

Regulatory Studies Center

THE GEORGE WASHINGTON UNIVERSITY

Quantifying Regulatory Efficacy

*Paper prepared for OECD Workshop on
Socioeconomic Impact Assessment of
Chemicals Management*

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Agenda

- OECD/EU Workshop
- Why evaluate efficacy of regulation?
- How does evaluation fit in the regulatory process?
- Why is evaluation so challenging?
- Methods for better regulatory evaluation
- Improving incentives for robust evaluation

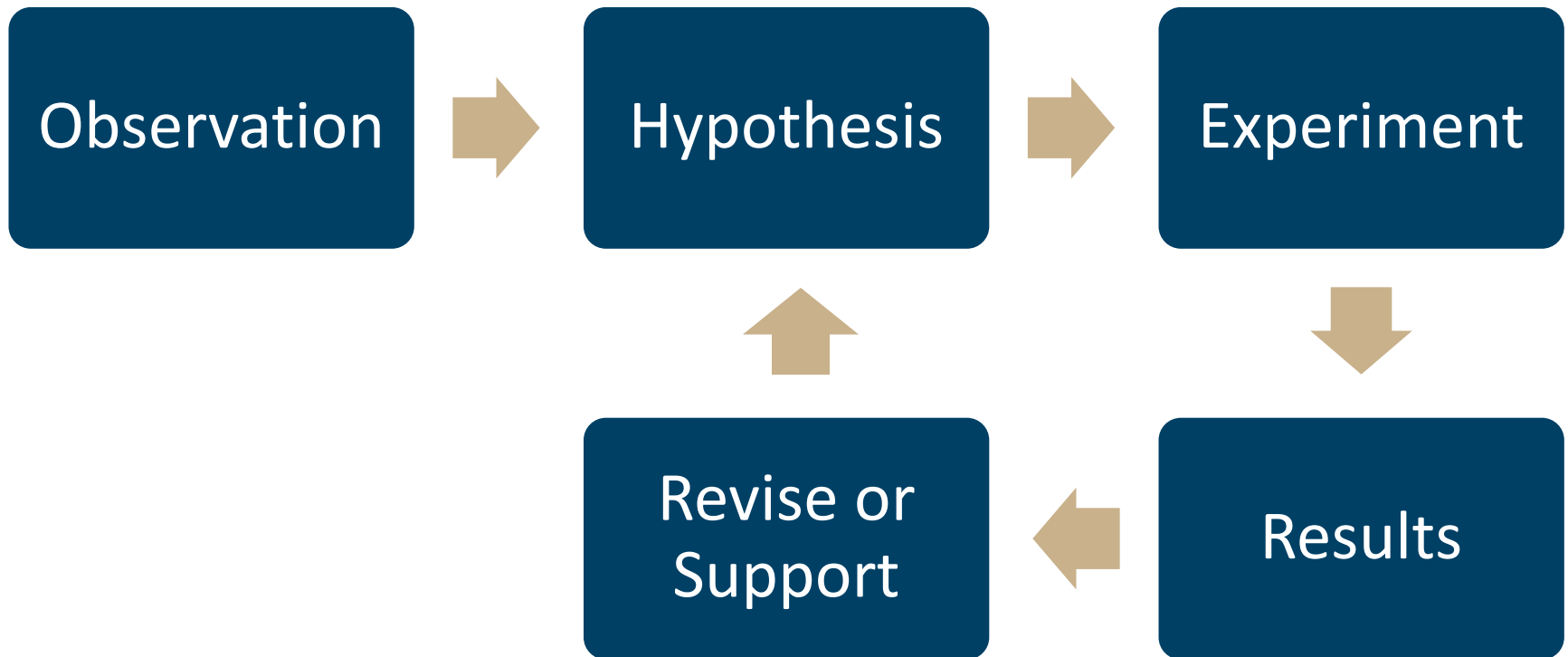
Helsinki Workshop 2016

- Workshop on the Socioeconomic Impact Assessment of Chemicals Management
 - Hosted by the European Chemicals Agency
 - July 2016, Helsinki
- Papers available:
 - <http://www.oecd.org/environment/tools-evaluation/sacame.htm>

Why evaluate?

- Feedback is important
- Systems mindset
- Inform existing regulations
 - Delivering expected results?
 - Revise or rescind?
- Inform future regulations/policies
 - Improve ex ante analysis
 - Understand *causal* relationships

Scientific method



Regulatory process

- Regulatory impact assessment (ex ante)
 - Hypothesize causal links between action & outcome
 - Assess risks (models, assumptions)
 - Identify alternative actions to manage risks
 - Estimate benefits, costs & distributional effects
- Public engagement (ex ante)
- Implementation
- Ex post evaluation?

