

Conceptual Model of Comprehensive Research Metrics for Improved Human Health and Environment

American Evaluation Association

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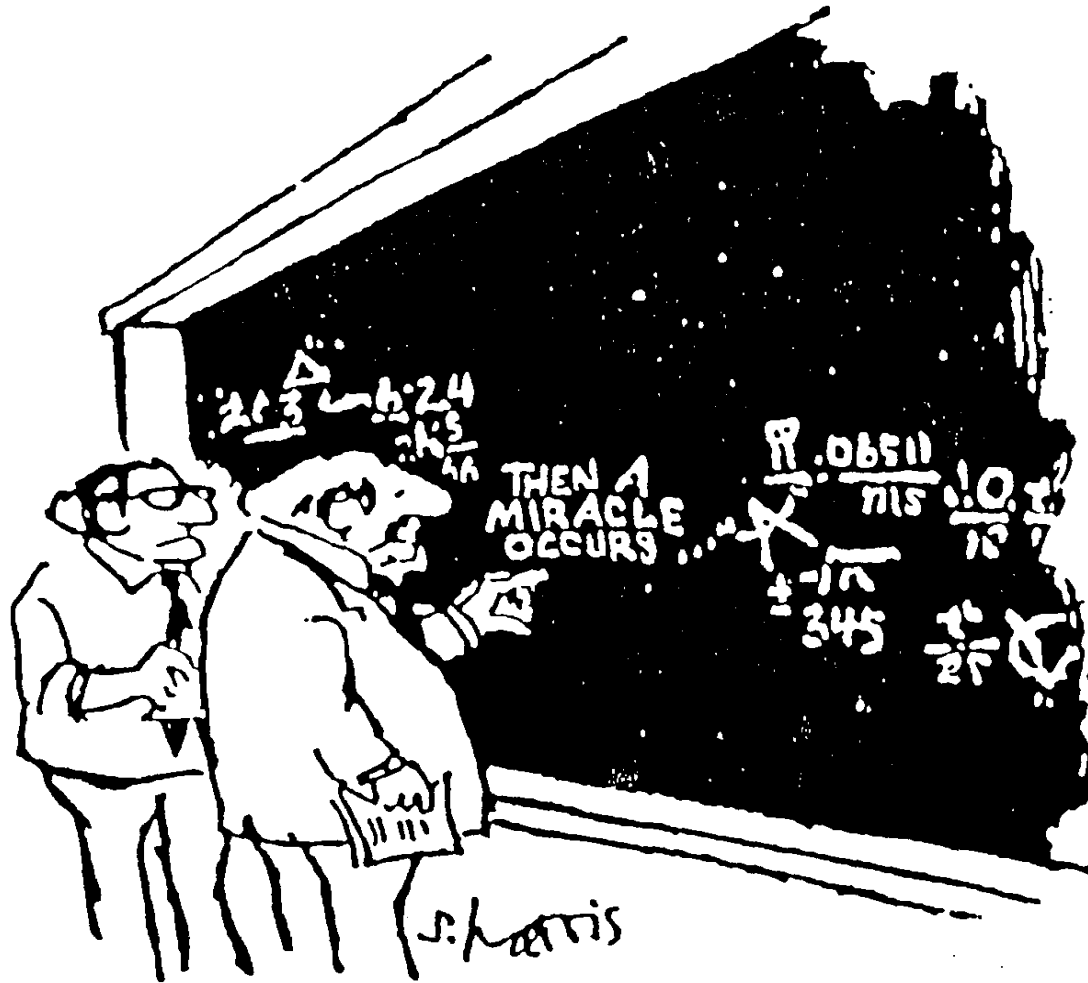
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What are the Key Steps in an Evaluation?

1. Conceptualize the **program**
2. Define the evaluation **purpose**
3. Determine the evaluation **design**
4. Collect and analyze **data**
5. Share and use the evaluation **results**



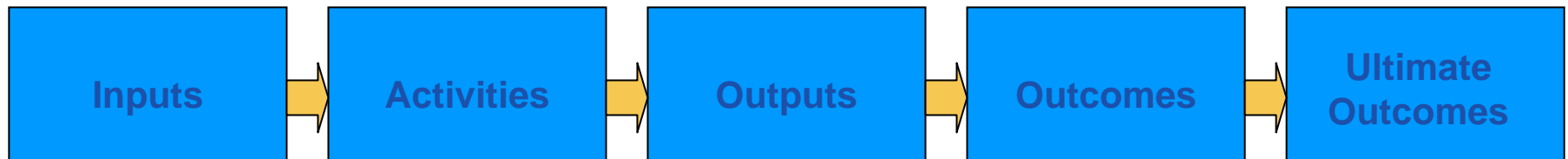
Conceptualizing the Program



“I think you should be more explicit here in Step Two.”

