Using GIS to enhance Range Safety

Introduction

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Agenda

- Automate…
  - the Creation of Danger Zones
- Reduce….
  - Required land for training operations
- Improve…
  - the design of the ranges
- Implementation
  - So how does the Marine Corps implement?

What is a Danger Zone?

- Unsafe Areas
- Can be hand drawn

Automate:
Remove Human Error

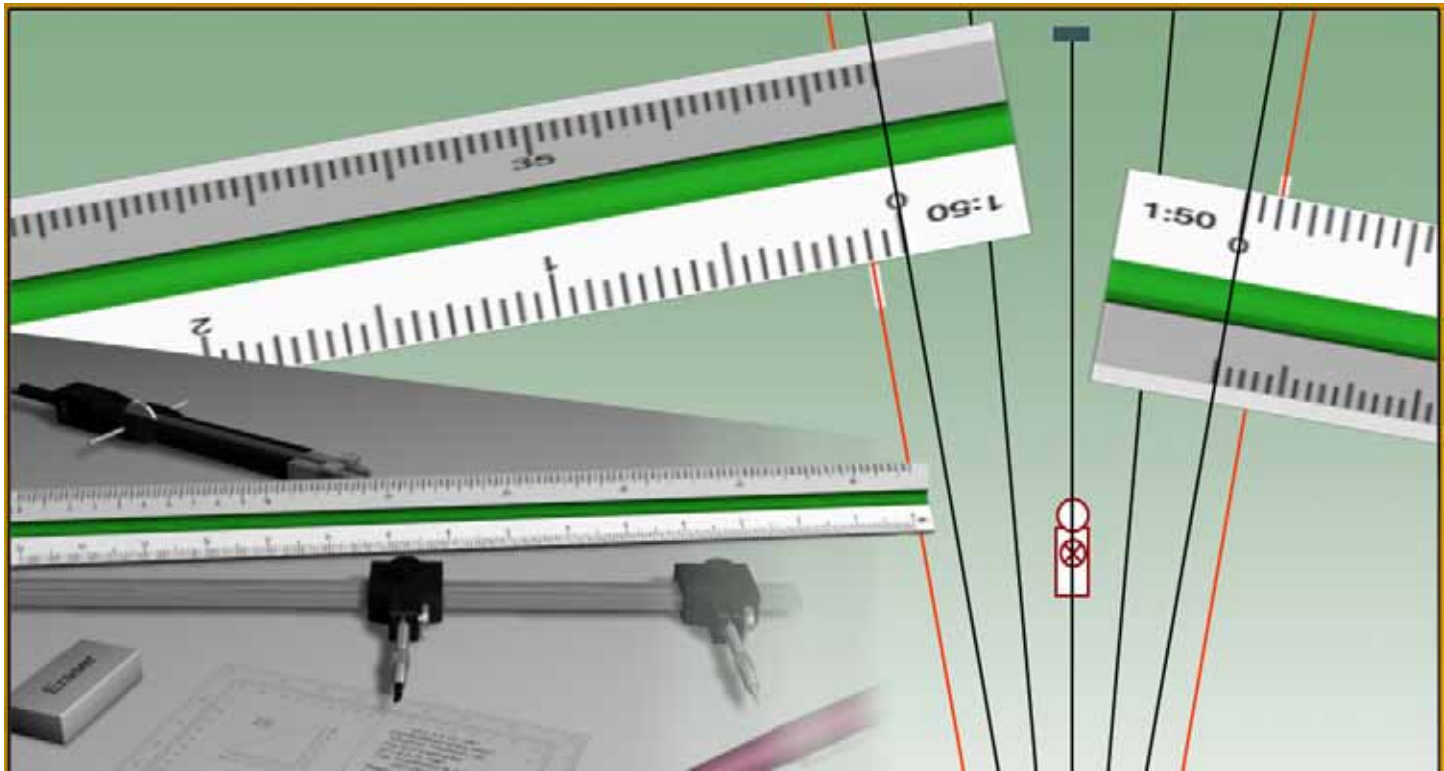
- SDZ Tool: What does it do and how is it better
  - Exact SDZs
  - Software Updates

