

A Perspective on NSF's No Cost Overrun Policy (NCOP)

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- History & Purpose
- Where NSF is today
- Thinking Differently – 2016 Independent NCOP Report



History & Purpose

(LFM Section 4.2.5)

- Dr. Arden Bement; FY 2009 budget request to Congress
 - Adequate contingency to cover all foreseeable risks
 - Any cost increases not covered by contingency accommodated by reductions in scope
 - “...*identify potential mechanisms for offsetting any cost increases in accordance with this policy.*”
- Instills diligence and rigor in establishing the Total Project Cost (TPC)
- Gives NSF a strong oversight position

Management Tool

(Disciplined but flexible)



Where NSF is Today

(LFM Section 4.2.5)

Mechanisms for offsetting any cost increases under NCOP:

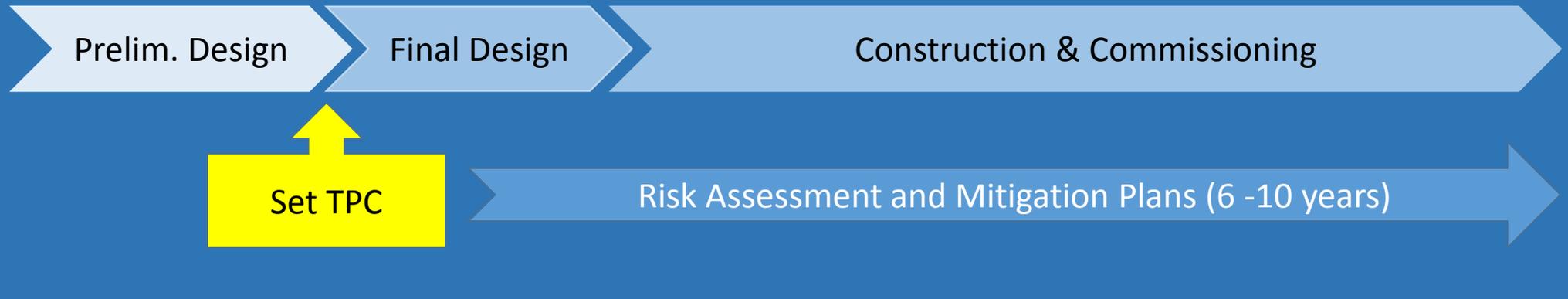


- Risk-adjusted TPC set following Preliminary Design Review (PDR)
- Re-plan staying under authorized TPC
- Use of budget contingency for Recipient-held risks (known-unknowns)
- Scope Management Plan (Risks and Opportunities)
- “Management reserve” for agency-held risks (unknown-unknowns) – if authorized as part of TPC (**Very Rare**)
- Board authorization to increase TPC – Directorate responsible for first 10%
- Request additional appropriations

Routine

Where NSF is Today

The linear Design-Construct process is classic “Waterfall Model” implementation



Once the process proceeds to the next phase, there is no turning back.

Thinking Differently – Learning a Lot

“Design a Little”



“Build a little”

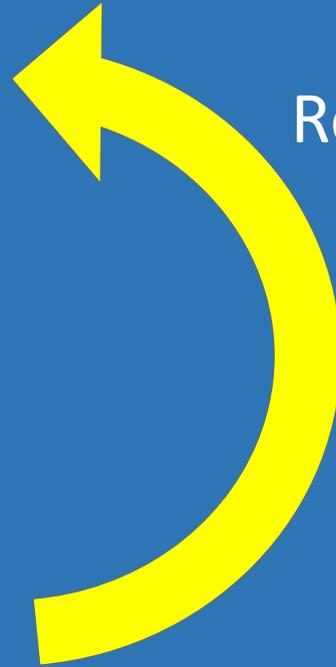


“Test a little”

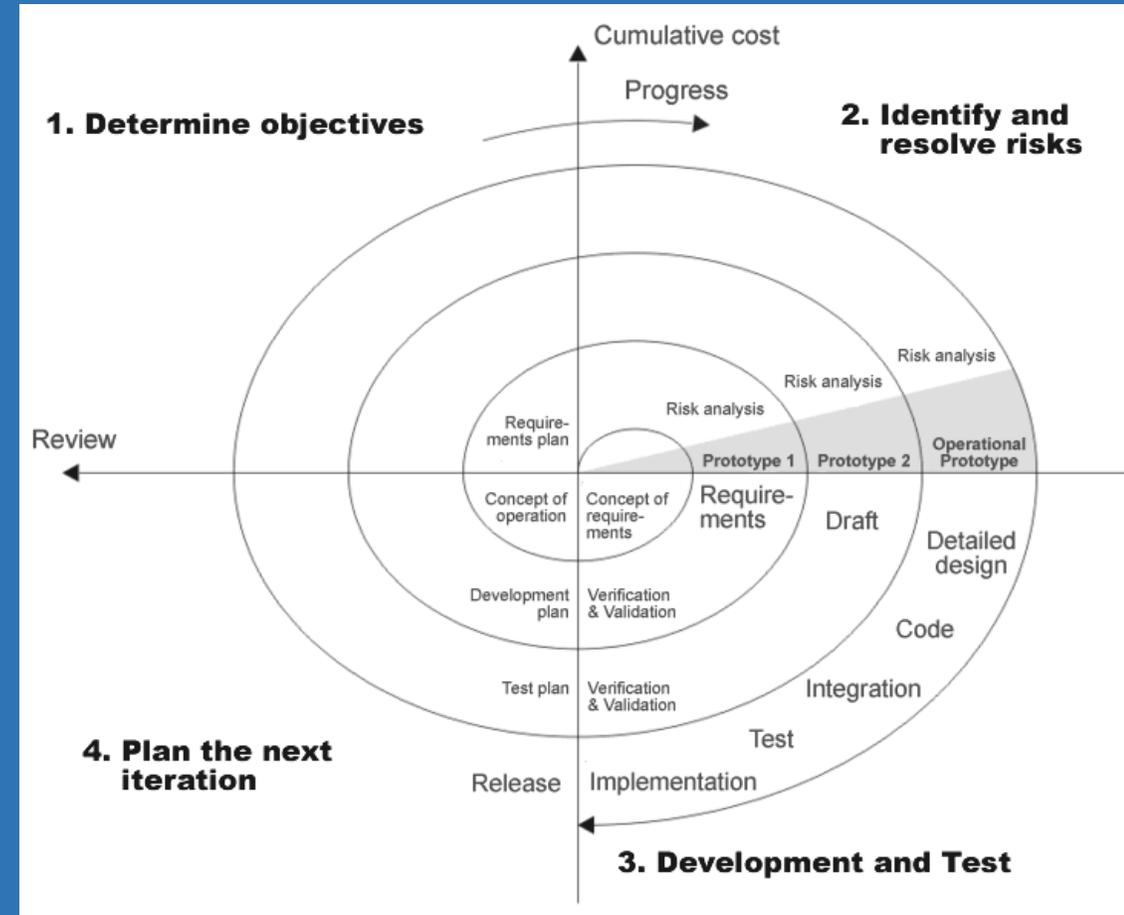


“Use a little”

Repeat!



Boehm, 1988



Thinking Differently - Examples

- Early Agency and Recipient recognition on value of “spiral development” methods for certain applications
 - Risk identification and reduction
 - Shorter timescales between “projects”?
 - Codify in Internal Management Plan (IMP; NSF) and Project Execution Plan (PEP; Recipient)

