competence during a Facilitated Learning Analysis is paramount, as is maintaining high levels of respectful, contemplative dialogue. *Learning* is valued over blaming, solving, even achieving consensus. Many perspectives achieve a deeper 'nuanced' understanding thereby creating new mental 'slides' for future 'Recognition Primed Decision Making'. Errors and misunderstandings are identified and corrected when they are mere 'weak signals'. Employees learn to value respectful contemplative discussion and automatically and instinctively consider the *potential* consequence of their actions.

More structured than an After Action Review, but less intense and less formal than an Accident Prevention Analysis (APA) or a Serious Accident Investigation, a Facilitated Learning Analysis helps a group maximize learning opportunities presented by the near-miss event.

As stated earlier, significant events can also be positive. They may or may not have injury or property damage. Therefore, FLAs can be conducted at a wide range of organizational levels. FLA products should be shared. Whenever possible, initiatives recommendations and corrective actions generated from within the group should be summarized as "lessons learned" or part of the lessons learned analysis.

III. Conducting the Analysis

The Facilitated Learning Analysis process generally includes one facilitator helping a group analyze a recent performance to improve future performance. Focusing on principles, this general outline allows flexibility to adapt to the audience, the event, the organization, and the facilitator.

a) Principles:

1. Respectful discussion is paramount.
2. Active listening promotes respectful discussion.
3. Learning for the future events is more important than assessing blame.
4. Participants are most likely conscientious and well meaning.
5. Humans make errors.
6. Firefighters make decisions based on past experiences and studies of similar situations (Recognition Primed Decision Making).
7. Wildfire situations are often complex, and a learning atmosphere helps reveal a rich and nuanced understanding of factors within the event.
8. Key Principles of High Reliability Organizations are integral to the FLA:
    a. Preoccupation with Failure
    b. Reluctance to Simplify
    c. Sensitivity to Operations
    d. Deference to Expertise
    e. Commitment to Resilience

The situations firefighters often encounter are complex and dynamic. Training and experience cannot possibly anticipate every situation. Consequently, an FLA can also be complex, with distracting finger pointing and defensiveness. The facilitator must have the skills to gently bring the group back focusing on future performance.

The FLA helps firefighters to be able to recognize when he or she is over their head, or when they have not been in a particular situation before? The nature of a near-miss is often after assessed by comments like: "We don't know what we don't know". After the 1994, South Canyon Fire, the BLM National Fire Director, speaking in terms of hindsight, said it well: "At that point in my career, I might have done the same thing". This honest realization compels us to put learning and 'Recognition Primed Decision Making' into high gear. Those most honest realize that any of us could have been in these situations.

Industrial safety studies repeatedly show we will 'get away' with an unsafe act over 300 times before a real tragedy occurs. In that period, maybe 30 near-misses occur, or ten minor accidents and a few near-misses. Because we have been so *reactive* to tragedy, we must inculcate our culture to be *proactive*, using After Action Reviews to work on unsafe acts, and the FLA for near-misses and minor accidents. Remember that AARs, when done on a daily or regular basis, by their very nature, will alert us all to potentially unsafe acts and weak signals.

b) Participants:

The nature of the FLA changes with assemblage of the group. For example, each of the following will play a role:

- People who were involved with the event
- Peripheral players
- Supervisors
- The FLA facilitator and FLA facilitator in training

You can have a very successful discussion with only those who were on site. The participant discussions tend to be hands-on, and tactical. A different but still successful session occurs if peripheral players, support staff, and supervisors participate. The discussion now includes broader organizational and interdepartmental topics. The dialogue will find its center with topics and issues based on who attends. Factors leading to the event are rarely limited to just the people who were on site since the broader organization is deeply involved.

c) Agenda:

A typical session may include gathering at the incident site or in a meeting room. When not on site, projected pictures and a sand table are useful. Introductions allow everyone attending to share that they are and what their involvement is. Take a few minutes to explain the FLA process, reinforcing the principles of High Reliability Organizing.

Throughout the process the facilitator must be mindful of pace, need for breaks, and opportunities for all to make their point, constantly reinforcing the principles. A rigid time limit may not be necessary.