Automate:
Remove Human Error

- ETR Tool: What does it do and how is it better?
  - Exact Calculations

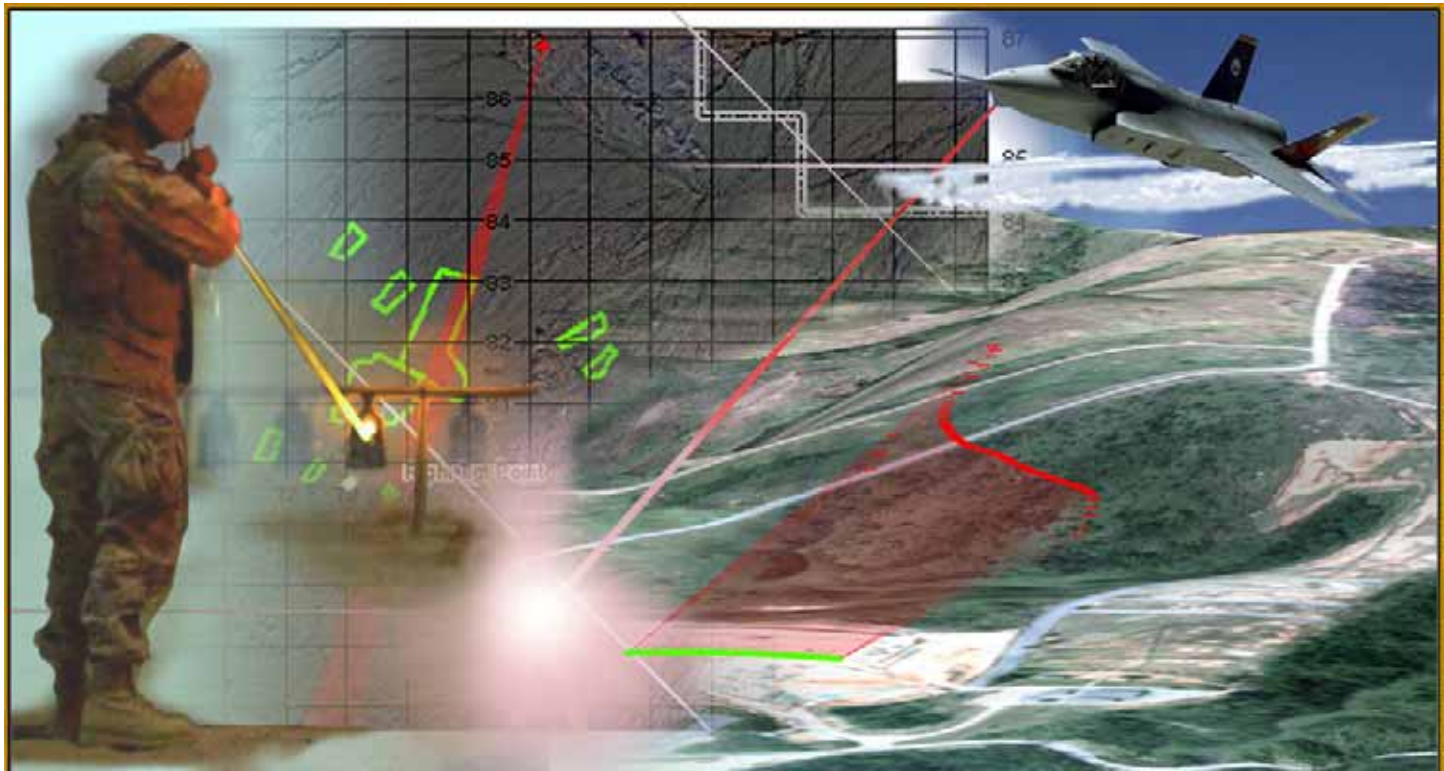
Automate:
Remove Subjectivity

- The RMTK removes the practice of “Rounding