Logic Model

Help planners think (and talk) about how all the steps fit together.



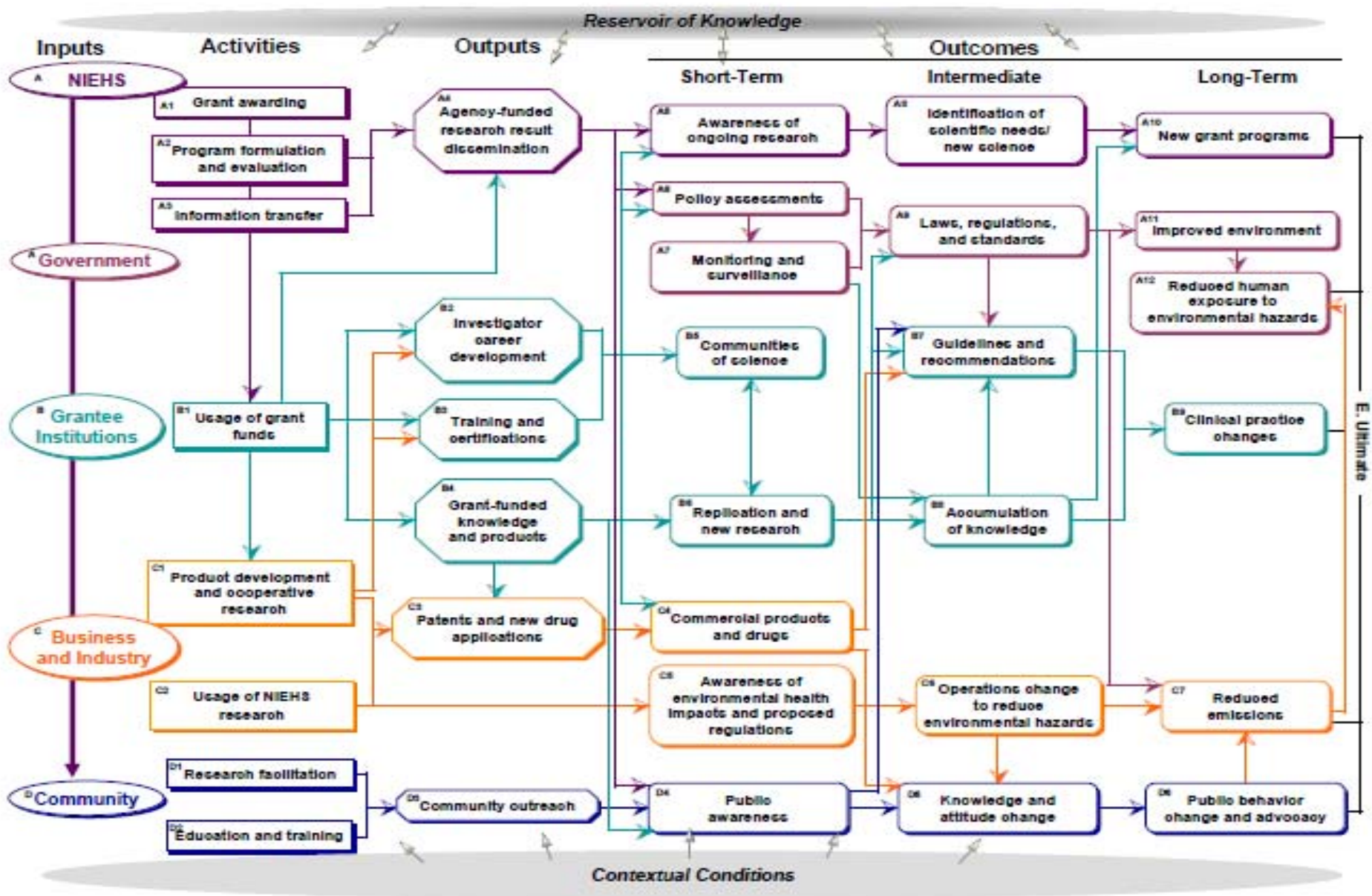
Inputs = resources available to do the work (human, financial, organizational, community, etc)

