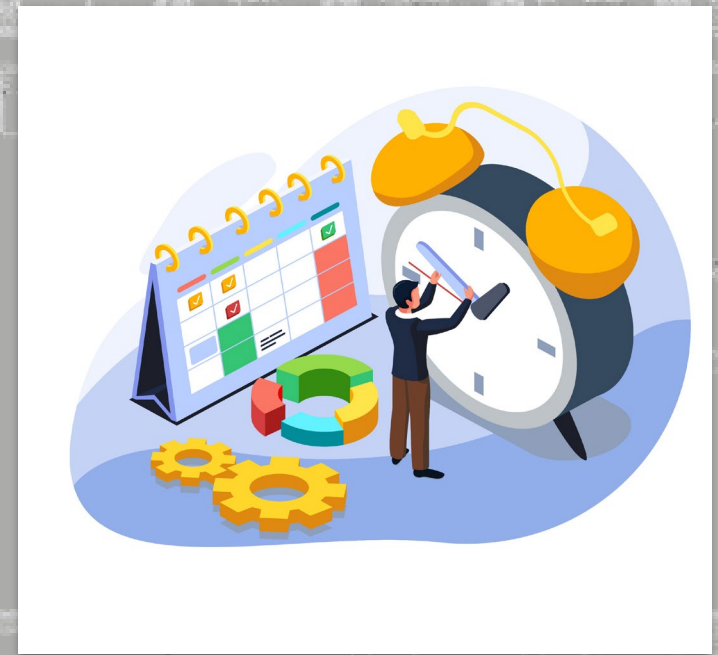# After Action Reviews – Lessons Learned Using Innovative Data-Driven Approaches and Methodology

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US Army Corps of Engineers ®

BOTTOM LINE UP FRONT

Purpose:
- To discuss innovative approaches to After Action Reviews (AARs)
- Present and discuss findings from recent AAR efforts
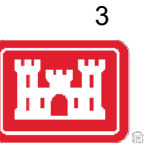- Recommend potential opportunities and ways ahead

BLUF: Completing AARs and discovering Lessons Learned are critical processes to provide comprehensive information that can improve study quality and execution of projects.

AGENDA:
1. Background
2. AAR Methods and Procedures
3. AAR Products
4. Path Forward

AFTER ACTION REVIEWS & LESSONS LEARNED

After Action Review - The AAR is a dynamic, candid, professional discussion of actions, events and projects, which focuses on performance standards. Feedback generated during the AAR process compares actual output of an action, event, or project with the expected outcome.

The participants in the AAR identify and document:
- What happened
- Why it happened
- How to sustain strengths and correct weaknesses

AARs Lead To:

Lessons Learned (LL) - LL is defined as knowledge gained from experience, successful or otherwise, for the purpose of improving future performance. Examples include:
- A lesson that is incorporated into a work process
- A tip to enhance future performance
- A solution to a problem or a corrective action
- A lesson that is incorporated into a policy or a best practice
- An adverse situation to avoid

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AAR GUIDANCE AND REFERENCES

USACE Self-Pronouncements

- *Relevant, Ready, Responsive, Reliable*
- "We are a learning organization"

Policies/Regulations

- EP 1105-2-58 Continuing Authorities Program — Chapter 2, Sec. 18
- ER 1165-2-217 Civil Works Review Policy — Chapter 8.5
- ER 1105-2-100 Planning Guidance Notebook — Appendix H (formerly for CWRB)
- ER 1110-1-12 E&D Quality Management — Chapter 9
- ER 5-1-11 USACE Business Process — Appendix B
- HQ Army Training Center Circular (TC) 25-20 — A Leader's Guide to After Action Reviews

MSC Quality Management System

Project Delivery Business Process (formerly PMBP)

AAR & LL Online Databases (no longer maintained)

USACE Campaign Plan FY18-22

WHY ARE AARs NEEDED?

What We're Supposed To Do:

- Follow existing guidance, however fragmented, and improve our processes
- Document AARs and turn relevant experiences into lessons we learn from
- Consult existing AAR/LL databases for applicability to current efforts
- Foster a culture of learning, improving, and becoming more efficient
- Learn as we go, share experiences, and communicate regularly/broadly
- Be objective without placing blame

What We Really Do:

- Focus on jumping over the next hurdle, not planning for long-term success
- Save AARs for the end, when many important lessons are forgotten
- Speak in platitudes; we don't say what really needs to be said
- We know what to do but don't know how to make it useful
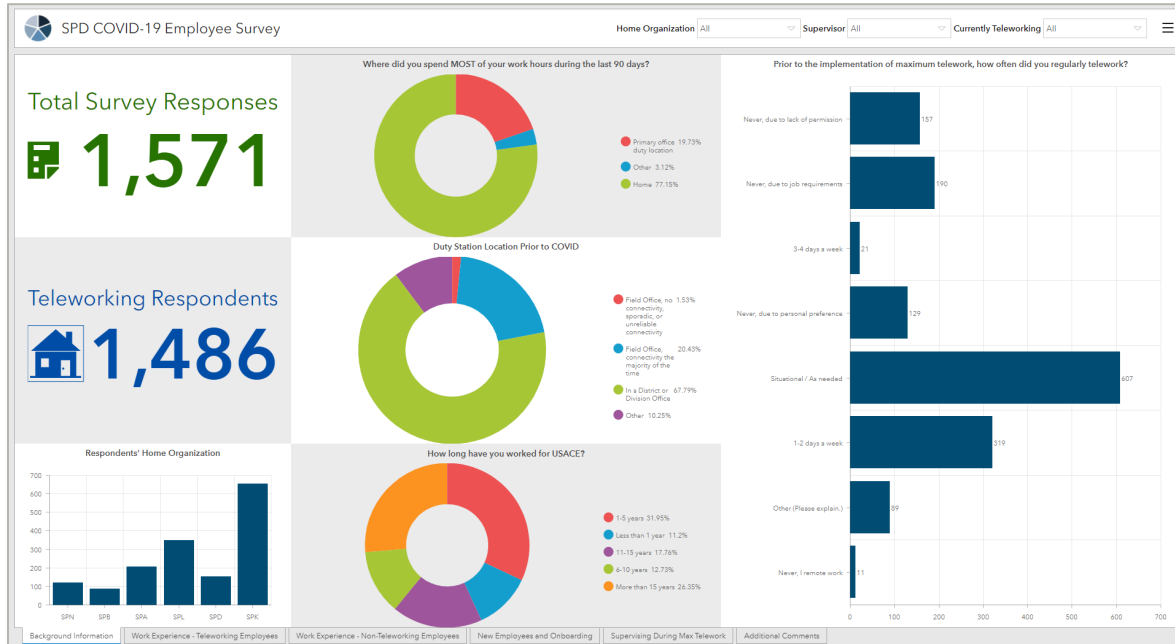- Run out of steam, check a box, and move on…

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RECENT AARS

Hamburg, IA Main Ditch 6 Levee Raise; Ala Wai Flood Risk Management Feasibility & PED Phases; Puerto Rico Coastal Storm Risk Management Feasibility Study
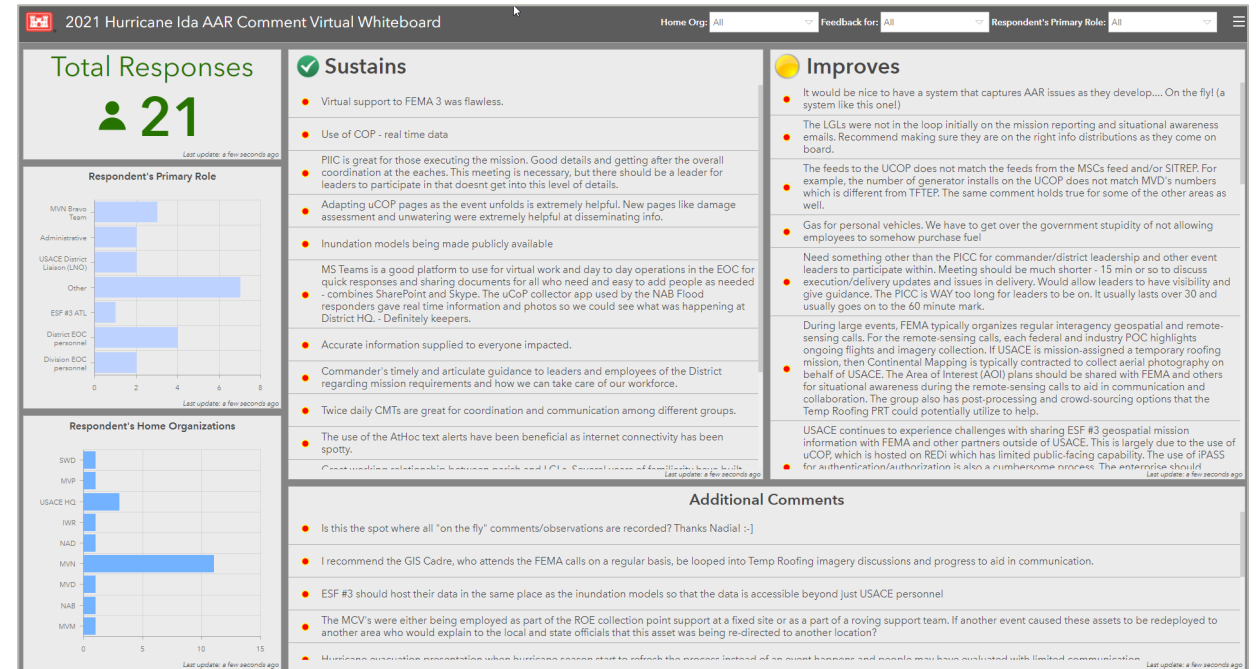
AAR METHODOLOGIES