Safe” and replaces it with accuracy



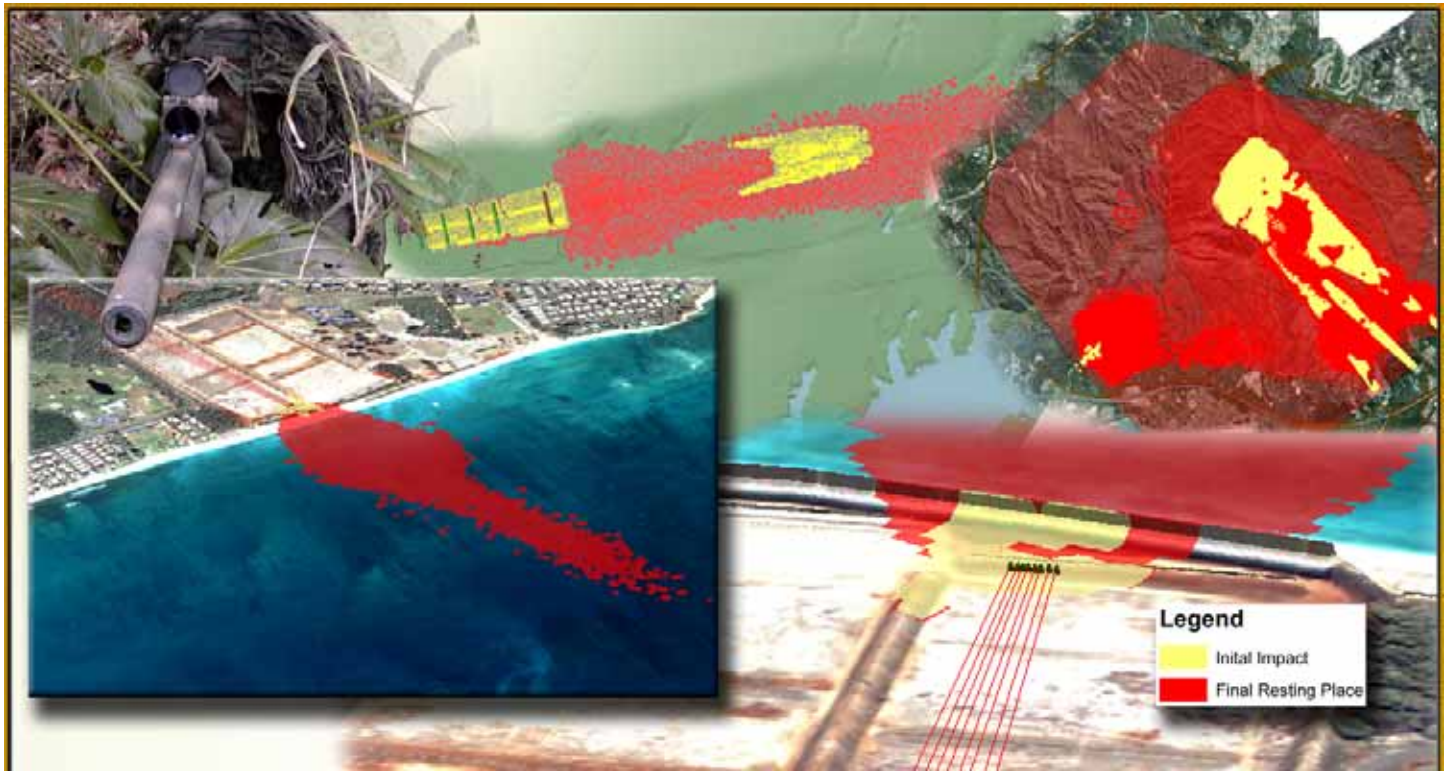
Automate: Remove Subjectivity

- LRM Tool: A clear picture of a Laser Surface Danger Zone
  - Capturing emergent analysis methodologies



