What determines whether or not adaptive management programs affect management and policy decisions?

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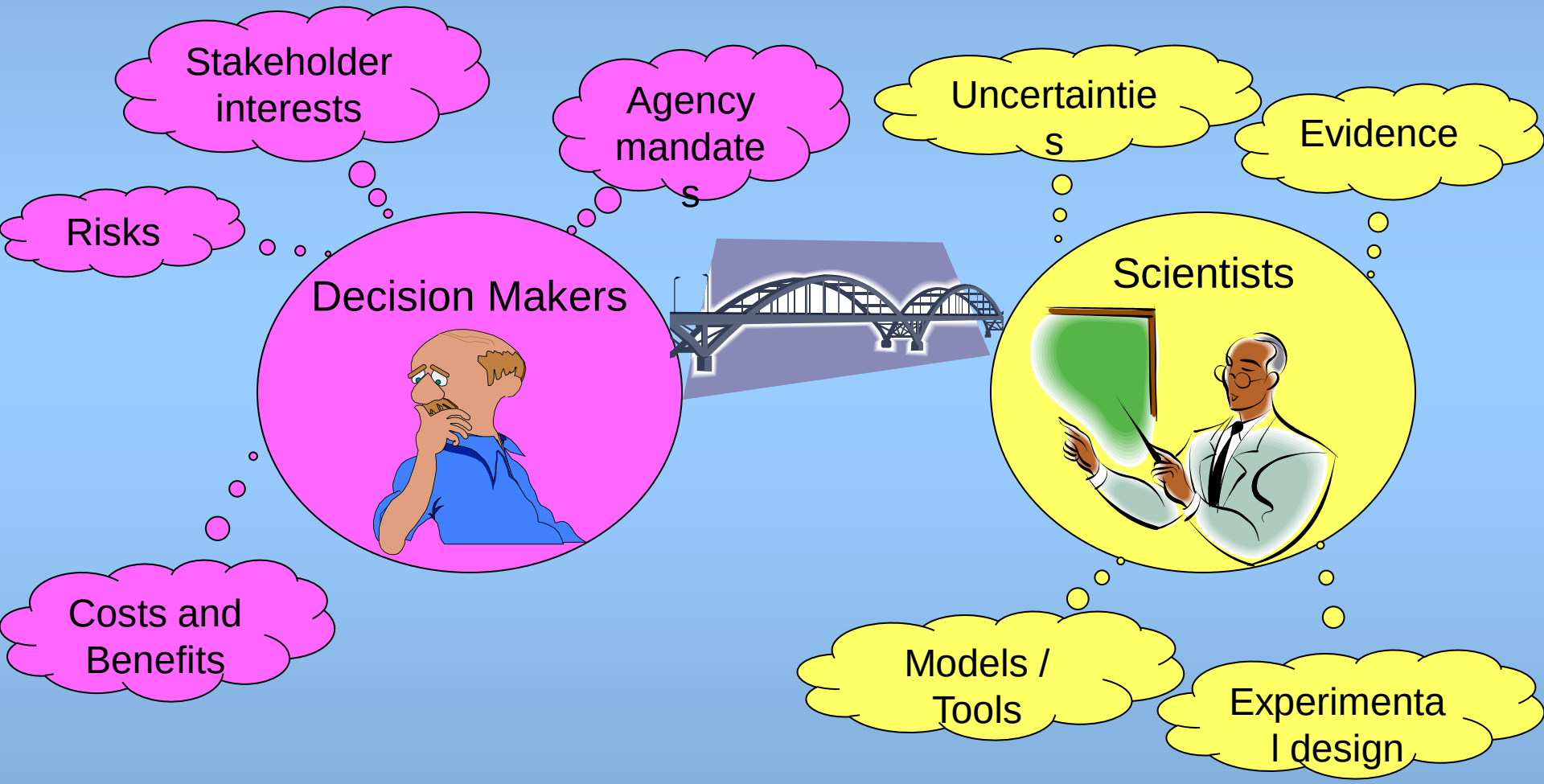
Where our ideas come from

- 2001: workshop on factors which enable / inhibit AM (for U. Washington - *handout*)
- 2006: study of 20 adaptive forest management projects (for NCSSF)
- 1979-2011: Toolbox from various AM projects across North America

