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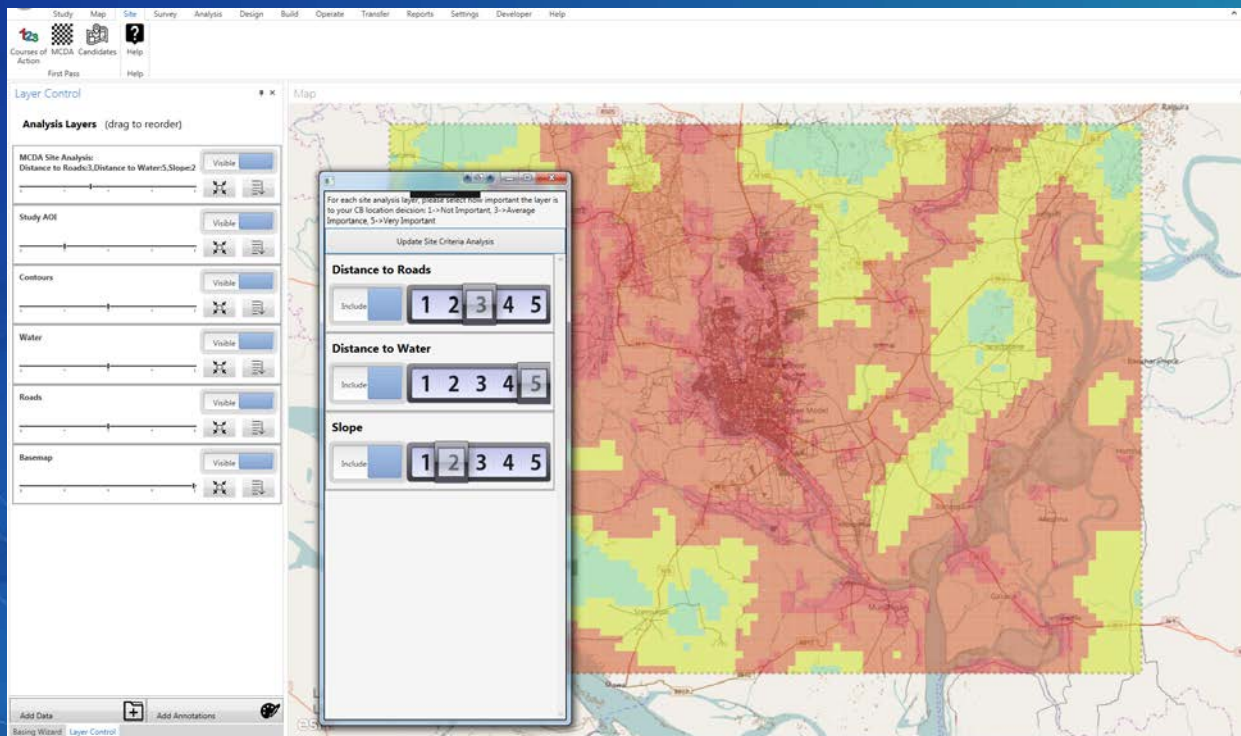
# Engineer Site Identification for the Tactical Environment

Dr. George Calfas, Juliana Wilhoit\*, Matthew Hiatt, Ryan Keeling, Elle Williams



# Maps to Decisions

US Army Engineer Research and Development Center uses leading mapping solutions to help the US Army decide where and how to build.



# Imagine you have 72 hours

The US Army must be ready to sustain humanitarian and military operations anywhere on the globe, requiring rapid data analysis to build a clear picture from complex geospatial data.



[https://en.wikipedia.org/wiki/Forward\\_Operating\\_Base\\_Salerno](https://en.wikipedia.org/wiki/Forward_Operating_Base_Salerno)