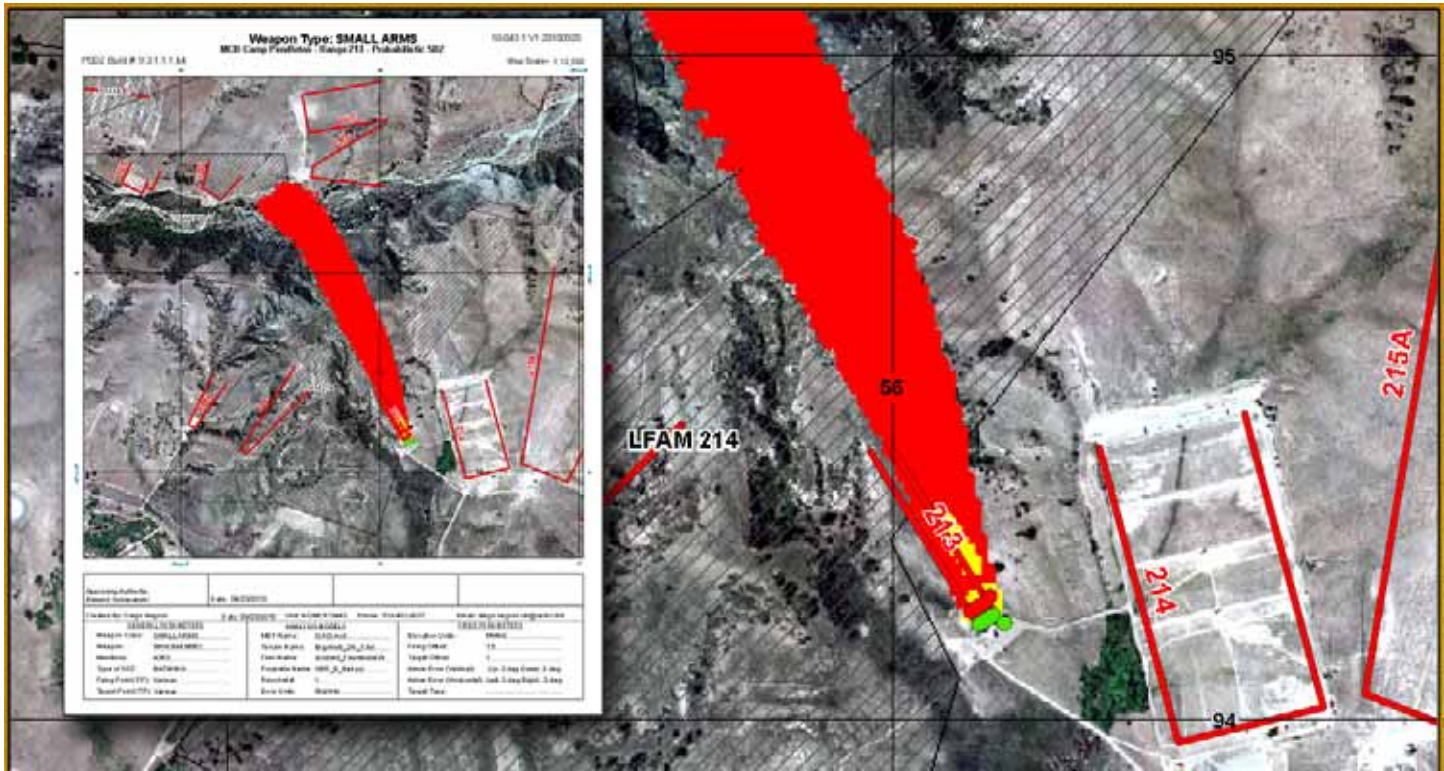
Reduce:
PSDZ Tool

- Deterministic vs. Probabilistic model



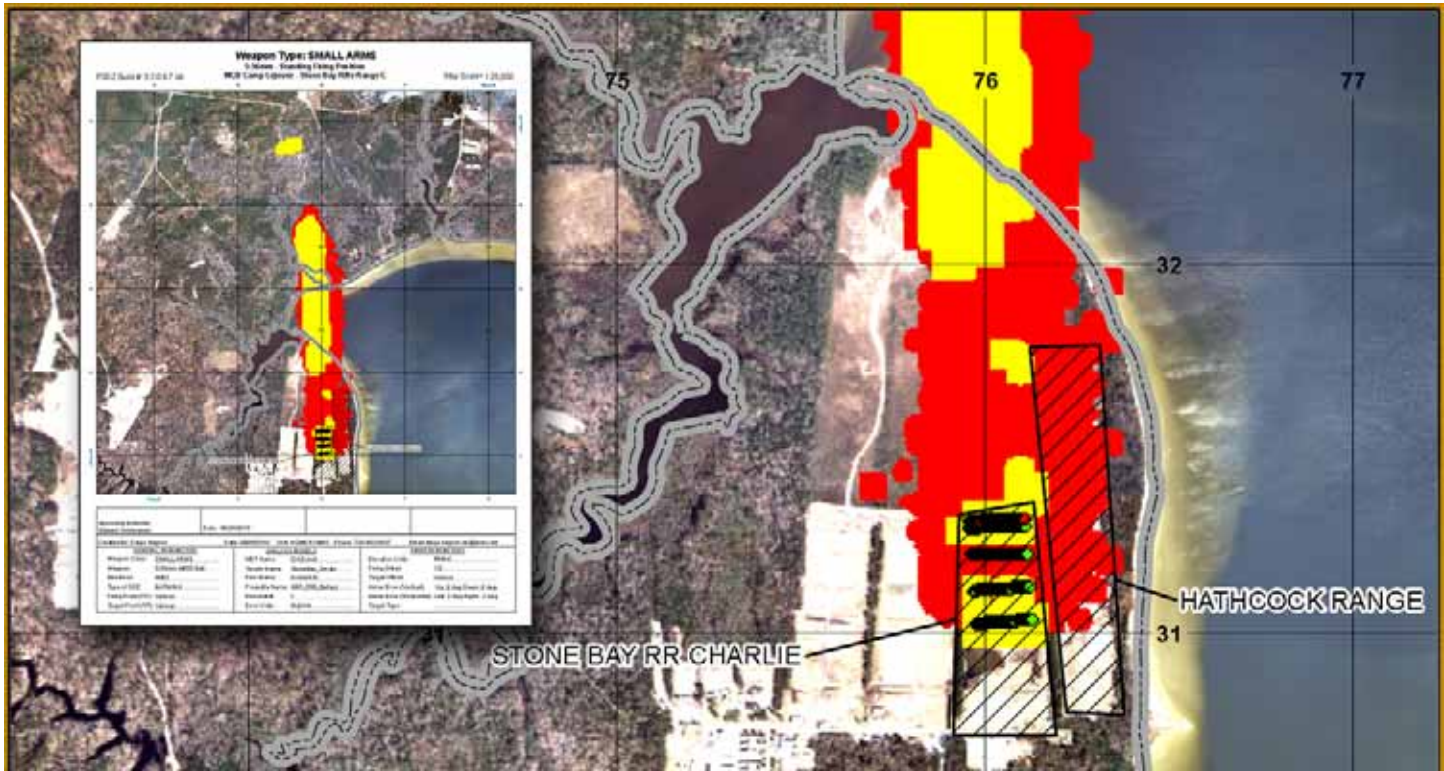
Reduce:
PSDZ Tool

- The end result….Case studies
