

# Identifying and Prioritizing Conflicting CBP Objectives for Resource Allocation

**Advanced Developments Encompassing Processes and Technologies  
for Customs and Border Protection (CBP-ADEPT-04):  
Case Studies for Enhancing Interdiction of Contraband**

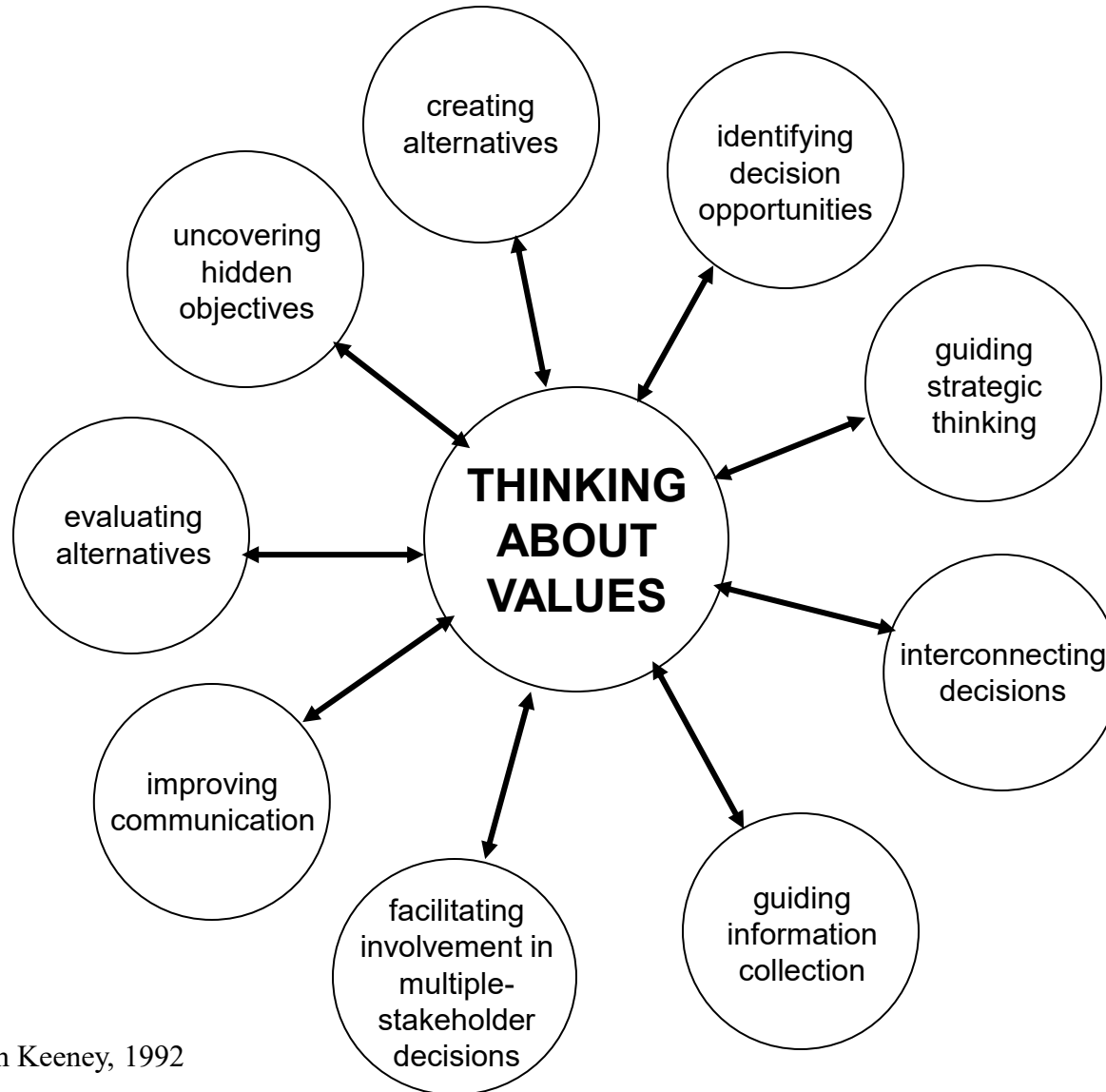
**17-18 August 2022  
Northeastern University, Boston**