Upon completion of the session, review the:

- Objectives
- Process
- Principles
- Learning bullets identified.

Briefly, discuss the FLA process and seek their suggestions for improvement (AAR). Also, discuss the nature of the report.

d) Discussion Focus:

The four basis questions used in After Action Reviews offer a structure from which to get started and will also lend themselves to writing the FLA report. The basic questions are:

- What was planned?
- What actually happened?
- Why did it happen?
- What can we / I do differently next time?

On the other hand, as author Gary Klein offers, consider using the questions from his discussion on Cognitive Critiques:

- Was the estimate of situation accurate?
- Where was uncertainty a problem and how was it handled?
- What were the intent and the rationales of the effort?
- How adequate were the contingencies (reactions to 'What If' probes?).

Posting the principles of High Reliability Organizing as a reference can be useful.

e) Sand Tables

Presenting an engaging previous event on the sand table as an icebreaker helps set the stage.

The presentation should demonstrate how good people acted when confronted with difficult situations. It shares what they were thinking, how they performed, and what they might do differently in the future. An informal interactive approach sets the stage for the event at hand. Then facilitate a cooperative discussion with participants arranging the terrain and working together to recreate the situation. With one eye on the four questions and five Hallmarks, ensure everyone's perspectives are shared.

f) Personalities

Occasionally strong personalities are present. The real issues often include strained dynamics between people. Modeling principles of respectful discussion and attentive listening are never more important. Recognize that influences such as: egos, issues with authority, defensiveness and feeling judged, etc - are all at play. The Facilitator, by modeling attentive listening and respectfully repeating back, will do more to elevate both the dynamics of the FLA, as well as the participants' future interactions with others.

When the strong personality is directed at the person carrying the responsibility during the event being discussed, ask each player what he or she expects of subordinates during difficult times. Introduce the importance of sense-making and how, as things make less and less sense, we become more stressed, more rigid, less able to accurately track the dynamic environment, and therefore, even more stressed. Ask the person in charge if they were feeling stressed and what the most important, positive thing a subordinate could have contributed at that moment. Again, we are not assessing blame, but looking to perform better in the future, when the role of the current IC may be reversed.

Remind participants that they are not the only ones to feel overwhelmed. They are not the only ones to be holding the bag when a fire blows up. They are not the only one carrying baggage about the fright experienced by their people.

Focusing on the future, choose important learning topics usually expressed as "What we will do differently next time". They must be specific, achievable, and real.

g) Documentation Guidelines

1. Reports will be organized by type of event. Describe the event in one or two paragraphs that reveal the type of situation involved. This will assist others dealing with a similar event.

2. Describe the process used for the FLA. Who was the facilitator, and why were they chosen? How were the individual, the situation, and the intent of the FLA introduced? What process was used to work through the event?

3. What salient points the participants identify? What concerns do the participants want elevated and shared? What lessons can others gain from this situation? For this report, these are best limited to bullets with links or reference to any detailed documents or initiatives developed from this event.

4. Include a statement at the beginning of the document identifying who requested the FLA and if a Delegation of Authority (DOA) was issued.

5. Either the facilitator or someone can write the report from the home unit; however, seeking the facilitator's review is highly advised. The line officer should review the report before it is submitted to the Lessons Learned Center, where it will be reviewed once again before it is posted.

IV. Appendix

a) Frequently Asked Questions:

What is the origin of the term "Facilitated Learning Analysis?"

The term "FLA" evolved out of early efforts of the US Forest Service, Fire Operations Risk Management Council and its attempts to put "trust" back into accident investigation processes. Especially after events following several recent tragedy fires. Initially, some of the first "near-miss' type incidents reviewed were called either "lessons learned analyses" or "peer reviews" (I.e.: the *"Little Venus Fire Shelter Peer Review"* and the "*I-90 / Tarkio Shelter Deployment Investigation*"). In each of these instances, careful consideration was given to move away from connotative words such as "investigation" or "inquiry" - terms that are associated today in negative context, particularly after the indictment of a wildland firefighter, charged with "criminal intent" relative to a tragedy fire and subsequent investigative claims.