  - Camp Pendleton: R213 – Sometimes it works



Reduce:
PSDZ Tool

- The end result….Case studies
  - Camp Lejeune: Range C – Sometimes it does not

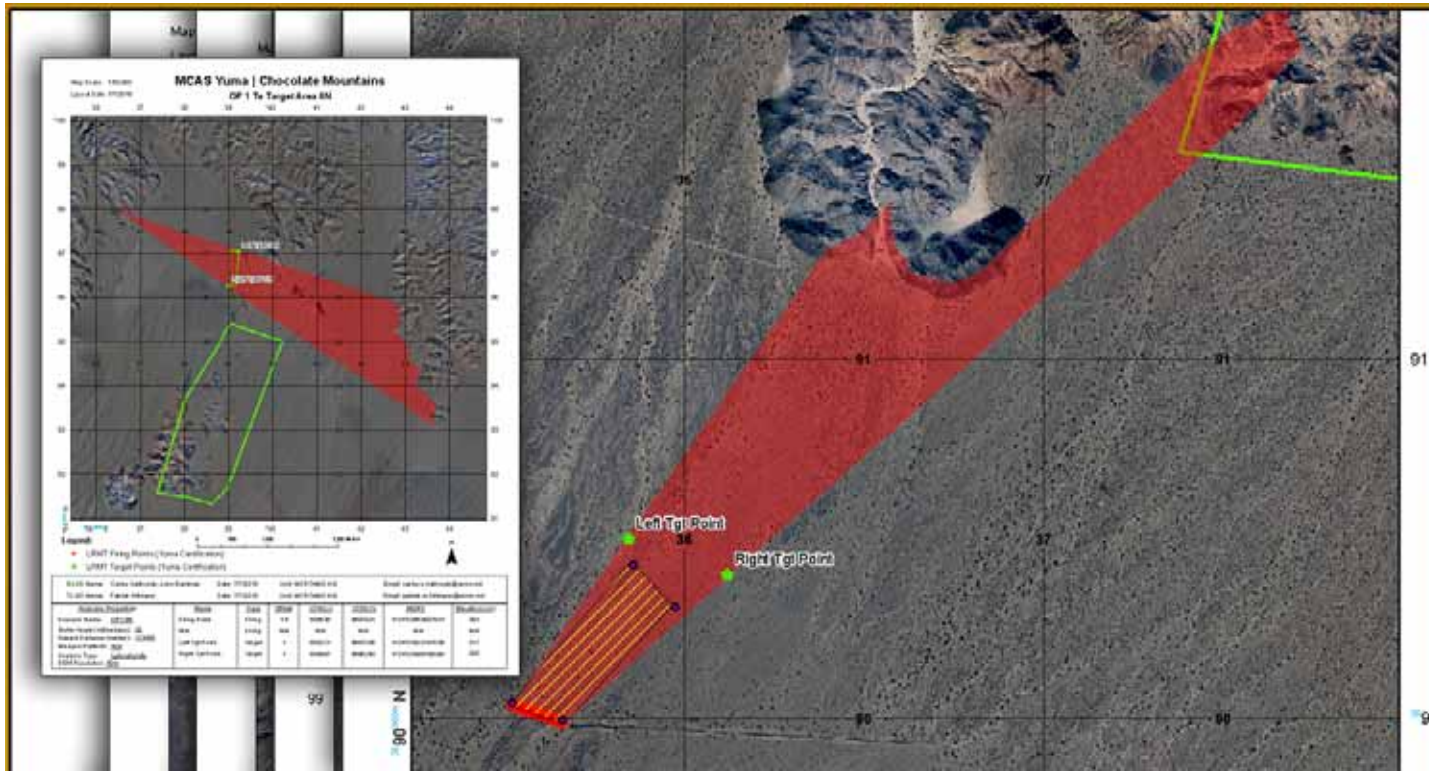


Reduce:
LRM Tool

- Hazards from lasers?

