

# Use & Non-Use of Decision Analysis in a Major Department of Energy Decision at Hanford

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U.S. Department of Energy  
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# Background

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- 1995 -- DOE Hanford decides to privatize processing of radioactive waste in two-part procurement: Part A -- conceptual design/feasibility; Part B -- provide treatment services through privately financed, constructed, operated, and deactivated (10 - 14 years to treat 10-15% of waste) facility
- 1996 -- two contracts awarded for Part A
- 1998/1999 -- Part A completed and decision to proceed with Part B made

# Part B Decision

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Authorize initiation of Part B, Phase I, based on

- meeting contractual requirements
- providing best value to the Government
- performing services for a reasonable price

DOE may authorize none, one, or two contractors to proceed

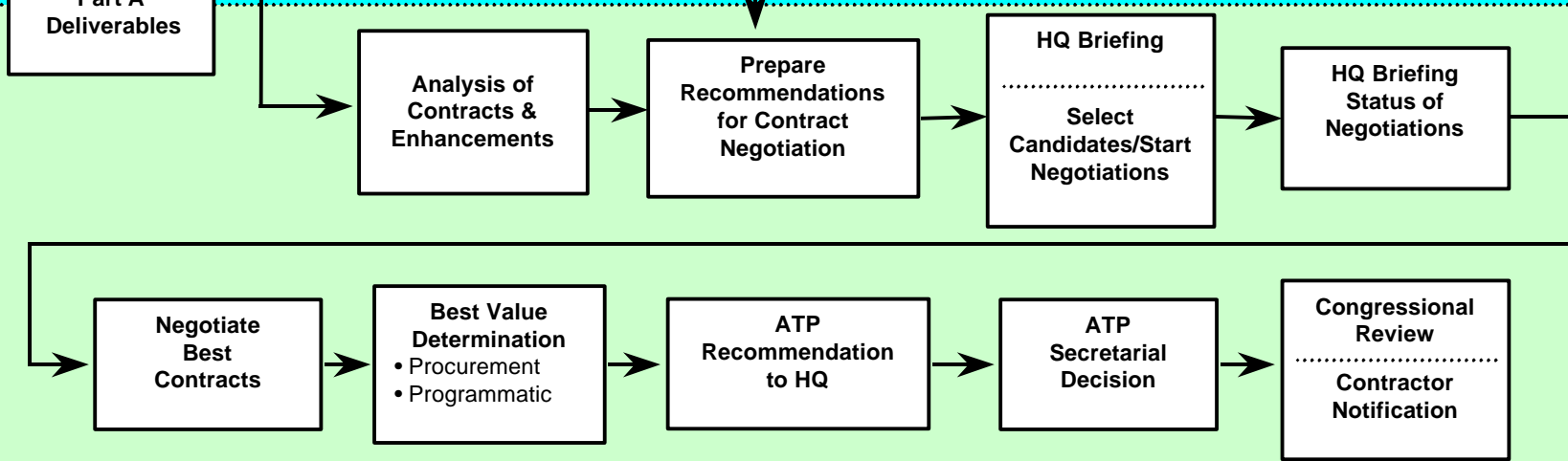
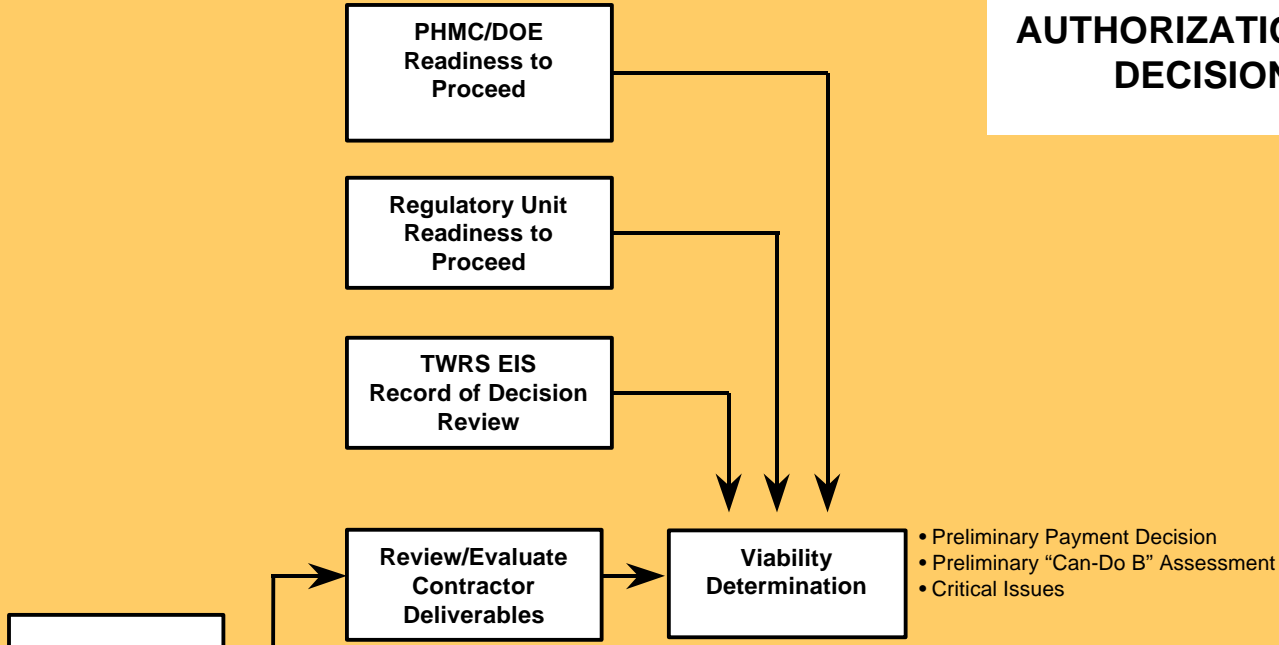
# Use of Decision Analysis