Because the word "analysis" is neutral, and the concept of "lessons learned" helps to link us to the essence of an "open" learning culture – previously used terms such as "Peer Reviews'' and "AARs on steroids" have morphed into the analysis tools available today. As a result, the terms: "Facilitated Learning Analysis" and "Accident Prevention Analysis" now fill the gap of formerly used terms as well as better reflect current on expressly demonstrating "doctrinal intent."

What is new about FLA?

The FLA is a tool to "mine" learning opportunities from events or issues that are "under the radar" of just simply not being discussed. Use the FLA with a focus on learning and not blaming. Values and principles reflect and reinforce recent initiatives within the wildland fire community. Most notably, the greatest value of an FLA is the ability to release the reports in very timely manner so that others can learn from the incidents and apply the lessons learned.

What is "Recognition Primed Decision Making?"

The intent is for improved performance through deeper insights and mental engagement instead of fear of reprisal. The 1995 "*Findings from the Wildland Firefighters Human Factors Workshop,"* introduced the concept of 'Recognition Primed Decision Making' to the wildland fire community. It turns out most of us base our fire line decisions on mental 'slides' from previous experiences. A Facilitated Learning Analysis is an intense study of situations close to home. With deeper understanding and many 'slides', firefighters will be able to anticipate future events when they are foretold by 'weak signals'.

Who conducts a Facilitated Learning Analysis?

It depends on the situation. In some instances, a peer from an adjacent unit or agency may be a great candidate, or perhaps a regional expert or someone from across the country. Find the right person for the moment. They should be a facilitator, not an investigator. They should be knowledgeable of the tasks and skills represented in the event. The key factor is trust and credibility with the people involved.

What are the benefits of a Facilitated Learning Analysis?

The process produces individual learning, unit learning, practicing respectful interaction, contemplative dialog, problem solving, and it develops additional facilitators, at all levels and for all disciplines. It increases experience and insight, reducing serious accidents, resulting in more efficient firefighting. There is also an emotional catharsis, whereby discussing and expressing helps people let go of lingering negative emotion.

Who Benefits?

Participants are the biggest beneficiaries since this is a hard look at an event occurring close to home. Local managers gain 'focus on learning' experience. The facilitator also profits. Intentionally involving future facilitators is wise. Finally, the wildland fire community benefits when the FLAs are shared through the Lessons Learned Center.

How is a Facilitated Learning Analysis different from an After Action Review?

AARs are for a crew, team, or any other relatively small unit. To protect the success and integrity of the AAR, individuals must speak openly, without concern that what they say may be recorded or used outside the context of their unit. An FLA is sort of a "super-charged" AAR; the difference being the FLA and an AAR includes addition of an outside facilitator and that the story may be shared.

How is a Facilitated Learning Analysis different from a Serious Accident Investigation?

A Serious Accident Investigation (SAI) sorts out responsibility, assigns accountability, and helps agencies to prepare for various complex and serious claims. The SAI Team provides formal findings and recommendations.

FLA intent is to improve performance on future events and the recommendations come from the participants.

Who decides to initiate a Facilitated Learning Analysis?

Depending on the significance of the event, it can initiate by a Crew Boss, Incident Commander, or Safety Officer. For other higher-consequence incidents a high-level commander, manager, Forest Supervisor or Line Officer will decide. One way to answer this question is to ask who will be held accountable. Who will be holding the bag if adverse personnel actions, claims, or liability emerge? Who is authorized to expend public money for the appropriate pursuit of learning opportunities? Who can determine if the actual lessons learned or the process used will be beneficial to others, or that the benefits outweigh the potential risks?

Who identifies corrective actions?

Empowered to find solutions, participants with ownership can be very creative in finding corrective actions.

Who determines if the corrective actions and products are 'real', and appropriate for the learning opportunities presented?

These value judgments are what managers are paid to do. Oversight must exist at the appropriate program level.

When to use a Facilitated Learning Analysis:

Consider using some sort of Learning Analysis option any time an opportunity for learning presents itself, or when the decision-maker feels the FLA is the appropriate process after a review of Appendix D.

When not to use a Facilitated Learning Analysis:

If claims against the agency or an individual are likely and bereaved families or lawyers are part of the scenario, then frank and open discussions are less likely to occur – consider using the Serious Accident Investigation or Accident Prevention Analysis (reference Appendix D.

