Systems View of Border Risk Management

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Borders are very complex systems
## *They include many elements*

- Checkpoints and open borders

- Land, maritime, and air

- Variety of terrains – mountains, plains, deserts, jungles, glaciers

- Remote, sparsely populated areas and dense residential/commercial areas…including seaports

- Different climatic conditions – rain, snow, dust, heat, cold

Each part of the border system has its own infrastructure, ConOps, lexicon, technologies, and responsible agencies
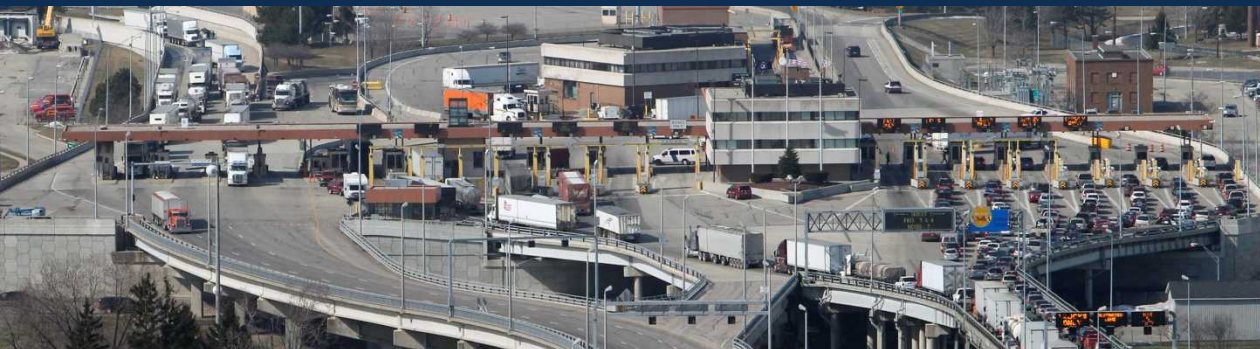
Process to develop a effective border security system

- **What to protect against?**
- **What are the priorities?**
- What is the baseline?
- What is the gap?
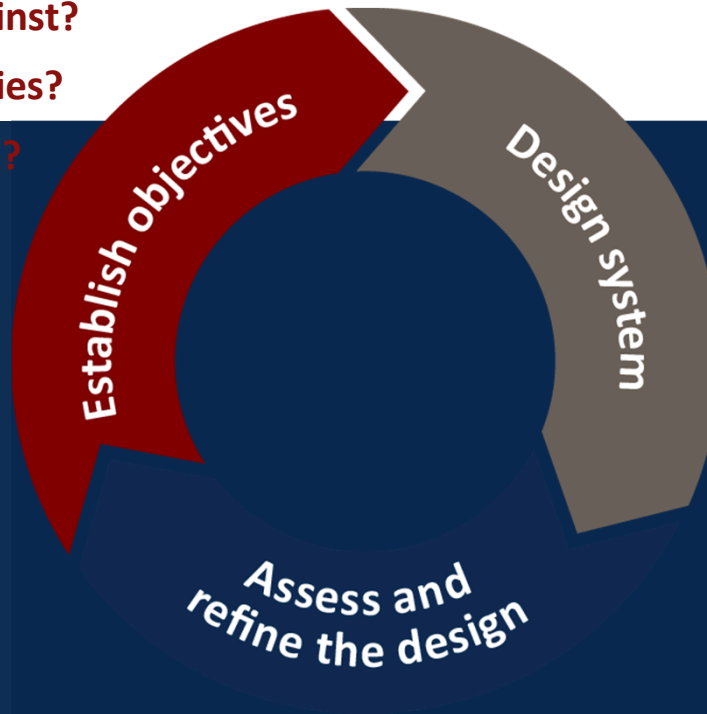
- Detection/Assessment
- Delay
- Response

Establish objectives

Design system

Assess and refine the design

Establishing objectives and priorities for the border system is key

WHAT you are trying accomplish is a key driver for your system:

What are you trying to *enable*?

These goals often conflict with each other

- AND -

*Both the threat environment and the policy requirements change with time*.

What are you trying to *prevent* from moving across the border?

