

Using Tabletop Exercises to Support the Development of New Vivaria and Insectary Processes and Procedures

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Introduction

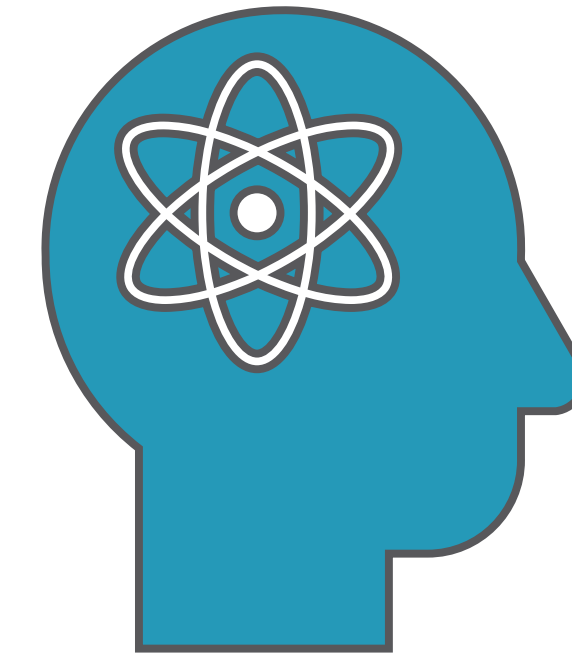
Tabletop exercises (TTEXs) have long been recognized as essential tools for preparing organizations to effectively respond to high-risk situations. Tabletop exercises offer a safe, efficient way to “stress test” the resilience of an organization’s protocols in the face of hypothetical worst-case scenarios, making them particularly valuable for reinforcing staff training, enhancing coordination and communication between teams and team members, and identifying opportunities to improve plans and procedures. In many cases, TTEXs are paired with functional exercises to assess how written plans and procedures translate to actual performance.

There are several approaches to designing and conducting TTEXs, depending on the scenario being tested and the desired outcome of the event. The five most popular approaches include the following:

Scenario-based Approach	Functional Group Approach	Hybrid Approach	Workshop Approach	Simulation Approach
Realistic and detailed scenario	Division of participants based on roles	Combination of scenario and functional approaches	Informal and interactive where experiences, insights and best practices are shared	Most technologically advanced approach
Each stage of scenario presented and discussed, and actions jointly decided	Each group addresses specific aspect of scenario	Allows for the examination of inter-related actions across multiple stakeholders	Includes facilitated discussions, brainstorming, and/or role-playing exercises	Uses computer-based models and/or other technology
Helps in understanding flow of events and impacts of decisions	Fosters collaboration and highlights inter-dependencies between departments	Began with broad scenario then break into groups to tackle specifics	Effective for fostering creativity and generating innovative solutions	More hands-on experience

As widespread as their use is for testing the resilience of existing processes and procedures, the utility of TTEXs as tools to help develop new processes and procedures in support of the stand up or expansion of activities is often overlooked. Entities standing up operations or new capabilities often struggle to draft processes and procedures that adequately meet initial needs, with the resulting drafts often lacking critical information about key roles, responsibilities, and lines of communication. Using a TTEX to initially map out activities such as the movement of live organisms into and around a facility and animal care in the event of widespread disruption of the local power grid leads to more effective preliminary versions of protocols and can help identify critical supporting processes and procedures that need to be in place for the activity to be completed effectively. Here, we discuss lessons we have learned for effective TTEX design, moderation, participant selection, execution and follow-up.

Lessons Learned



DESIGN

The goal is not to crash test the system, but to define the basic processes and procedures

- Keep it simple (within reason)
 - Define and prioritize event goals
 - Focus on “business as usual / best case scenarios” first
- Build in check points
 - Who needs to know what’s going on, and when?
 - Who needs this information, and how will it get to them?

MODERATOR

Need someone who can lead the discussion and keep it on track without themselves getting bogged down in the debate

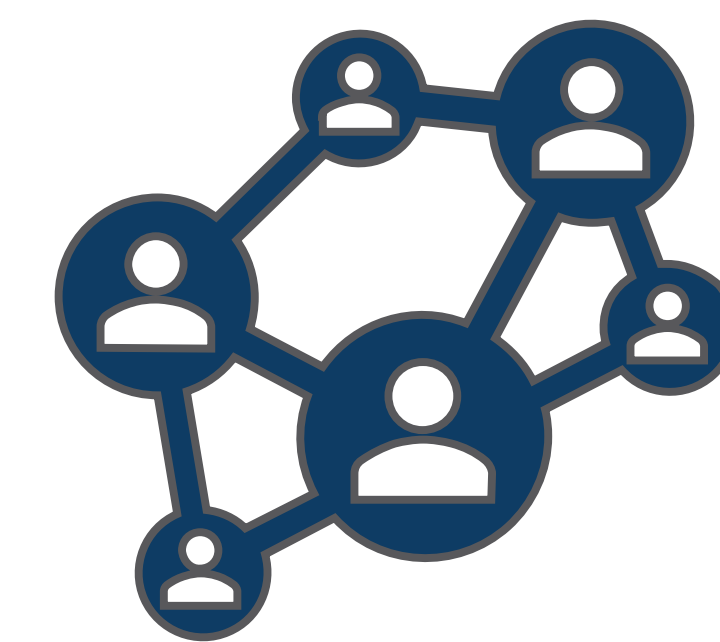
- Knowledgeable, but not necessarily directly involved
- Appropriate level of authority
- Willing and able to manage the personalities in the room



PARTICIPANTS

Nothing happens in a vacuum. Who else is involved?