- Surveys

- Emailed submissions

- Interviews

- Active discussion capturing

- Intermittent Hotwashes

INTERVIEW DO'S AND DON'TS

Do

- Treat it as story-telling
- Make a personal connection if possible
- Actively and compassionately listen
- Treat each interview as brand-new fact-finding
- Leave space for silence
- Thank people sincerely

Don't

- Blame or point fingers
- Talk more than your interviewee
- Begin with assumptions or pre-conceived notions
- Necessarily have/provide a list of prepared questions, especially when interviewing engineers*

*Said with love and respect

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POST-INTERVIEW PROCESSING

- Take copious notes; transcribe all you can if possible but use recordings sparingly

- Look for emergent themes and build/follow-up on them.

- Use subsequent interviews to validate themes and findings, without attribution or a "gotcha" attitude.

- Don't be afraid to follow up with additional questions throughout the process or if some interviews contradict each other. But do strive to be as neutral as possible in your follow-up.

- Use other primary sources to identify and help validate

ENTERPRISE KEY TAKEAWAYS

PDTs are stressed!

Managers and supervisors are aware of the challenges PDTs are facing. Many mentioned the pride they have in their teams and acknowledged the amount of night and weekend work necessary to stay on top of things.

We can only go so fast.

DPM 2018-09 has the following word uses: 'Quick' – 4 times; 'Expedite/ Expeditiously' – 10 times; 'Fast' – 4 times; 'Streamline' – 9 times; 'Turn Dirt' – 3 times. Schedule is clearly given priority for our work. Is this yielding the best results?

Focusing on schedules over science can impact quality.

The shift to risk-informed decision making and the overall agency culture to meet schedules and milestones at all costs may have had unintended consequences over time.

ENTERPRISE KEY TAKEAWAYS

The 3x3x3 study process doesn't fit all studies.

Approximately half of all studies receive an exemption. A large percentage of studies that ask for an exemption don't receive one. The ability of a PDT/District to make an early determination about the need for a 3x3x3 exemption is critical to developing a sound, justifiable recommendation that won't trigger 902 concerns.

The 3x3x3 exemption process needs to be more streamlined.

PDTs spend a significant amount of time and money developing and processing exemption requests. This defers resources and works against risk-informed decision making. Some teams wait for months while exemption requests are 'in routing'.

Agency culture regarding schedules and exemptions caused unintended consequences.

Potential technical red flags may not be raised or may be deferred to later phases in order to meet schedule and milestones, even if the technical red flags may have wide-reaching impacts on a project.

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ENTERPRISE KEY TAKEAWAYS

If H&H modeling doesn't go well, lots of other things won't go well.
> H&H modeling is such a critical component for a study that if it doesn't get completed properly <u>the first time</u> not only does it need to be redone but other PDT disciplines such as cost, economics, and environmental have to wait for updated model results.

Our communication of risk is only as good as people understand it.
> Risk registers and placemats are tools. They must be explained to be useful. These tools cannot take the place of direct communication so we all truly understand the risks a study/PDT are facing.

We must adopt a more formalized AAR and LL process
> The only formalized way for us as an agency to improve our processes is through conducting AARs and developing LL. What we have described today uses real data, captures empirical data, and utilizes objective experiences. This process works.

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OPPORTUNITIES & WAY AHEAD

1. **Revisit and reanalyze 3x3x3 at the leadership level to determine if changes are needed.**
   a. Revisit policy interpretation of Section 1001 that states FEDERAL costs are capped at a maximum of $3M, not total study costs, as USACE has interpreted and applied since 2012.
   b. At a minimum, increase the $3M to account for inflation and apply cost of living index to account for regional labor differences.

2. **Consider an Exemption Review discussion at the AMM to gauge probability of a 3x3x3 exemption.**

3. **Realize that agency culture and current business practices don't align or allow revolutionizing within feasibility studies, and work to change this perception.**

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QUESTIONS/DISCUSSION