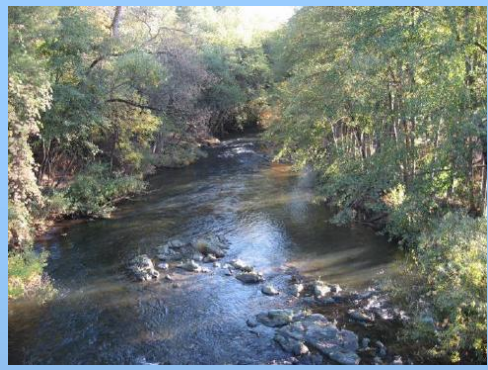
Bridging the decision-science circles in AM projects



The Forest AM Study

Potentially Enabling Factors (from UW workshop)	Forest AM Projects (20)	
	"Success" (14)	"Failure" (6)
Problem Context		
Leadership		
Executive direction ←		
Problem definition		
Communication & Org. Structure		
Community involvement ←		
Planning		
Funding		
Staff Training		
AM Science ←		

Key Factors Enabling AM



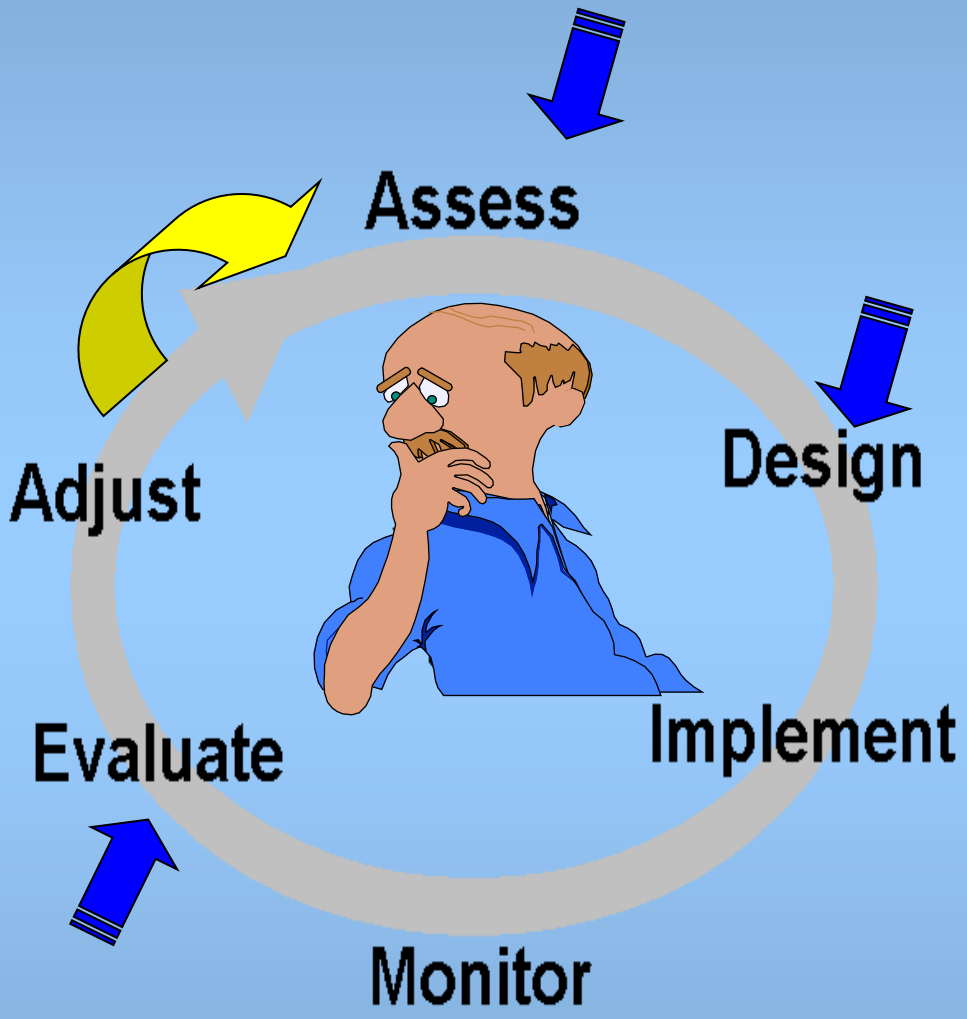
Context – Driving Problem

Leadership
Executive Direction
Problem Definition
Communication
Organizational Structure