What are some examples of Facilitated Learning Analysis?

The Case Studies section (Appendix B) shares a wide variety of situations and methods to exploit learning opportunities. Completed examples are available at the Lessons Learned Center on-line library at: www.wildfirelessons.net.

What products and reports are required?

Reports focus on the process used rather than documenting the whole story. Documentation may include a brief synopsis of the event, a description of the FLA corrective actions, and initiatives, recommendations, or findings that the participants want to elevate.

Participants may develop a blow-by-blow account in a more detailed narrative or PowerPoint presentation. The unit may have unique skills such as videographers or writers to help communicate the lessons. Keep in mind, however, that many reports do not get read. The real strength of these sessions is the growing perspectives (personal "slides" and nuance) within the participants' individual knowledge and experience base. Available horsepower should be directed towards making this service available to more people and their own situations.

How can the Case Studies of Facilitated Learning Analysis be located?

Case studies of the FLA, APA, and other report formats can be located at the Wildland Fire Lessons Learned Center's main website, www.wildfirelessons.net

How is the FLA related to Doctrine?

Doctrine, or principle-based management, presents a system of values and mutually understood structures achieving results as individuals execute the mission guided by those values and structures. A Facilitated Learning Analysis is intended to deepen the individual's understanding of those values and provide insights and interpretations of their experience that will help them apply doctrinal principles in the future.

Can negative administrative actions emerge from a Facilitated Learning Analysis?

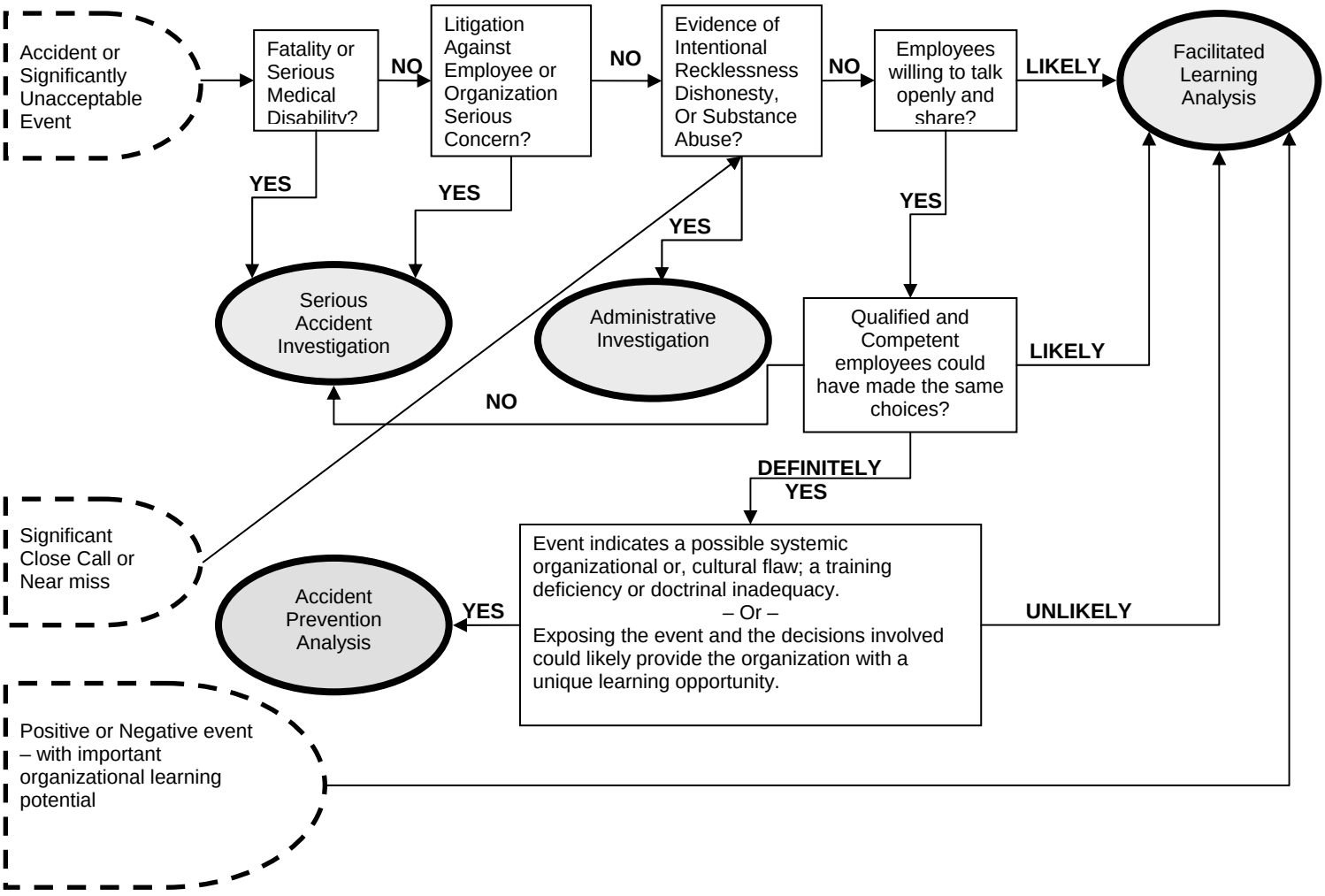
Credibility and employee trust are in the balance. A primary tenet of a 'Just Culture' is that people will not be punished for normal errors.

