



# Choices in IA: Problem definition, decision criteria, analytical methods

Scott Jacobs, Managing Director  
Jacobs and Associates

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# What value has IA for the policy process? (1)

## IA as a **learning process**

- o Asking the right questions
- o Expands the framework of thinking beyond narrow mission – enhances horizontal thinking
- o Focuses attention on innovative policy instruments

## IA as an **analytical process**

- o Strengthens empirical/rational basis for decisions, to supplement political and consensus decision processes
- o Discovers how to boost policy performance and reduce static and dynamic compliance costs
- o Explores trade-offs often ignored in vertical bureaucracies
- o Results-oriented – focuses on what and how to get results on the ground



## What value has IA for the policy process? (2)

### IA as a **communication process**

- o Improves quality of information available to stakeholders
- o Involves a wider range of interests and fosters public dialogue on goals and means of public action

### IA as an **accountability and credibility process**

- o Clearer statements of goals of regulation, and winners and losers
- o Sets a basis for ex post evaluations of policy performance
- o Improves policy performance, helping to satisfy demands for better policy performance and lower policy costs
- o Reduces the risk of costly policy failures



## Good governance goals of IA

- Analysis: Calculating the costs and benefits of government action → Faster learning, increasing benefits of government action, finding lowest cost solutions, reducing policy failures
- Consultation and responsiveness to a wider range of interests → Transparency, building trust, and reducing regulatory risks for private sector, reduce “information monopolies”
- Integrating multiple policy goals (social and economic policies) → Policy coherence in a complex world; break down vertical silos and promote horizontal thinking
- Accountability for actions and results (within ministries, to the public) → Client-oriented, credible, and responsive government



# The IA Method:

## Three steps to a good decision

- **Define the problem**
- **Set the decision criteria**
- **Choose the right analytical methods to satisfy the criteria**



# The importance of defining the problem

- No analysis can compensate for poor problem definition.
- Lessons from policy failures: Understand the scope of the issue, its trade-offs, and incentives, and define the problem broadly enough to include changes in behavior.

For example:

Wrong problem: How can we make medicine bottles harder for children to open?

- Solution: Design caps that are hard to open
- Incentives: Many users of medicines (older people) do not close bottles
- Result: More child poisonings

Real problem: How can we reduce access to medicines by children?

- Solution: Change behaviour and technology. Label bottles with child warnings, design caps so that people who can read can open them easily.





## Problem definition usually requires examination of a wide range of impacts and possible outcomes

- Define the desired outcome in terms of results (fewer poisonings, not tighter lids).
- Identify the range of choices that people can make to influence the results (put bottles on high shelves, close bottles tightly).
- Assess how various regulatory approaches will affect their choices and behaviors. Recognize the most regulations have positive AND negative effects (if bottles are harder to close, more people leave them open).
- Use a IA method that permits the relevant choices to be compared so that net effects can be identified. Usually, this will be a form of benefit-cost analysis.
- Identify a mix of options that use incentives and change behaviors to get results at lowest cost.



# Decision criteria and analytical methods

- **Decision criteria** determine how analysis is used to reach a policy decision:
  - Do the benefits justify the costs?
  - Is the approach the least costly or least burdensome option that achieves clearly defined objectives?
  - Does the rule violate or prevent the violation of a threshold test for action?
- **Analytical methods** examine, order and manipulate different kinds of information to present “reality” in simplified and understandable ways:
  - Benefit-cost analysis (what are the benefits and costs?)
  - Cost-effectiveness analysis (proportionality test)
  - Threshold analysis (precautionary principle)





# Decision criteria and methods in selected countries

- **Canada:** Each regulatory proposal must “maximize the net benefit to Canadians”. This is demonstrated through benefit/cost analysis.
- **US:** Three decision criteria: The potential benefits to society should justify the potential costs, recognizing that not all benefits and costs can be described in monetary or even in quantitative terms. The rule will maximize net benefits to society (including potential economic, environmental, public health and safety, and other advantages; distributional impacts; and equity). Where a statute requires a specific regulatory approach, the proposed action will be the most cost-effective. This is demonstrated through benefit-cost analysis, including examination of at least 3 alternative approaches: Informational Measures, Market-Based Approaches, Performance Standards.