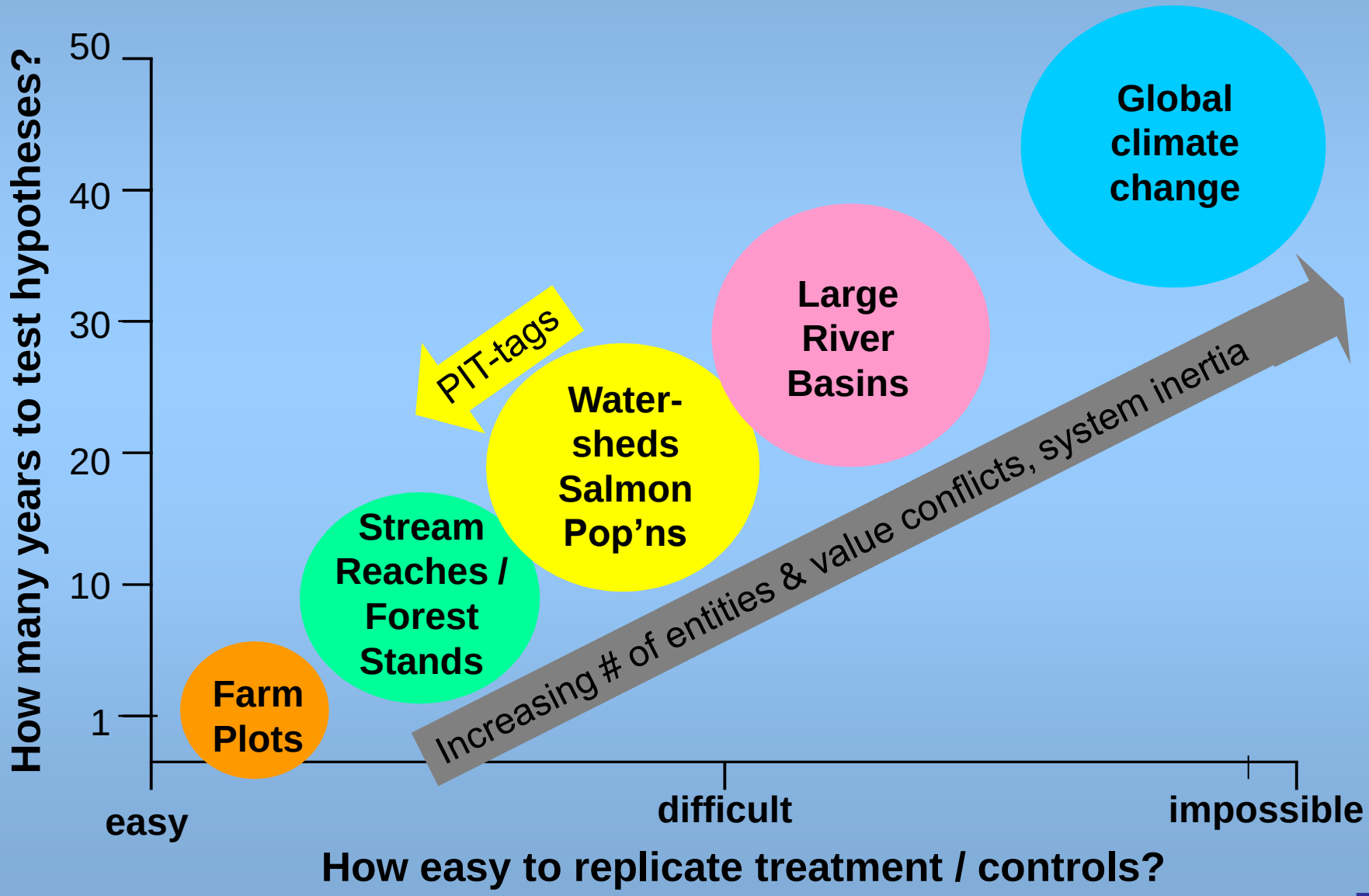
Community Involvement
Planning
Funding
Staff Training
AM Science