Activities = what the program does with the resources (processes, tools, techniques, events, education, training and actions of planned program)

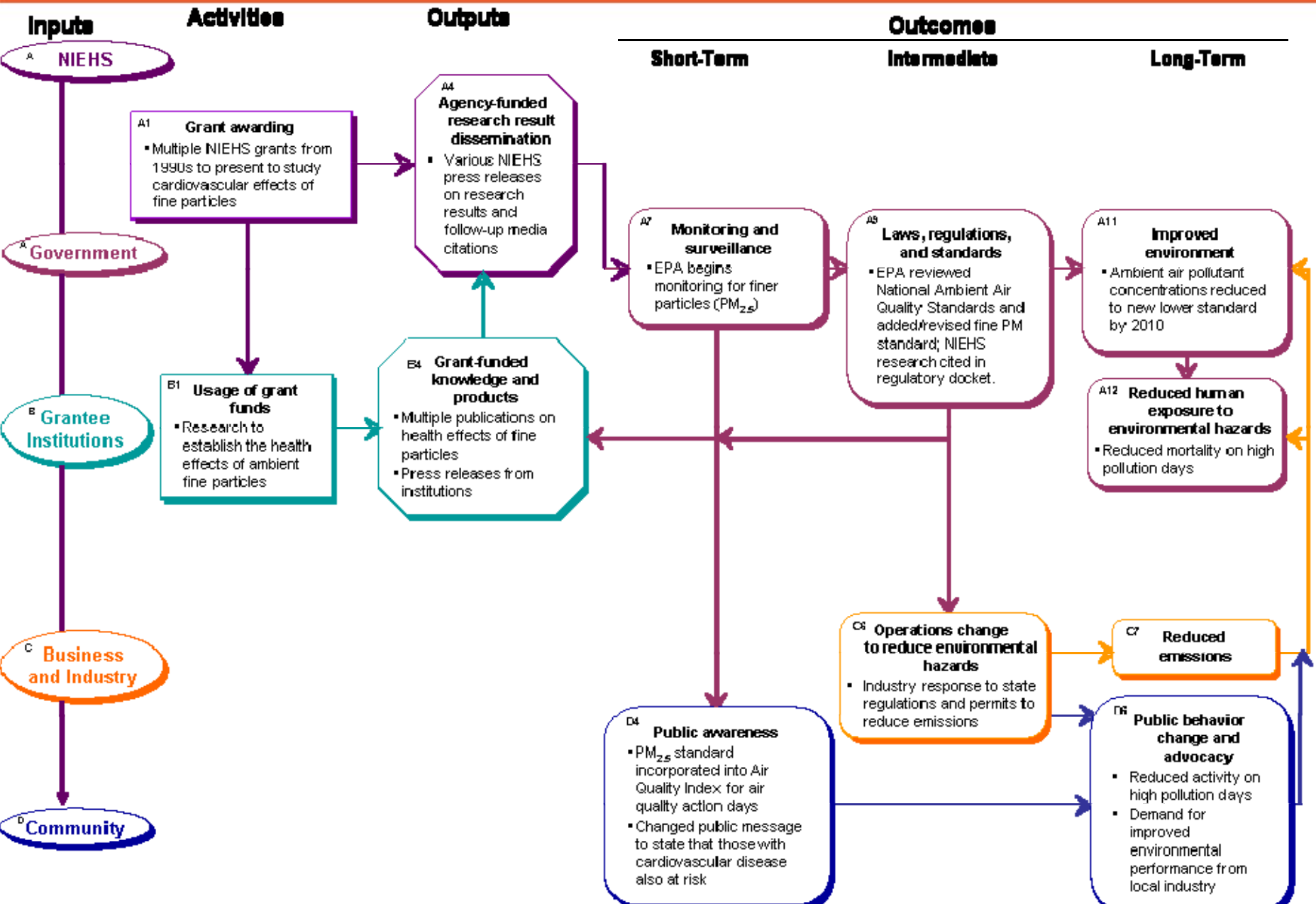
Outputs = direct results of program activities (usually described as size and/or scope of services/products delivered or produced by the program)