Reduce:
LRM Tool

- Using terrain to truncate the NOHD
  - Analysis
  - Case Study: Yuma

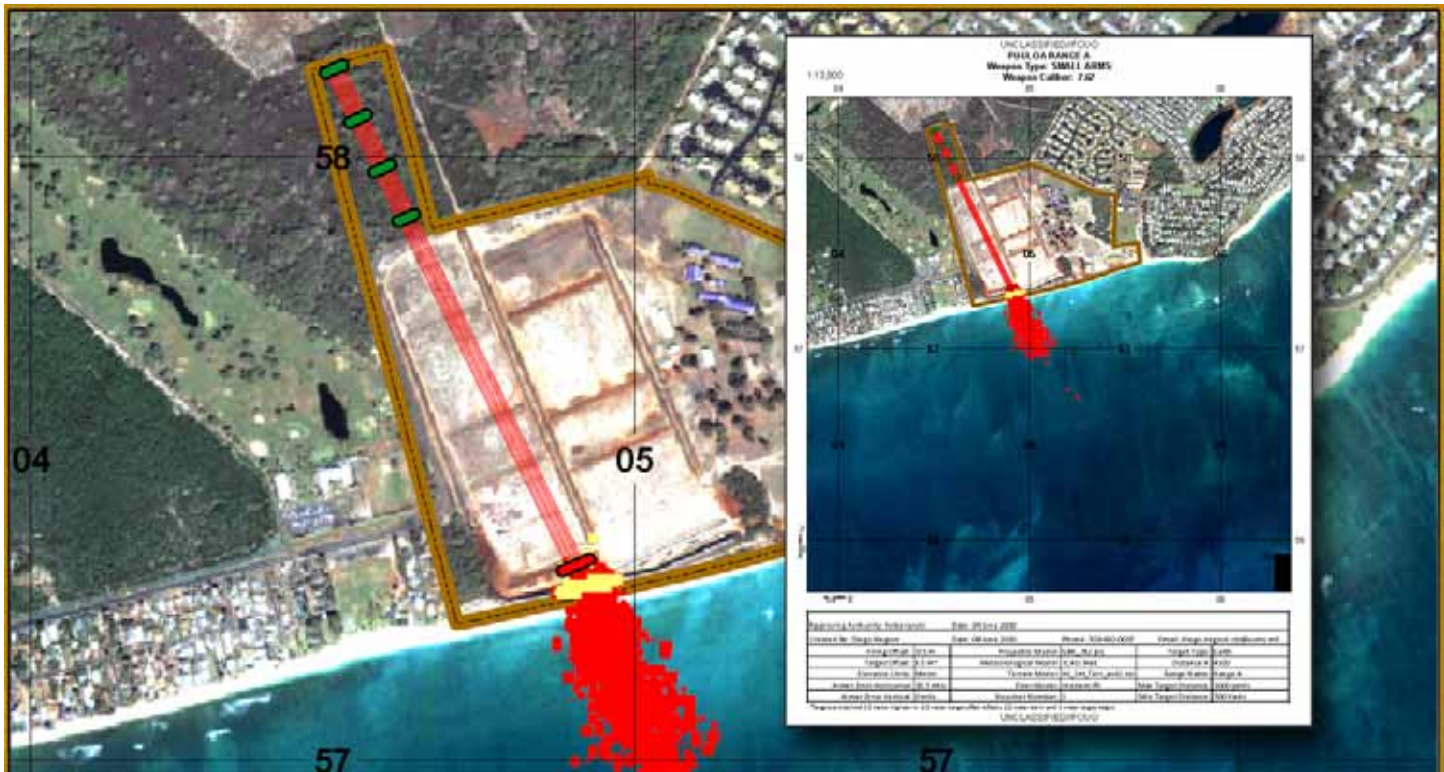


Reduce:
WDZ Tool

- Max Energy Footprints

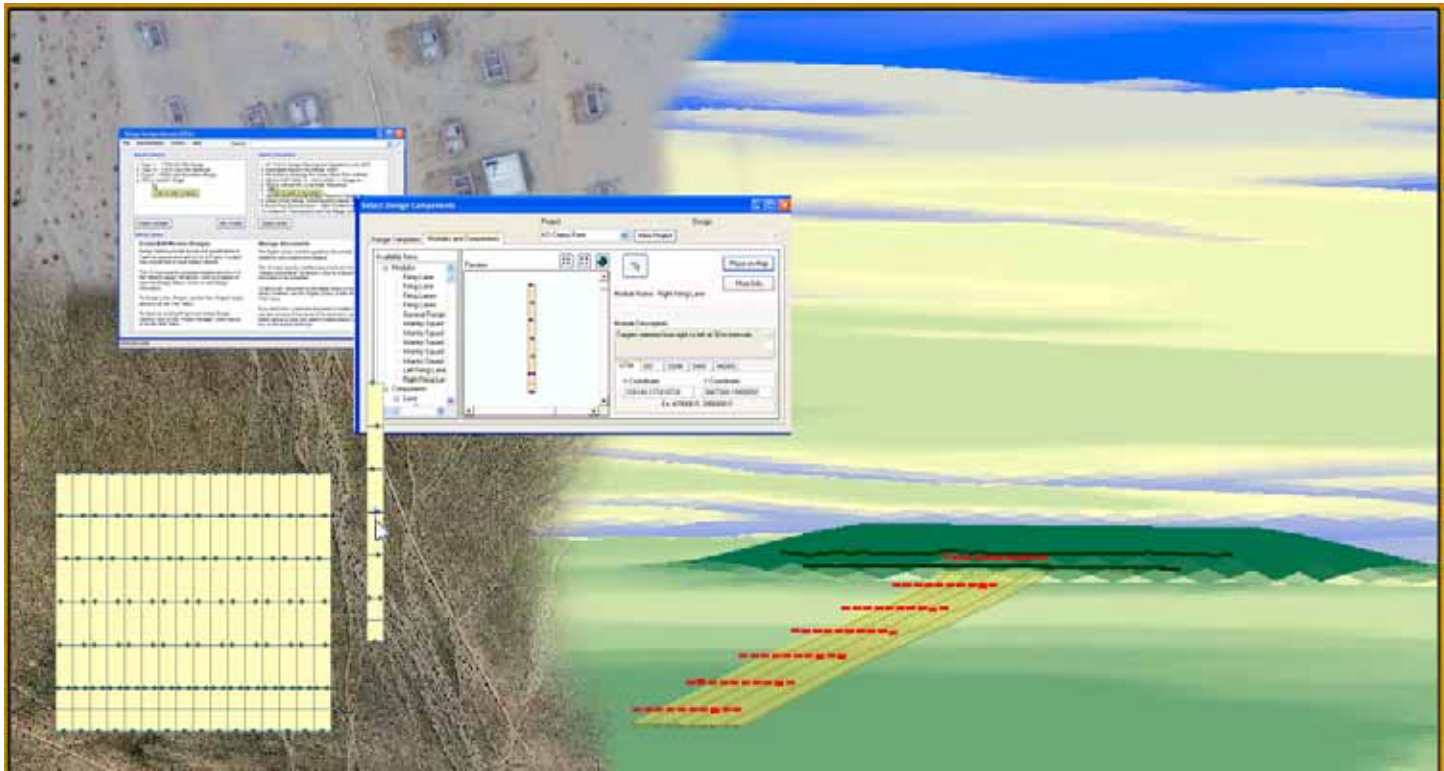