ESSA 2006. NCSSF Study

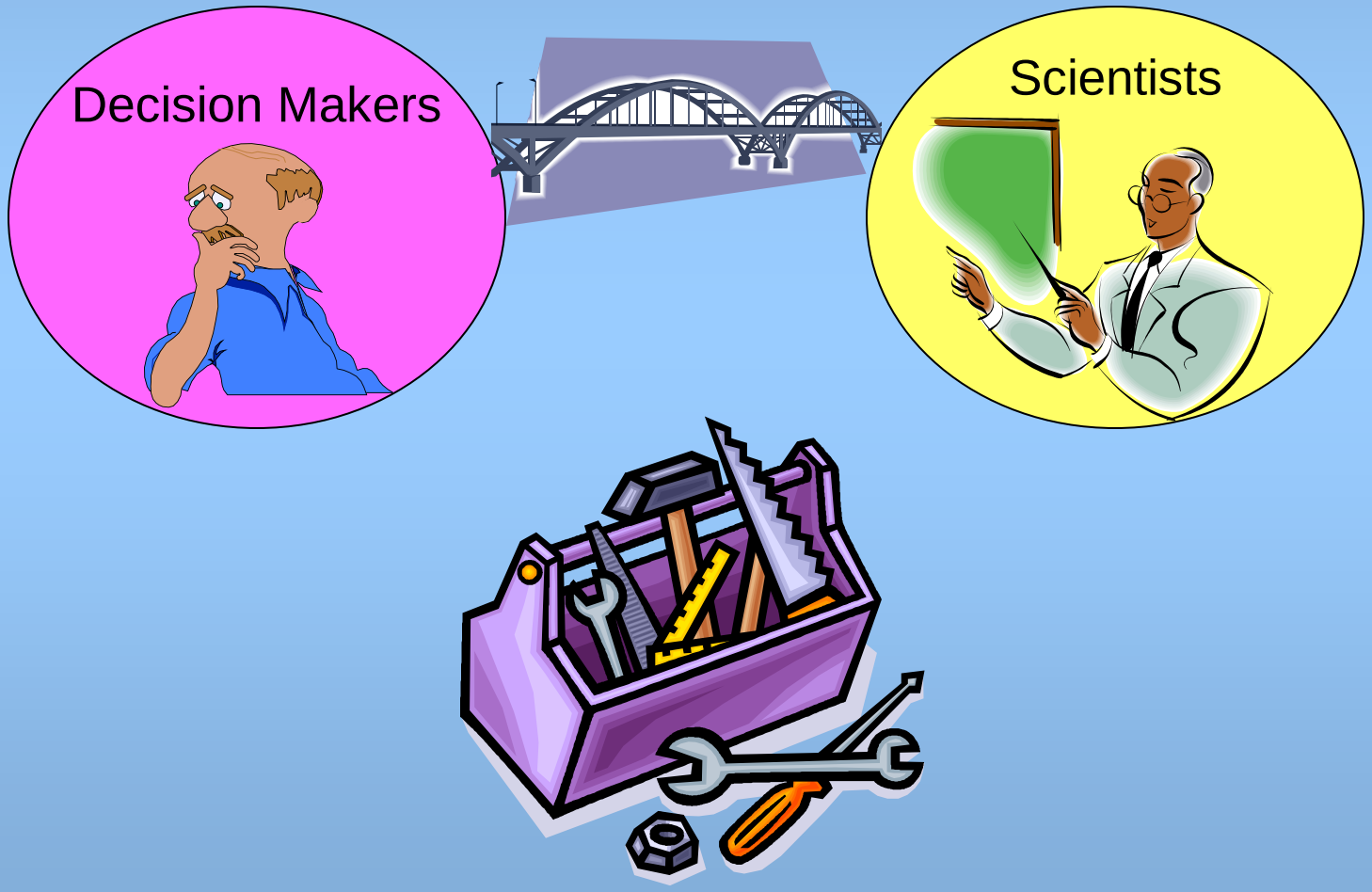
Steps 1-5 set the foundation for Step 6



Feasibility of AM Experiments



5 tools for building bridges



1. Water Use Planning Process

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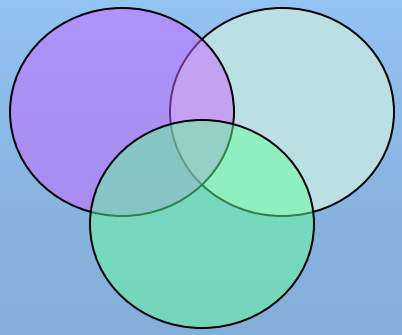
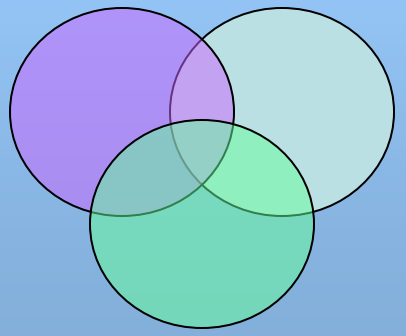
Policy Group