**Richard S. John, Ph.D.**  
**University of Southern California**  
**Center for Risk & Economic Analysis of Threats & Emergencies**

# So What? Who Cares?

- Space: Identifying and *Prioritizing CBP Values and Objectives*
- Problems:
  - *Identifying Objectives for specific CBP Missions*
  - *Focusing on What we Care about (Fundamental Objectives)*
  - *Defining Metrics for Measuring Performance*
  - *Specifying Trade-offs among Conflicting Objectives*
- Solutions:
  - *Conduct Value Focused Thinking (VFT) to Identify Fundamental Objectives*
  - *Use Values and Objectives to Construct Creative Solutions*
  - *Explicitly Identify and Estimate Uncertainties*
  - *Explicitly Consider and Quantify Priorities for Conflicting Objectives*
- Results:
  - *Application to Prioritizing CBP Facility Investments for 167 LPOEs (SRA)*
  - *Application to Identify & Quantify Benefits of CBP R&D (Landscape)*
  - *Application to Identify & Quantify R&D Customer Satisfaction for S&T*
  - *Application to Identify Objectives & Quantify Trade-offs for DHS Decisions*
- TRL: 7
- Contact me ([richardj@usc.edu](mailto:richardj@usc.edu), 310-227-6186)

# Benefits of Value-Focused Thinking



# CBP Strategic Resource Assessment (SRA) for LPOEs

## SRA Criteria 2020

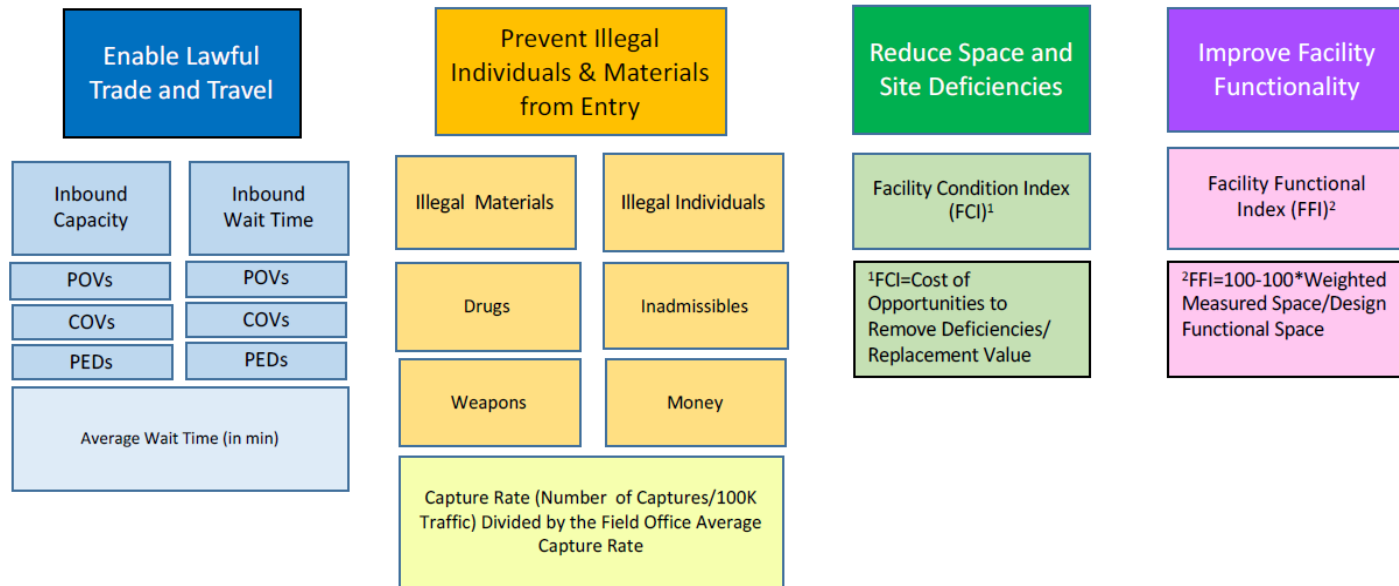


Figure E1: Revised SRA Set of Criteria for Evaluating LPOEs and Crossings

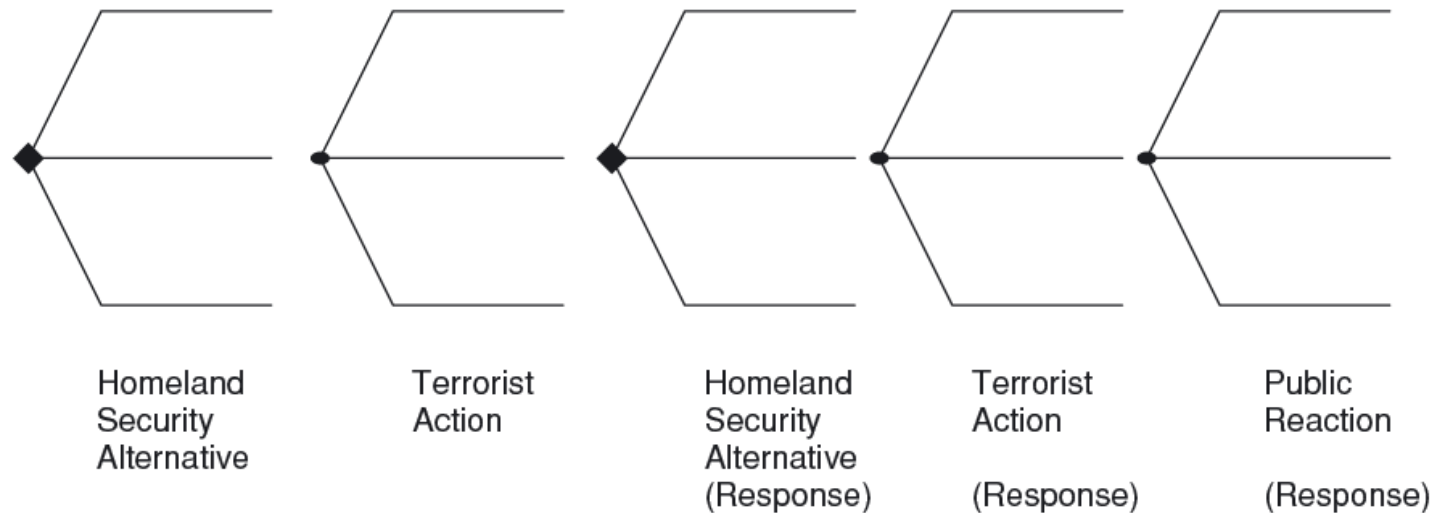
<sup>1</sup>Replacement Value according to TRIRIGA

<sup>2</sup>Design Functional Space is the space required for all functional areas to meet design standards