- Invite decision makers as well as implementers
 - Protocol writers, process developers
 - Subject matter experts
- Process view—who else is responsible, accountable, or needs to be consulted or informed?
 - General and administrative support units/departments
 - Technical staff



EXECUTION

Keep the discussion on topic and on schedule, and keep track of what is discussed

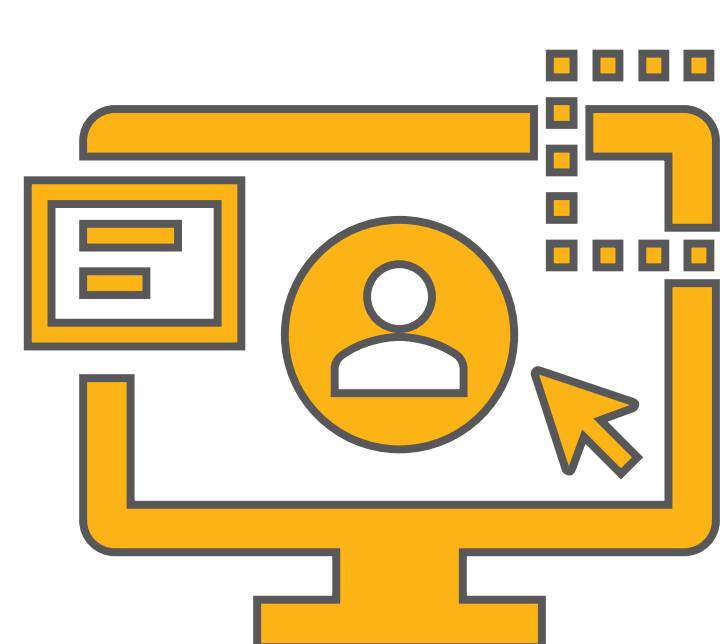
- Set expectations for behavior and outcomes up front
- Use a designated note-taker
- Keep track of questions / concerns that are not directly related to the topic at hand
- Close with summary of decisions, action items, next steps



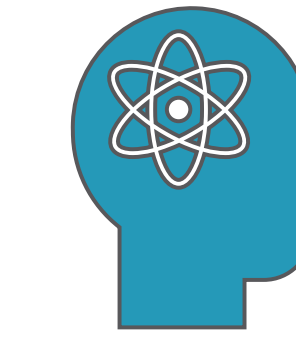
NEXT STEPS

The event is only useful if something comes out of it

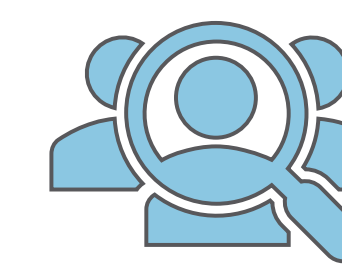
- Provide a write up for participants, key stakeholders
 - Scenario, outcomes, outstanding questions, action items and deadlines if set
- Follow up on pending decisions and other action items
- Coordinate with other participants / stakeholders when testing the developed process



Applying the Lessons: A Hypothetical Case Study

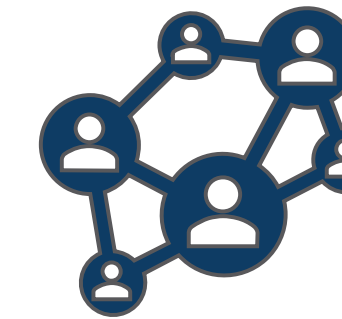


Dr. Chavez just received funding to start up a new breeding colony of an invasive ixodid tick species. The insectary Dr. Chavez runs has never housed ticks, and she is concerned that her team may overlook key requirements while developing the new processes and procedures, leading to delays in the project. Dr. Chavez decides that she would like to run a scenario-based TTEX focused on the preparation for and receipt of ticks into the facility, to better inform document development.



Dr. Chavez reaches out to her biosafety office for help identifying a suitable moderator. A contractor supporting that office has some familiarity with insectary operations and has run multiple TTEXs for the facility before. They agree to moderate this TTEX for Dr. Chavez.

Dr. Chavez wants several of her staff who will be working with the ticks to attend the event. After some discussion, she and the moderator decide to invite representatives from the following teams who they anticipate will be involved in the process:



- Safety, for occupational health
- Shipping and Receiving, for receipt and delivery
- Facilities, for insectary room preparation
- Attending Veterinarian and vivarium manager, for tick feeding
- Biosafety, for regulatory and guideline compliance
- Security, for access control



Before the TTEX, the moderator meets with Dr. Chavez to set behavior and outcome expectations, which are outlined at the TTEX opening. The exercise is allotted two hours for the coordinating groups. Two individuals will record meeting notes. Participants will be provided with sticky notes to record unrelated questions and concerns, which will be collected at the event's end. Action items will be compiled for a write-up.



A comprehensive write-up for all participants and key stakeholders, outlining the scenario, expected outcomes, outstanding questions, and any action items with set deadlines will be drafted and disseminated by the moderator.

Conclusion

Tabletop exercises help streamline the development of innovative, holistic processes that address the requirements of multiple stakeholders. Additionally, they foster a shared culture of resilience, open communication, and continuous improvement. Once developed, the draft process can be tested by conducting a functional exercise inclusive of the teams represented at the original TTEX.

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