How is a Facilitated Learning Analysis different from an Accident Prevention Analysis?

Both the "Decision Aid" flowchart (below) and the "Comparison of Methodologies" table (Appendix D), illustrate the processes available for selecting an appropriate analysis tool and help to describe the differences between the analysis processes.

DECISION AID FOR AGENCY ADMINISTRATORS FOR CHOOSING A POST EVENT INVESTIGATIVE / ANALYSIS PROCESS

The following 'Decision Aid', provided by the USFS Fire Operations Risk Management Council is designed to assist Agency Administrators when choosing a post-event investigation / analysis option.



The diagram above serves to illustrate how an APA and a FLA fit into the spectrum of tools available to Agency Administrators for reviewing significant unintended outcomes.

b.) Case Studies:

The following are list are examples of events where Facilitated Learning Analysis concepts were used. Note some cases when originally conducted were termed Peer Reviews.

Nuttall Entrapment Investigation (July 2004)
A fire shelter deployment reviewed with a SAI Team. This is an early no-injury example of an analysis that looks for the positive lessons.
http://www.wildfirelessons.net/documents/Nuttall_Deployment_Review_Final_2004.pdf

I-90 / Tarkio (LLC, August 2005)
Shelter deployment investigated as a SAI. Many of the values for FLA emerged from I-90 / Tarkio.
http://www.wildfirelessons.net/documents/I-90_Report.pdf

Missouri Ridge (LLC March, 2006)
Minor injury where a much more serious outcome could have happened. A traditional SAI conducted with a coach associated with FLA process. The report documents the method and rationale used.
http://www.wildfirelessons.net/documents/Missouri_Ridge_Tree_Felling_Accident_090605_72-hour_Briefing.pdf

R-5 Brake Maintenance (June 2006)
A near-miss incident where vehicle maintenance procedures were the cause of failure, (originally written as a "peer review".)

Little Venus Peer Review (LLC, July 2006)
A shelter deployment with a formal investigation framework utilizing original and developmental 'Peer Review' principles, (now recognized as the "Accident Prevention Analysis". Steve Holdsambeck, (FS Risk Management Officer – R4) pioneered and developed the APA process because of facilitating this highly significant and complex event.
http://www.wildfirelessons.net/documents/Little_Venus_Deployment_Peer_Review.pdf

Balls Canyon Peer Review (LLC, July 2006)
A close-call with rapidly expanding fire behavior and a stuck vehicle during engine operation (originally called "peer review"; now recognized as APA learning analysis.)
http://www.wildfirelessons.net/documents/Balls_Canyon_Near_Miss_062706_Final_Report.pdf

East Roaring (LLC, August 2006)
Multiple packs and firefighting gear were destroyed by wildfire (FLA).
http://www.wildfirelessons.net/documents/East Roaring Fire LLA.doc

Derby Helicopter Evacuation (August 2006)
Emergency helicopter 'rescue' of firefighters from a ridge, the FLA explored a breakdown in communications.