Designing the system

- **Most commonly deployed border security technologies are for detection and assessment**
 - **however delay and response are also required for success of the system**

When considering the technologies to use in the system, other things besides the capability they provide also become important:

- **Interoperability**
- **Maintenance and sustainability needs**
- **What is needed for day-to-day operations versus emergency or surge operations**
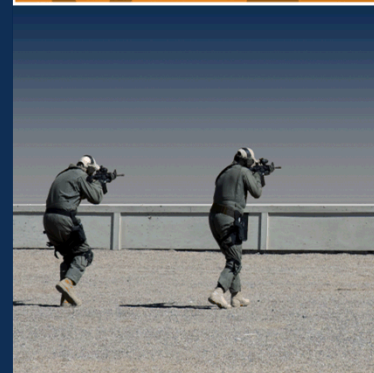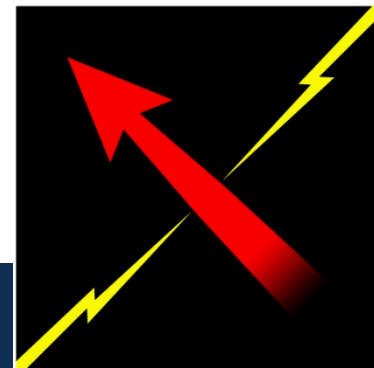
Geospatial modeling tools can assist ground operations

Think broadly about tools you can use to optimize your technology system deployment or to enhance response operations.
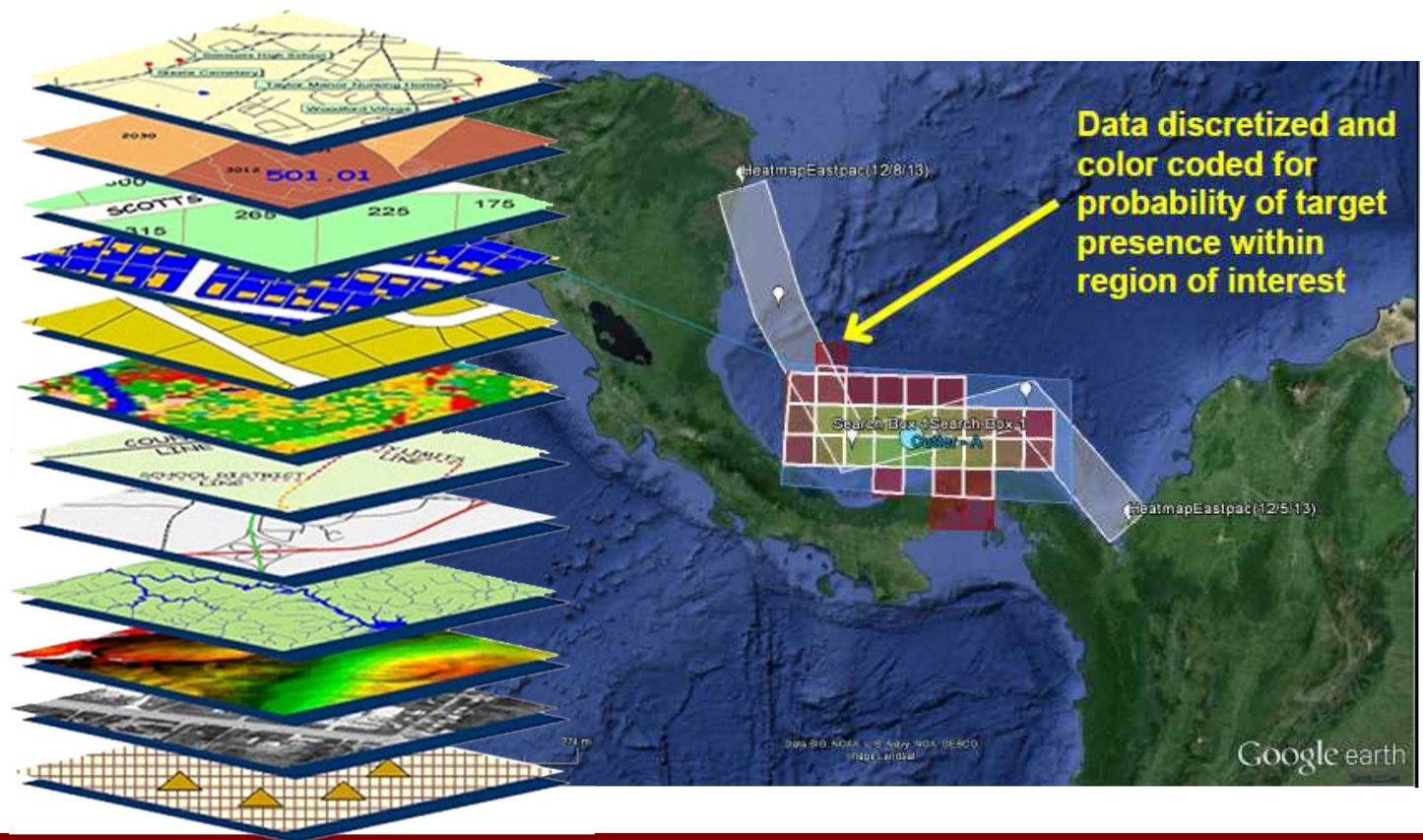
Mobile platforms may increase flexibility and effectiveness