Challenges

Ex-ante analysis

- Well-established principles & procedures
- Challenging methodologically
 - Assumptions and models
 - Hypothesize outcomes

Ex-post analysis

- Procedures less well-established
- Challenging methodologically
 - Counterfactual?
 - Opportunity costs?
 - Measuring actual reduction in risks
- Incentives lacking

Responding to Methodological Challenges

- Plan for retrospective review at outset
- Design rules to allow natural experiments
- Lay out theory of change
- Determine proper scope
- Measure causal relationship

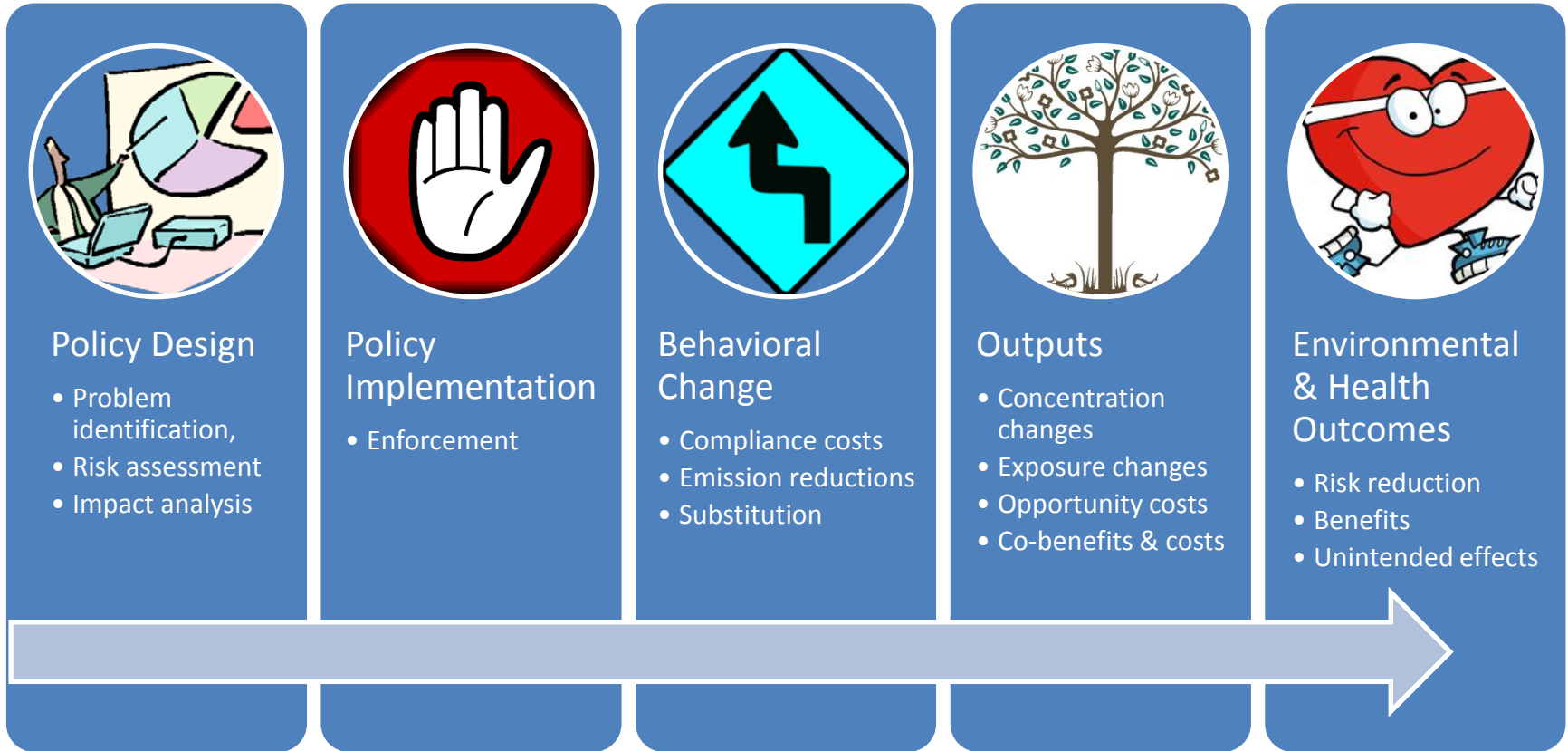
Plan for review at the outset

- Problem to be solved
- Criteria for measuring success
- Causal logic model
- Time frame

Design to enhance learning

- Randomized controlled experiment
- Variation facilitates natural experiments
 - Pilots or trials
 - Different compliance thresholds or timing
 - Differences across jurisdictions

Illustrative Causal Model



Scope

- Specific regulation vs. program-wide
- Outputs vs. outcomes
- Quantified benefits & costs
- Other factors
 - Innovation
 - Flexibility
 - Distribution

Measure causal relationship

- Quasi-experimental approaches
 - Over time
 - Across jurisdictions
- Statistical tests
 - Is X informative about Y?
 - Does X precede Y?
 - Does ΔX explain ΔY ?
 - What do non-parametric methods show?
 - Effect of X w/ other variables held constant

Responding to Incentive Challenges

- Condition new regulation on ex post learning
- Institutionalize independent review
- Change default rules
- Reallocate resources

Conclusions

- Evaluation & feedback important
 - Identify underperforming (or overly costly) rules
 - Improve future policy
 - Modify *ex ante* assumptions
 - Calibrate risk assessments
 - Improve causal predictions of health benefits & other regulatory effects
- Solutions must address methods & incentives

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