

## Applied Learning Environments

December 12, 2019

### Q&A Session

*This webinar provided an overview of Applied Learning Environments (ALEs) and how they can help the Planning community build empathy and collaboration with stakeholders, facilitate the development of more innovative alternatives, and save both time and money during the planning process. ALEs are simulated environments designed to engage participants in active/applied learning to achieve specific learning objectives. Examples of ALEs used in the Corps include the ERDC Ship/Tow Simulator, emergency preparedness tabletop exercises, and multi-hazard tournaments. The webinar was presented by John Kucharski (HEC, Senior Economist), Andrea Carson (LRP, Community Planner), and Hunter Merritt (SPK, Water Resources Planner) and included an example ALE application in which webinar attendees participated in a “serious game.” Questions related to ALEs or developing serious games for use in planning studies can be directed to any of the ALEs team members.*



*This summary of the Question / Answer session of the webinar is not a transcription; questions and responses have been edited and reordered for clarity.*

#### **When should project delivery teams (PDTs) use serious gaming in the planning process: at the charette when developing a broad range of ideas; before the Tentatively Selected Plan milestone, when the team is trying to evaluate effects; or during feasibility level design, when the team is incorporating input from reviews?**

The ALEs team views the use of serious gaming as a progressive process. It can first be used to discuss and explore multiple scenarios with stakeholders during the charette phase of a study. Next, if the PDT has incorporated modeling into the feasibility phase of the study, those modeling results can be used to inform an updated version of the game to help the PDT and stakeholders evaluate the difference scenarios and identified tradeoffs.

Over the coming fiscal year, the ALEs team plans to develop materials to help PDTs implement serious gaming in a planning process or in a shared vision planning effort.

#### **What happens if there are aspects of a serious game that do not sufficiently reflect reality?**

When games are used to serve as a first iteration of the model that PDT intends to use in its study, the PDT should ask stakeholders / participants what aspects of the game didn't feel realistic and whether they felt their interests were accurately represented. This feedback can be used by the model designer to revise the model so that it more accurately represents the system being studied.

#### **Are there serious gaming resources outside of USACE that could help planning teams develop new games or access existing ones? In particular, are there any serious games that help communicate conceptual ecological models?**

There are multiple companies and organizations already working in this space, and specifically several existing games that incorporate ecological models and the role of environmental manager. For example, Deltares, a Dutch applied research institute focused on water resources, produced a game called [Sustainable Delta](#) which includes an ecological tradeoff component with the goal of informing and

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enabling communities, stakeholders, elected officials, and the general public to better understand water systems and their related restoration and protection measures.

**Has the ALEs team considered submitting a “Statement of Need” to the USACE Engineer Research Development Center (ERDC) for further research and development of serious games or to evaluate serious gaming approaches?**

Yes, the team has submitted research proposals, as well as pursued other avenues of support to continue the serious gaming/ALE effort. Those at the District and Division level are also encouraged to [submit research and development requests](#) as funding ALE needs arise. While it is not mandatory to do so, those in the field who would like to submit a request are welcome to reach out to the ALEs team for assistance. Note: John Kucharski is the point of contact for serious gaming on the ALEs team.

The longer-term aim of the ALEs team is to form a “gaming group” that will be able to track and coordinate efforts, leverage synergies among gaming efforts, share knowledge across the agency, and consider how gaming applications can be broadened beyond outreach.