Unmanned Aerial Vehicles (UAV)

US Border Patrol
"Sky Watch"
mobile observation post

Van-mounted optical system

Day / night cameras with high intensity spot light
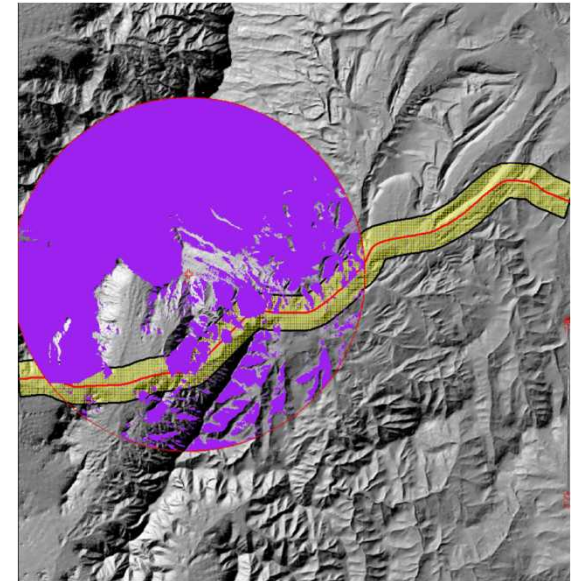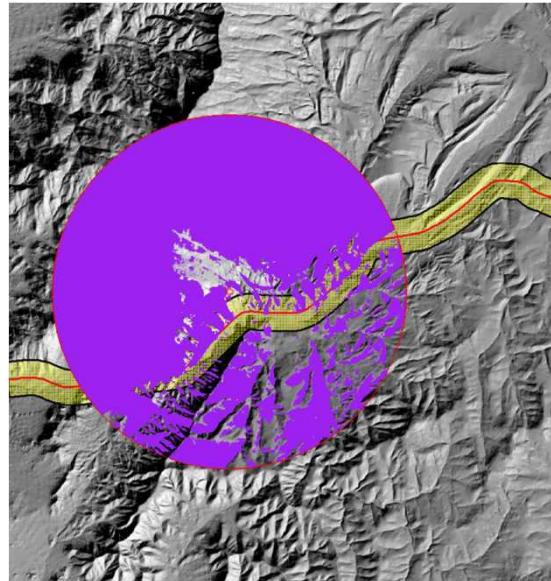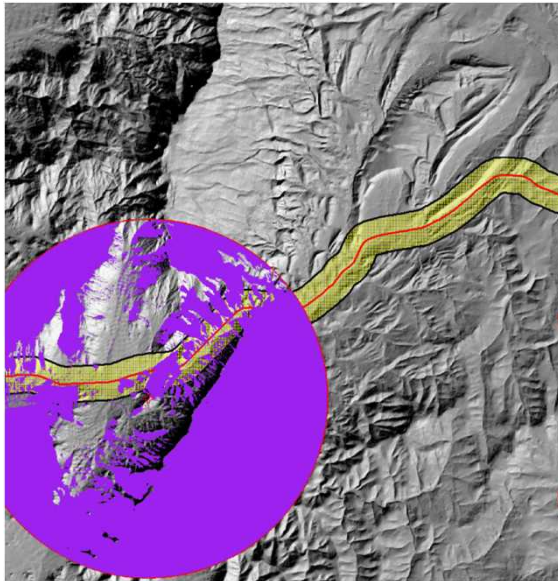
Border security systems