Deep Creek Tree Felled on Pick-up (August 2006)
Felling operation where a pickup truck drove into the falling path of a green tree. The Safety Officers on the Incident Management Team conducted this FLA.

Gash Creek Lessons Learned Analysis (LLC September, 2006)

Lessons Learned Analysis introspection by the Bitterroot National Forest looking at barriers to progressive tactical actions and public understanding of related issues.
http://www.wildfirelessons.net/documents/Gash_Creek_Lessons_Learned nalysis_2006.pdf

Lessons Learned from Escaped Prescribed Fire Reviews and Near Misses (LLC, October 2006))

Thirty prescribed fire escape reviews and 'near- miss reports were analyzed to identify what, if any, recurring lessons were being learned or whether they were indicating emerging knowledge gaps or trends.
http://www.wildfirelessons.net/documents/Rx_Fire_LL_Escapes_Review.pdf

***"Ahorn Fire Shelter Deployment"* Facilitated Learning Analysis (LLC, August 2007)**

A Division Supervisor deployed a fire shelter. The fire fighter was stationed as an observer / lookout on an un-staffed division on the southern flank of the fire for several days. Mid afternoon, the fire behavior became more active as it had on previous afternoons. Later the fire fighter observed more extreme fire behavior and moved up escape route to previously identified safety zone." This is the facilitated learning analysis done after the incident.
http://www.wildfirelessons.net/documents/FLA_report_and_pics.pdf

"Madison Arm Fire Entrapment" Facilitated Learning Analysis (LLC August 2007)

What follows is a facilitated learning analysis (FLA) report regarding an entrapment and burnover situation on the Madison Arm Fire, on June 27, 2007. The resources entrapped and burned-over included two Forest Service engines and a chase truck, as well as a contractor-owned heavy pickup truck, trailer and dozer. Eight Forest Service employees (two engine supervisors and their crews) and single contractor entrapped by wildfire. This serious, life-threatening event thankfully ended without injury or fatality.
http://www.wildfirelessons.net/documents/MadisonArm_FacilitatedLearning_Analysis_Report.pdf

c) Reference and Reading

"Managing the Unexpected: Resilient Performance in an Age of Uncertainty" by Karl E. Weick & Kathleen M. Sutcliffe, © 2007. Jossey-Bass.

"Managing the Risks of Organizational Accidents", by James Reason, © 1997. Ashgate Publishing Limited.

"Findings from the Wildland Firefighter's Human Factors Workshop", November 1995, Ted Putnam, MT&DC: Project Leader. USDA Forest Service Technology and Development Program, publication number 9551-2855-MTDC.

"Sources of Power: How People Make Decisions", by Gary Klein, 1999. MIT Press.

"Learning in Action" by David A. Garvin, 2000, Harvard Business School Press.

"Roadmap to a Just Culture: Enhancing the Safety Environment", by the Global Aviation Information Network, Working Group E, Flight Operations / Air Traffic Control Operations Safety Information Sharing, 2004. Available on line at: http://204.108.6.79/.

"The Leader's Guide to Storytelling: Mastering the Art and Discipline of Business Narrative", by Stephen Denning, © 2005. John Wiley & Sons Inc.

"Techniques of Safety Management: A Systems Approach", by Dan Peterson, © 2003. American Society of Safety Engineers.

Tactical Decision Game / Sand Table reference material
http://www.fireleadership.gov/toolbox/TDG_Library/tdgsreferences.htm

d) Comparison Table of Methodologies: Between "AAR" and "SAI"