Improve:
Real Estate

- PSDZ Case study: Hawaii



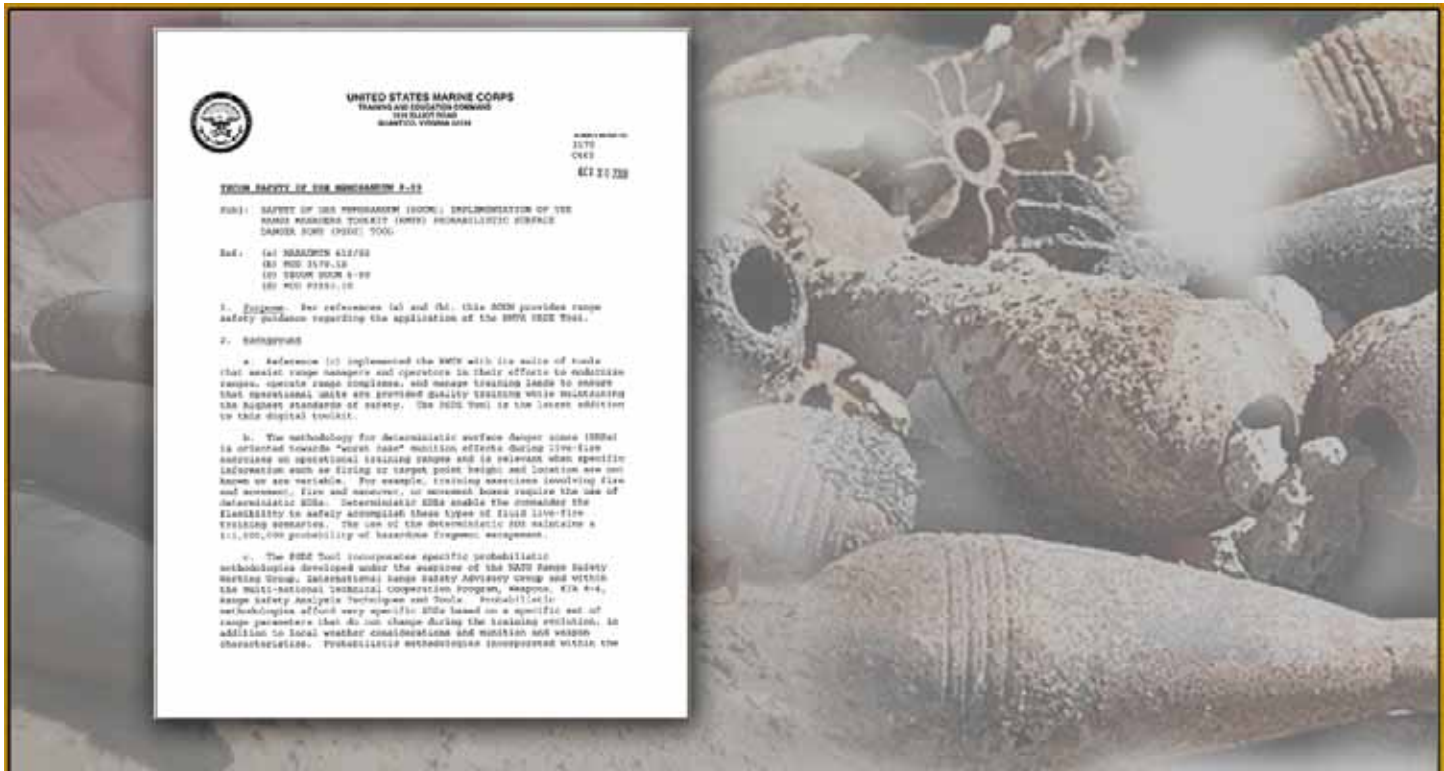
Improve:
RD Tool

- Prefabricated ranges
  - To use as are…
  - …or to piecemeal.



Implement: SOUMS

- A Quick action
  - Quickly distributed
  - Quickly updated



Implement:
Site Visits

- Ensuring Use and Usability

Implement: Providing HW/SW

- Upgrading and Licensing
  - Training
  - Licensing

Questions?