Generate alternative strategies
Review outcomes, tradeoffs
Converge to preferred option

Technical Group

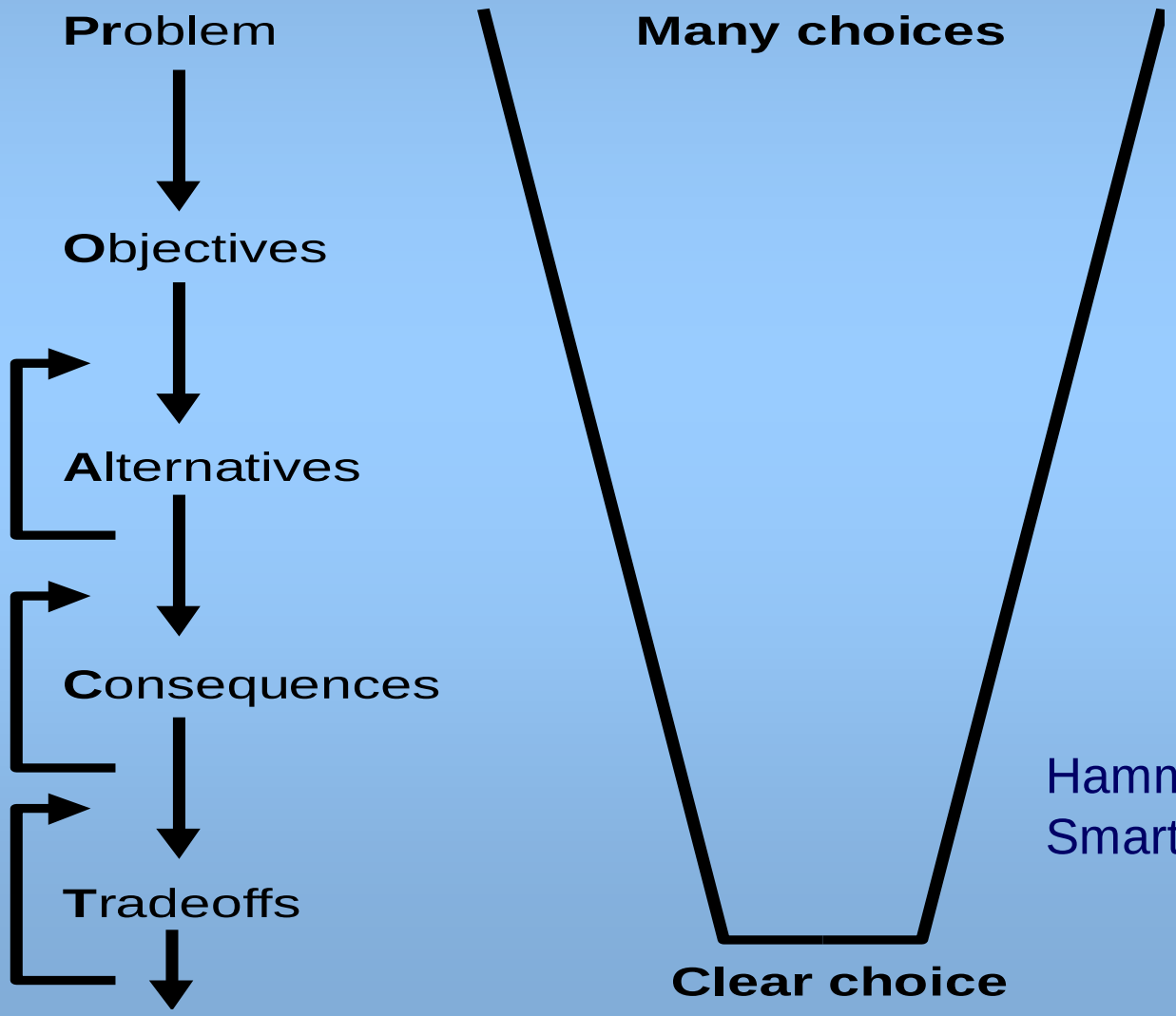
Convert strategies into actions
Simulate actions & outcomes
Summarize tradeoffs





2. Decision Analysis

PrOACT Approach



Hammond et al. 1999. Smart choices.