Choosing an Appropriate Analysis Tool for Learning from Success or Failure

	After Action Review – "AAR"	Facilitated Learning Analysis – "FLA"	Accident Prevention Analysis "APA"	Serious Accident Investigation – "SAI"
Focus of process:	**Continuous Improvement at the single unit level; informal and self directed. Initiated by crew, or Incident Management Team)**	**Employee Learning** **The process dissects an event and demonstrates to employees both what they should learn from the event and how they should similarly learn from subsequent events.**	**Organizational Learning and Effective Accountability** **The process identifies the cultural and organizational faults that enabled the accident to occur and any latent factors that may contribute to subsequent accidents if not corrected.**	**Managerial Understanding & Awareness** **The process identifies causal and contributing factors that can be corrected to prevent future similar accidents.**
Human error and At-risk behavior:	**Is viewed as normal and correctable through feedback provided by members of the unit.**	**Is viewed as normal.** **Errors and their consequence are viewed as opportunities to gain insights in improving individual and group performance and organizational resiliency.**	**Is viewed as inevitable and inherent to the human condition and must be managed as a component of system safety.** **Accidents that result from human error are therefore an indication of an unsafe system. Accidents resulting from human error and at-risk behaviors are viewed as consequences of cultural and organizational failures. Significant attention is given to at-risk behaviors that are intentional rule violations.**	**Is viewed as either a causal or contributing factor to the accident.**

	After Action Review	Facilitated Learning Analysis	Accident Prevention Analysis	Serious Accident Investigation
Intent of report:	**Reinforces success or corrects deficiencies in performance.** **HOWEVER Written report is not required or completed. Feedback is verbal and changes can be implemented immediately.**	**Report is optional but highly recommended to track learning.** **If a report is written and distributed, its intent is to show how employees can and should continuously learn from similar events.**	**Promotes a learning culture and exposes flaws in agency safety programs.** **1. Identify latent flaws within organizations that enable unintended outcomes.** **2. Display achievable recommendations to address latent organizational flaws (i.e., the causal factors).** **3. Chronicles the accident in a way that facilitates widespread learning for employees engaged in similar work.**	**Prevent similar accidents and defend the agency in litigation.** **1. Determine causal and contributing factors.** **2. Provide foundation for accident prevention action plan to address, mitigate or eliminate the identified causal factors.**
Report format:	**Not applicable.**	**If documented, the report is generally a brief description of the event and a summary of what those involved learned from the accident.** **Report is intended to share the lessons learned.** **Reports describes event, tiers to intent, and can offer recommendations.**	**1. Displays what those involved learned for themselves and share their recommendations of what the organization can learn from the accident.** **2. The accident narrative is a factual account of the accident as told from the perspective of those directly involved. The accident is described using professional storytelling techniques to facilitate widespread**	**1. A factual and chronological display of the events, decisions and errors that caused the accident.** 2. **Includes factual section and management evaluation section**

			organizational learning. **3. The Lessons Learned Analysis is an expert analysis of the accident and the causal factors** 4. **The recommendations address changes needed in training, controls, organizational structure and culture, supervision, and accountability.**	

	After Action Review	Facilitated Learning Analysis	Accident Prevention Analysis	Serious Accident Investigation
Witness statements:		**Statements are given in a group-debriefing atmosphere and employees talk based on their willingness to share their perspectives and lessons learned.**	**Witnesses are assured that their statements are administratively confidential. They are also advised that if anyone volunteers information that indicates there was a reckless and willful disregard for human safety (see definition) the Agency Administrator will be advised there is cause for an independent administrative review.** **Witnesses are interviewed generally individually but are not requested to sign statements or have their statements recorded. Key witnesses proofread the narrative for accuracy prior to publication.** **"Privilege" is not desired in conjunction with this process as it could hinder full disclosure of all pertinent facts.**	**Witnesses may be asked to provide signed, written statements to investigation team. Frequently these statements are recorded.** **If anyone volunteers information indicating a reckless and willful disregard for human safety, that information may be passed on to the appropriate Agency Administrator.** **Agency ability to grant "privilege" to witnesses is currently being sought.**
Policy Requirement	**AARs are a "best practice" for continuous improvement**	**Flaps are a "best practice" for continuous improvement**	**Meets the requirements of an accident investigation.**	**Meets the requirements of an accident investigation**

It should note that there are many similarities between SAIs and APAs, but the shared intent is how "learning" is accomplished. For example, the process used to investigate human, equipment and environmental factors is identical in both processes. Individual APA Team members may have almost identical roles and duties to their counterparts on an accident investigation team (e.g., Team Leader position).