## Methods: three choices for the Commission

- **Benefit cost analysis (includes analyses such as risk assessment, risk-risk analysis, and sub-analyses such as SME impacts):** Flexible, developed and tested across a very broad range of policy problems, can include qualitative and quantitative information, able to identify interactive effects and trade-offs, and adjust policy goals in light of the evidence. Can improve policy goals and reduce negative effects. Distributional impacts hard to include, requires weighting.
- **Cost-effectiveness analysis:** Developed and tested across a very broad range of policy problems, can significantly reduce negative effects of public policies. Limited in capacity -- cannot reject bad policies or correct problem definition.
- **Threshold analysis** such as the precautionary principle: Untested, little empirical validation, uncertain methods, much discretion is left to policy officials with little accountability.



## **Example: Child safety in airlines**

**Problem: How can we make airlines safer for children to travel?**

- **IA method used: Cost-effectiveness analysis. Engineering and cost analysis of different options for making airplanes safer. No assessment of changes in behavior outside of airplanes.**
- **Most effective solution: Require separate seats for kids.**
- **Incentives: Babies who fly are safer. Due to higher costs, some families drive instead of flying.**
- **Result: Child deaths increase. Airplanes are safer (for richer families), but country has, on net, several more child deaths each year in cars (among poorer families).**



## Example: Child safety in airlines (2)

**Real Problem (contingent): How can airlines be safer for children without increasing net risks to children?**

- **IA method: Benefit-cost analysis:**
  - Recognized that passengers have travel choices. Assessed risks of different modes of travel
  - Assessed price elasticities of airline passengers against substitute travel options
  - Assessed net effect on risks at various costs.
  - Identified threshold cost increase for air tickets at which risks to children increase.
  - Conducted cost effectiveness analysis of regulatory options whose costs are below that threshold.
  - Identified most effective option that maximizes the benefit-cost ratio below the threshold.



## Guidelines for choice of methods

- **Benefit cost analysis:** Should be used when there are many possible choices; policy objective is uncertain, broadly defined, or contingent; interactive effects and trade-offs are possible. Most policy problems fit these criteria.
- **Cost-effectiveness analysis:** Should be used when policy objective is inflexibly defined; there are low risks of trade-offs; or when b-c analysis has defined the approach.
- **Threshold analysis:** Should be used when society has agreed on a policy that should be achieved “at any cost.” Should be restricted to narrow set of policies.





## Examples of sub-analyses that can be included in b-c analysis

- **Canada:** Effects on aboriginal peoples
- **US:** Unfunded requirements on states and cities, small business analysis
- **UK:** Small business analysis
- **Ireland:** Impact on women, effect on persons in poverty





# Handling uncertainty: sensitivity analysis

- Sensitivity analysis can reveal whether, and to what extent, the results of the analysis are sensitive to plausible changes in the main assumptions and data.
- Treatment of uncertainty must be guided by principles of full disclosure and transparency.
- In some cases, the level of scientific uncertainty may be so large that you can only present discrete alternative scenarios without assessing the relative likelihood of each scenario quantitatively. Results should be presented from a range of plausible scenarios, with information that might help in qualitatively determining the most likely scenario.
- When uncertainty has significant effects on the final conclusion about net benefits, consider additional research before rulemaking. The costs of being wrong



## The IA Method: Some recommendations for the Commission

- **Define the problem:** Encourage horizontal thinking. IA problem definition should examine trade-offs, interactive effects, incentives.
- **Set the decision criteria.** Should be done in advance, not through ad hoc means. Benefits should always justify costs. Lowest-cost options should always be chosen. Thresholds used in extraordinary cases where costs are irrelevant.
- **Choose the right analytical methods to satisfy the criteria.** Usually, a mix of b-c analysis, either formal (3-5 percent of rules) or informal, together with cost-effectiveness analysis of various options. Be flexible about quantification, but rigorous about identification of impacts. Be clear about uncertainties and the risk of being wrong.



## A word on scientific peer review

- **Policy bodies themselves should prepare the RIA** to speed up the learning process and integrate RIA with decisions from the earliest point.
- **External checks on the quality of the RIA** inside the Commission are essential to maintain consistency and balance incentives to use RIA as a marketing tool rather than as honest exploration.
- **Peer review of the scientific evidence** can provide additional certainty about the quality of data, the uncertainties, and the range of possible scenarios