3. Data Quality Objectives Process

1. State the problem
2. Identify the decision
3. Identify inputs to the decision
4. Define the study boundaries
5. Develop an “if-then” decision rule
6. Specify limits on decision errors
7. Optimize design for obtaining data

Avoid the Path of Endless Questions

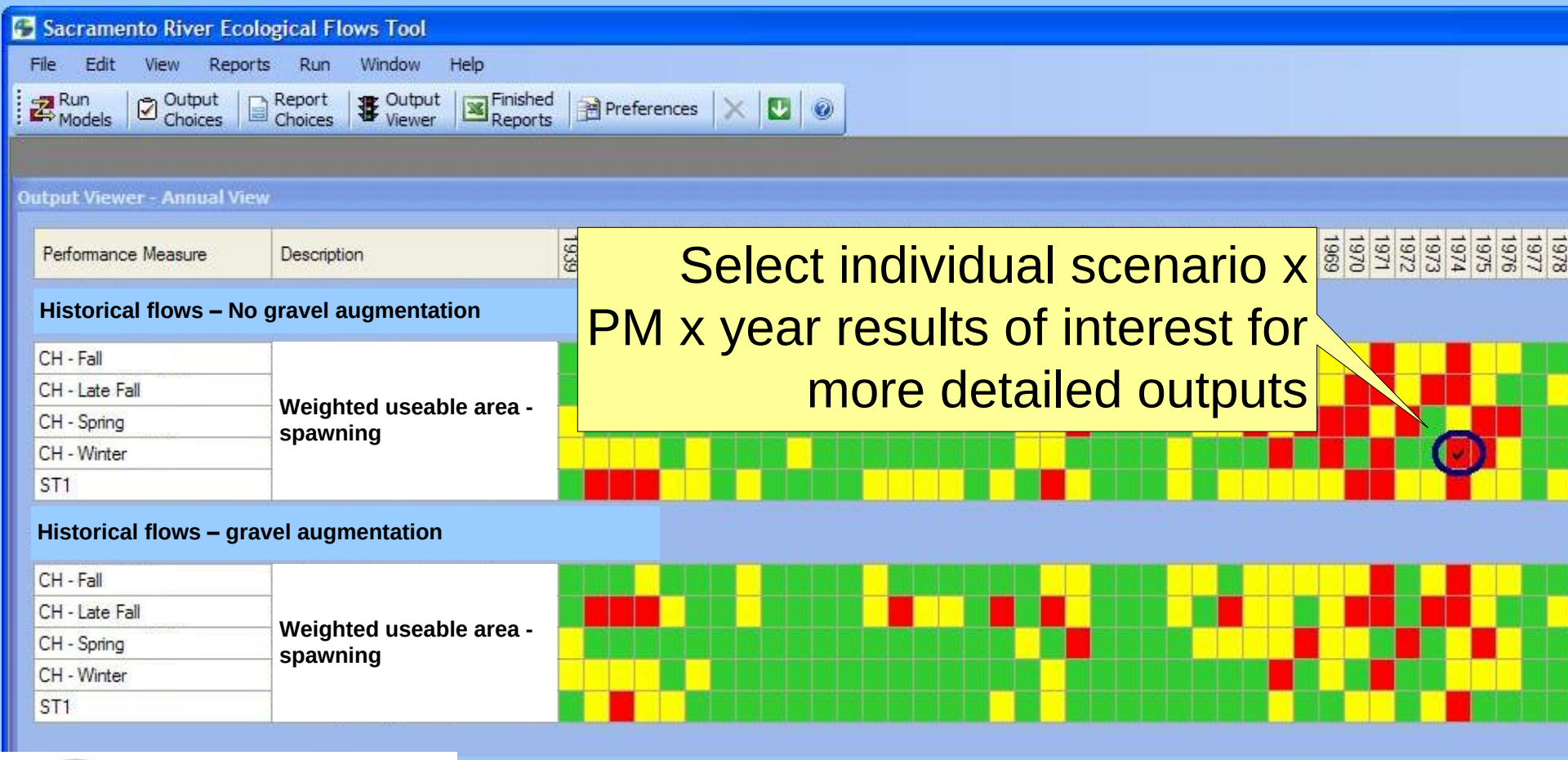
4.Simple Outputs for Managers

Output Viewer - Rollup View

Performance Measure	Description		Multi-Year Rollup	% Poor	% Fair	% Good
Historical flows – No gravel augmentation						
CH - Fall	**Weighted useable area - spawning**	☐		5	39	56