## Considerations for site selection:

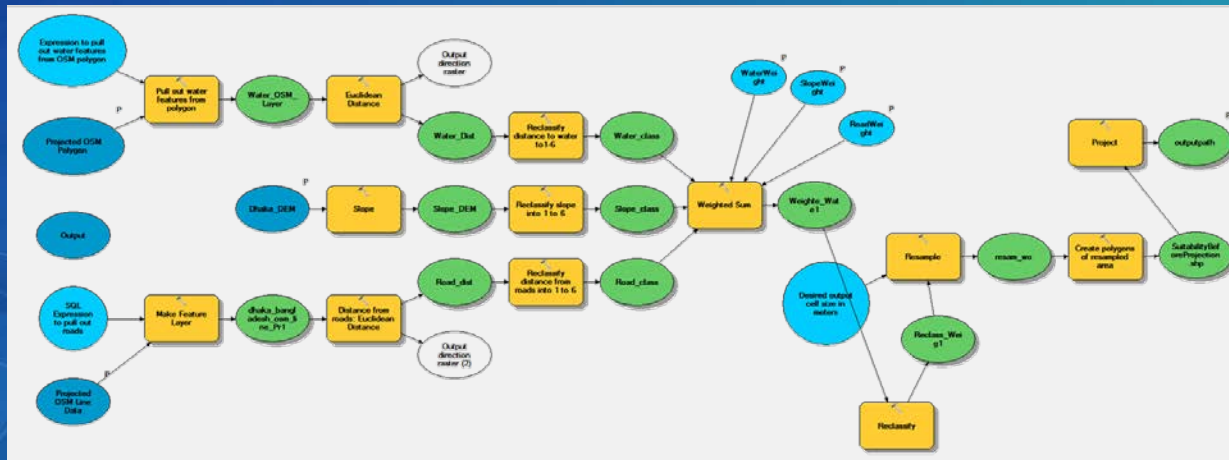
- Natural Environment, e.g.
  - Slope and land cover
- Built Environment, e.g.
  - Existing facilities and roads
- Sociocultural Environment, e.g.
  - Cultural heritage sites and PMESII-PT
- Mission Considerations, e.g.
  - Force protection and routing





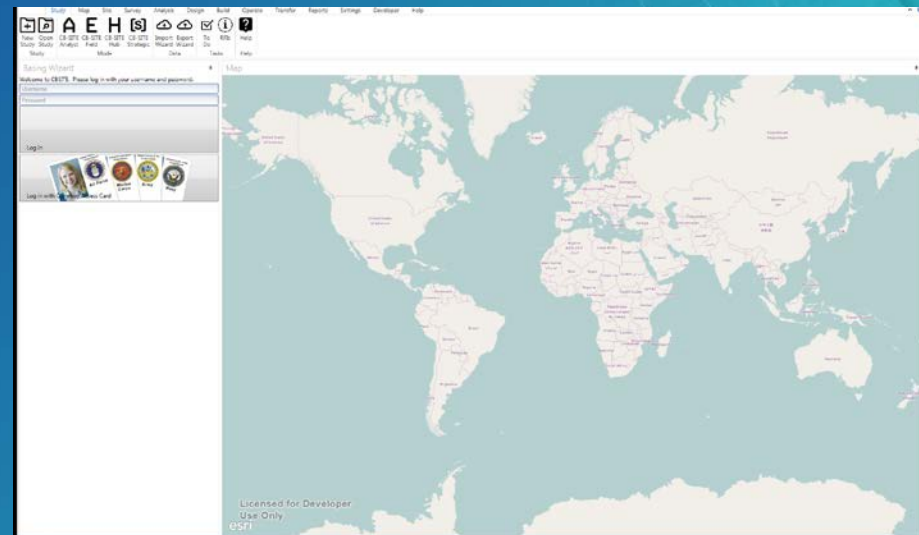
# ESRI Enables Rapid Prototyping

- First, there was the idea.
- Why ESRI?
  - ArcGIS Runtime for .NET provided quick standup of standalone geospatial platform.
  - ESRI ModelBuilder allowed subject matter experts to provide leading research without excessive programming overhead.
  - Provides a common platform for users throughout the Army.



# Engineer Site Identification for the Tactical Environment (ENSITE)

- ENSITE strives to be the front end and dashboard for connecting survey and geospatial data for engineer site selection and operations.
  - Map-based user interface
  - Support for pre-built geospatial tools and workflows
  - Integrates data sources into accessible global coverages
  - Workflows and techniques for validating data





# Video Demonstration

Engineer Site Identification for the  
Tactical Environment



# Lessons Learned

- Important to have toolkit for building prototypes
- Data analysis starts with reliable data and metadata
- Stability and ease of use important to getting user feedback
- Rapid prototyping is required to compete in a changing market





# Thank you for your time! Questions?

- For further information:

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