# The Art of Identifying Objectives

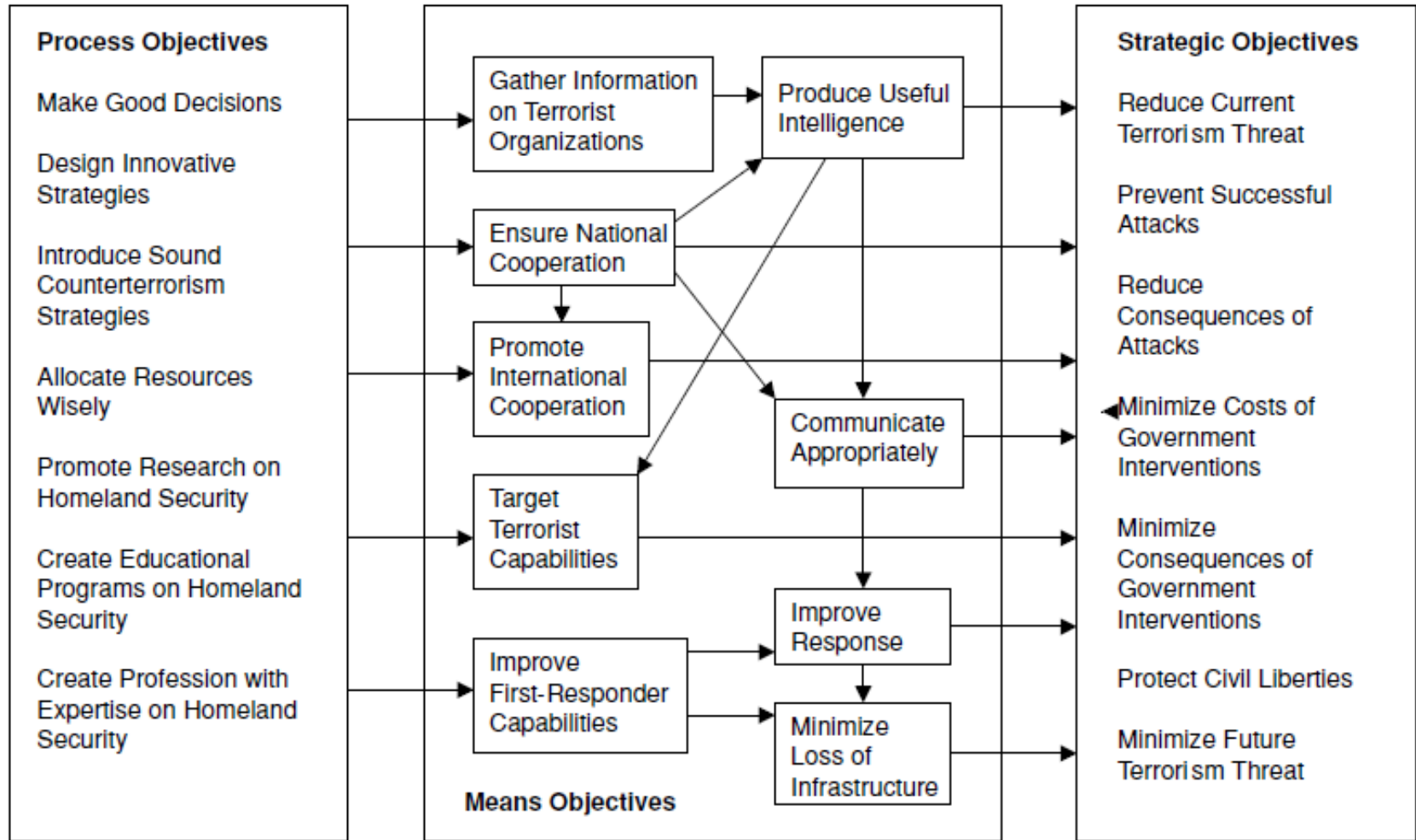
- Step 1: Write down all the concerns you hope to address through your decision
- Step 2: Convert your concerns into succinct objectives
- Step 3: Separate ends from means to establish your fundamental objectives
- Step 4: Clarify what you mean by each objective
- Step 5: Test your objectives to see if they capture your interests

# DHS Decision Problem Template



**Fig. 1.** Decisions of homeland security with terrorist and public action.

# Homeland Security Means-Ends Objectives Network



Keeney, R. L., & Von Winterfeldt, D. (2011). A value model for evaluating homeland security decisions. *Risk Analysis*, 31(9), 1470-1487.

# Demonstrated Benefits of Value Focused Thinking for CBP Decision Making

- Promotes Creative Problem Solving
  - Alternative Generation follows Identification of Objectives
- Promotes Decision Making for Alternative Scenarios
  - Avoids Assumption Traps (Best Case, Worst Case)
- Promotes Explicit Consideration of Trade-offs
  - Avoids Blinding of Inconvenient Objectives
- Promotes Input from Multiple Stakeholders
  - Helps Identify Sources of Agreement and Disagreement
- Provides a Rationale for the Decision
- Promotes Clear Communication about the Decision Process