More than technology

- **Most people visualize a border security system as fences, vehicles and sensors.**
- **PEOPLE are still your most important resource and who you hire and how you equip them is what makes the system work.**
  - Recruit, train, and retain the right people
  - Assess and sustain their trustworthiness
  - Keep their skills current - or increase skills through training, exercises
  - Help them work effectively with other organizations
- **Reliable documents are part of the system**
- **Also, the procedures, policies, and concepts of operations drive the systems and are part of the system.**
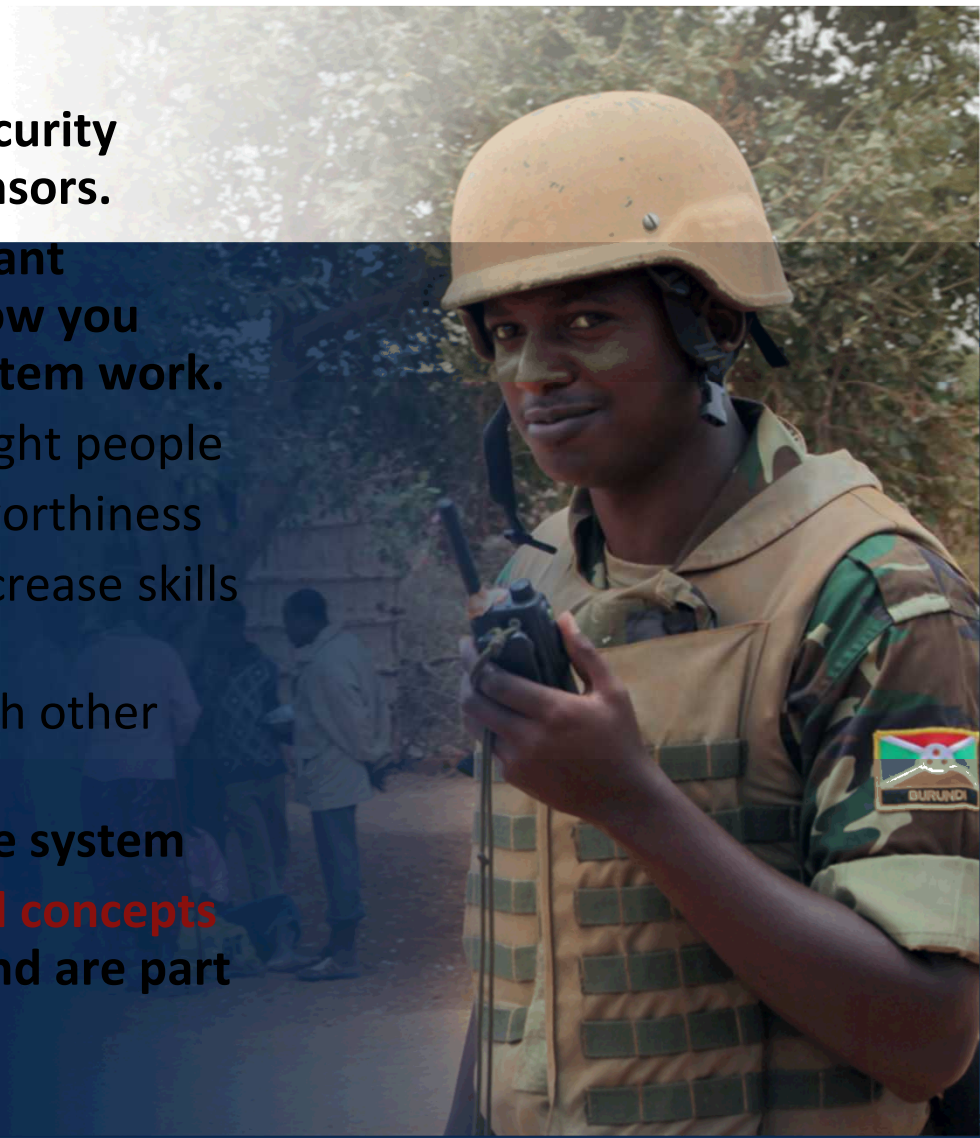
Computer modeling and simulation
Inform and test system design

ViewShed analysis - Purple areas indicate locations calculated where view is blocked by surrounding terrain.

Test Facilities
useful for evaluating technologies and systems

Cooperation can improve border security system effectiveness

Unilateral Monitoring Model	Cooperative Monitoring Model	
Reaction Zone	**Detection Zone**	*INTEGRATED SYSTEM*
Identification Zone	**Identification Zone**	
Detection Zone	**Reaction Zone**	
	Reaction Zone	
	Identification Zone	
	Detection Zone	

Change is the only constant at the border

- Optimize the blend of technologies with your people, the operational environment, and con-ops to meet objectives.

- Leverage information, tools and expertise across agencies.

- Create cross border partnerships.

- Be aware of changes in the border system and your security system.

- Continually validate you are still meeting your objectives.

Thank you