CH - Late Fall		☐		23	32	45
CH - Spring		☐		16	24	60
CH - Winter		☐		12	28	60
ST1		☐		19	40	41
Historical flows – gravel augmentation						
CH - Fall	**Weighted useable area - spawning**	☐		5	32	63
CH - Late Fall		☐		23	26	51
CH - Spring		☐		9	21	70
CH - Winter		☐		7	25	68
ST1		☐		7	19	74

SacEFT
Sacramento River Ecological Flows Tool

But linked to details for scientists…



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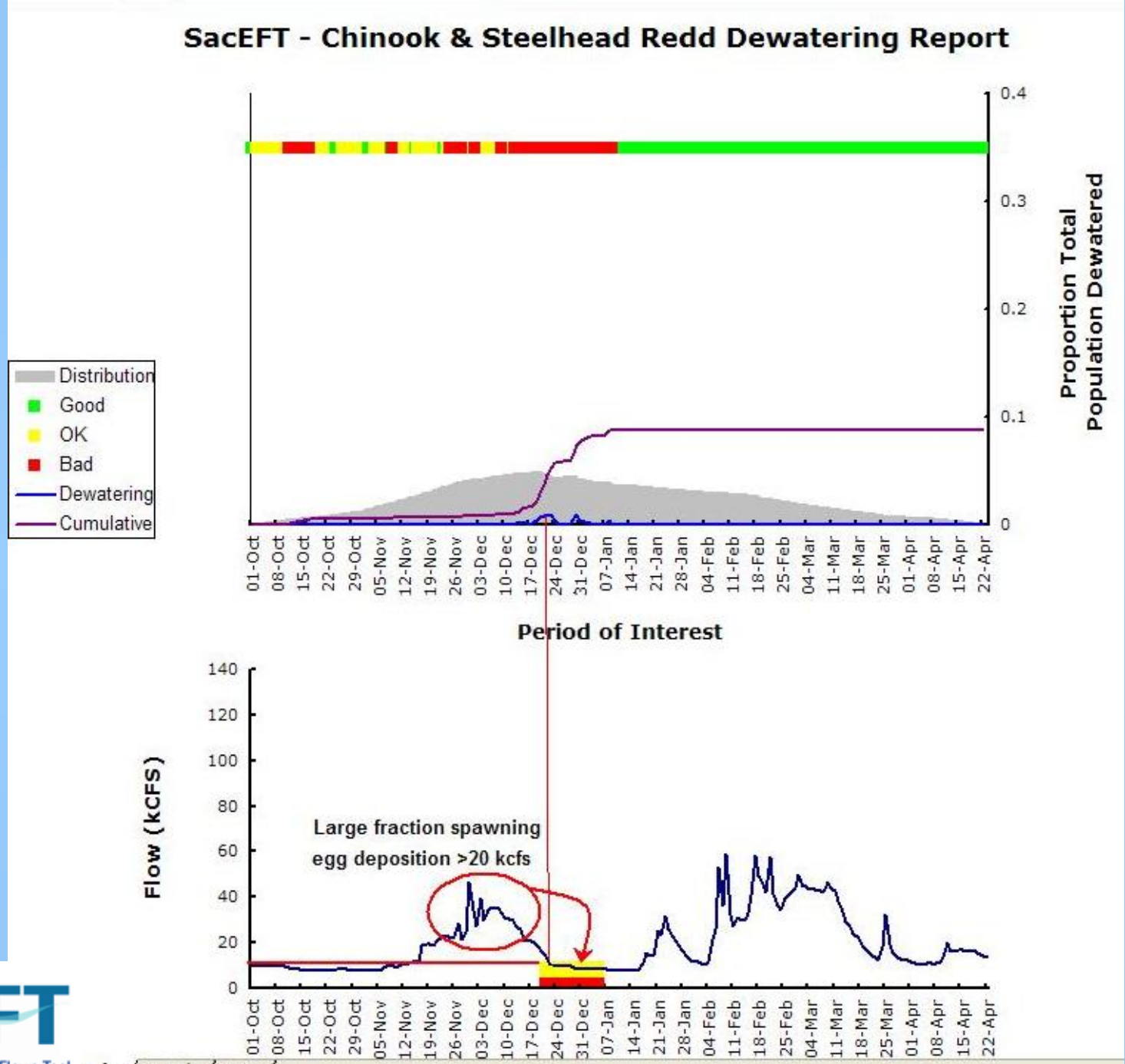
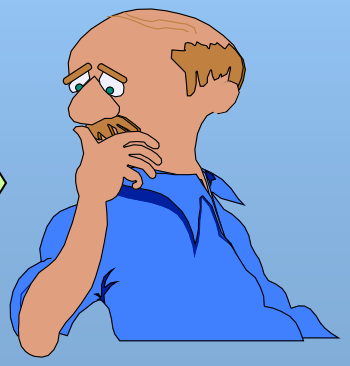
Within-year details in Excel