Outcomes = specific changes in attitudes, behaviors, knowledge, skills, status and level of functioning expected to result from program activities

Ultimate Outcomes = organizational, community and/or system level changes expected to result from program activities



Cardiovascular Effects of Fine Particles

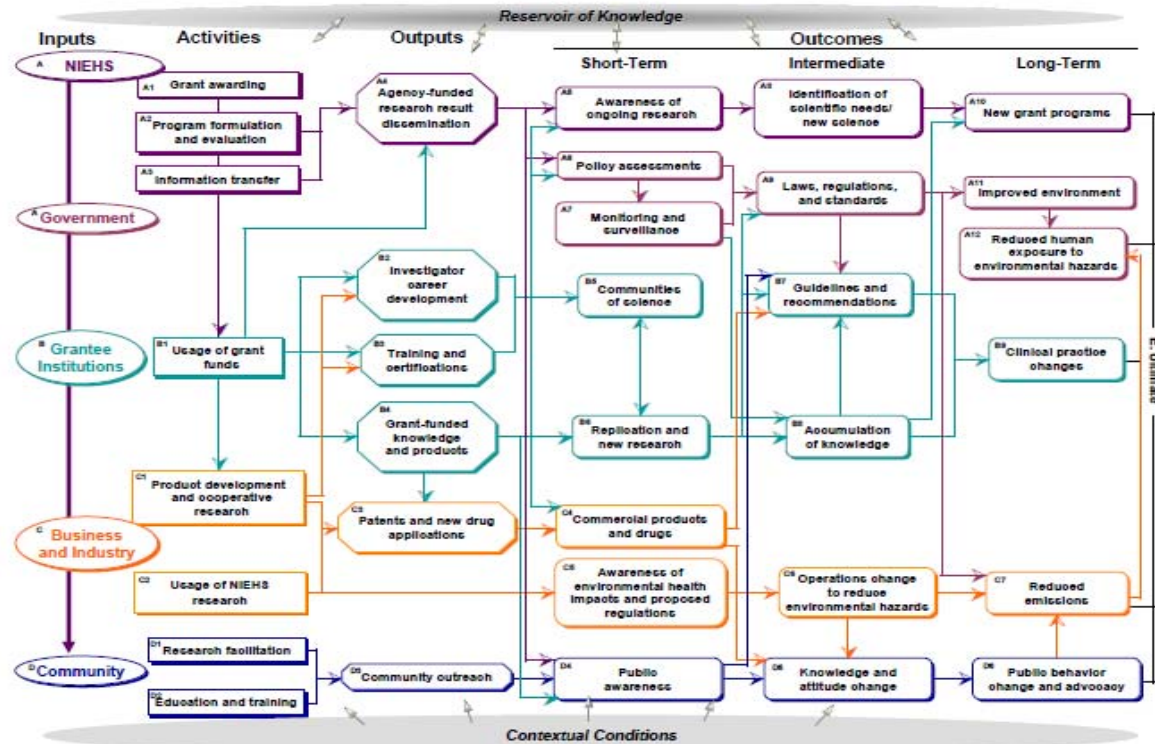


Outcome Based Evaluation of Research Programs

- Strengths
 - Identifies pathways by which to link NIEHS-funded research to ultimate outcomes into a unifying framework
 - Metrics associated with each component document the contribution.
- Challenges
 - Lack of data
 - Strength of association
 - Attribution

Session Review

- PHELPS: NIEHS Overview
- DREW: Logic Model Overview
- LIEBOW: Asthma Outcomes – Secondary Data
- ORIANs: Asthma Outcomes – Primary Data – Survey of Past NIEHS researchers
- ABED: Asthma Outcomes – Primary Data – Interviews with those who USE NIEHS Research
- FISHBEIN: Discussant



Acknowledgments

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- NIEHS/Program Analysis Branch: Ben Van Houten, Martha Barnes, Jerry Phelps, Christie Drew
- NIGMS: Juliana Blome
- Engel-Cox JA, et al. 2008. *Environmental Health Perspectives* 116(5):583-592 .
<http://www.ehponline.org/members/2008/10925/10925.pdf>
- Cozzens S. The knowledge pool: measurement challenges in evaluating fundamental research programs. *Evaluation Program Planning*. 1997;1:77–89.