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- Structure/decompose very complex decision
- Use objective/attribute hierarchies to structure evaluation of alternatives and organize information for decision makers
- Focus quantitative analysis on specific issues
- Document and provide basis for decision

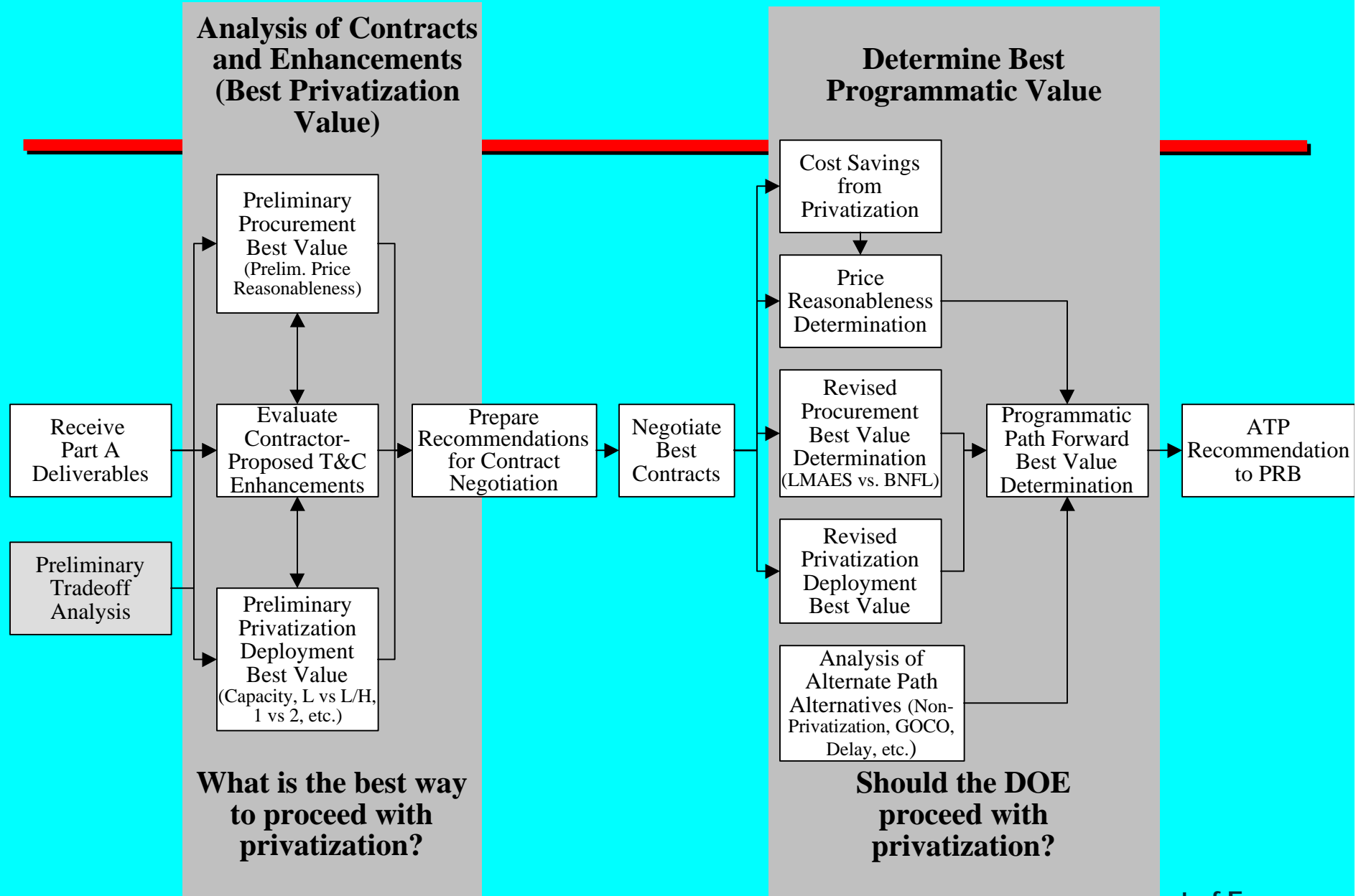
# VIABILITY ASSESSMENT

## TWRS PRIVATIZATION AUTHORIZATION-TO-PROCEED DECISION PROCESS

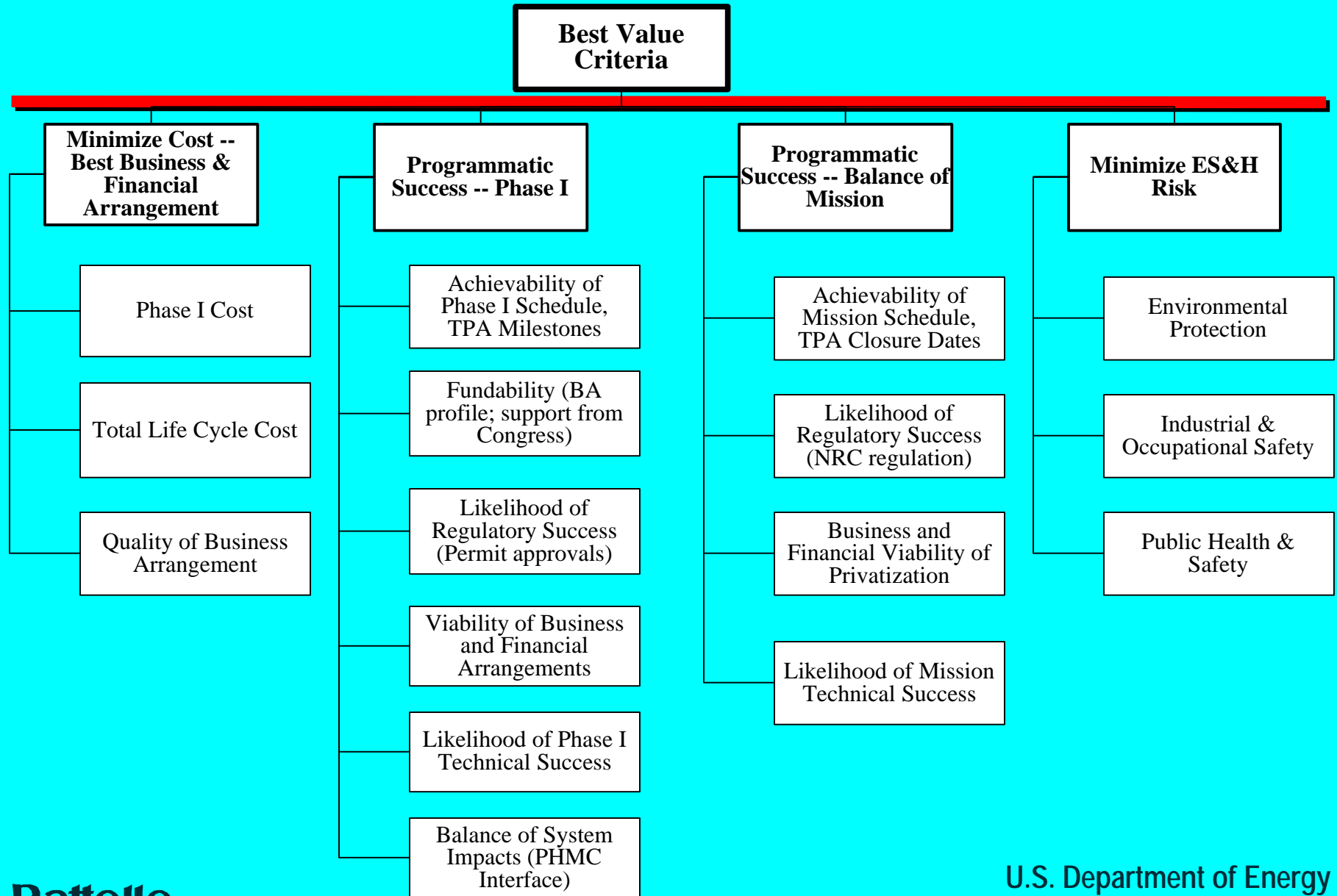


# BEST VALUE ASSESSMENT

# Best Value Assessment Process



# Best Value Objectives and Criteria



# Some Analyses Performed

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- Risk allocation model (with Argonne National Lab)
- Evaluations of
  - proposed enhancements (e.g., capacity, expandability)
  - 1 vs 2 contractors
  - LAW only vs LAW and HLW processing
  - privatization vs non-privatization (e.g., GOCO)

# Experience and Lessons Learned

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- Decision makers valued the structuring, but not particularly quantitative analysis -- “wobble room” was desired
- Qualitative evaluation matrices were a useful tool for organizing and communicating large amounts of detailed information -- using dominance and near-dominance to identify specific tradeoffs
- Decision analysis was greatly appreciated for documenting and justifying decisions

# Current Status

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- DOE proceeded with one contractor for Part "B-1"
- Part "B-1" deliverables received 4/24/00 and are being evaluated
- Proposed cost is too high
- DOE is in the process of deciding how to proceed