SacEFT
Sacramento River Ecological Flows Tool

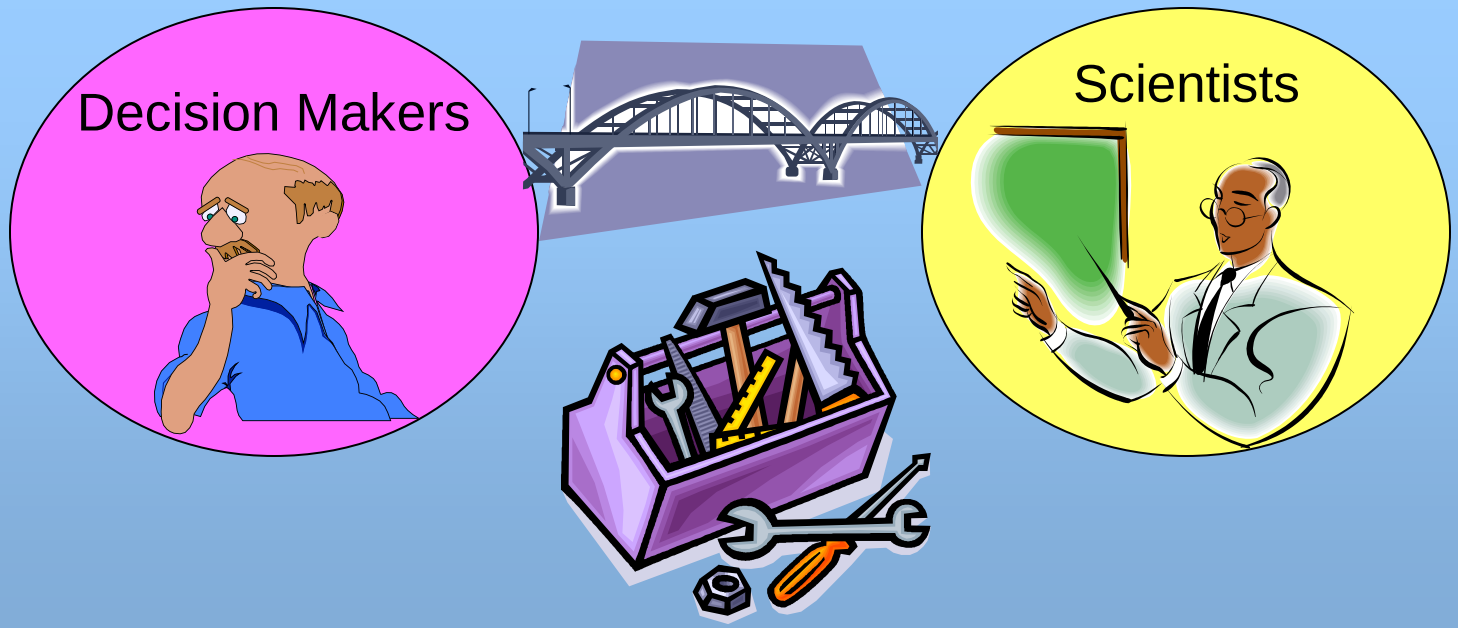
5. Choose the right tools

Problem	Tools
Disagree on desired outcomes, objectives.	**Conflict resolution** through negotiation
*Disagree on **how to** achieve outcomes.*	Science syntheses, research, pilot studies, **adaptive management**.



And finally…

Change occurs when the consequences of retaining the status quo are worse than the consequences of trying something new.




Thanks!