

# Advancing Outreach Effectiveness to Improve Conservation Practice Adoption



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# Advancing Outreach Effectiveness to Improve Conservation Practice Adoption... a call for applied social science action



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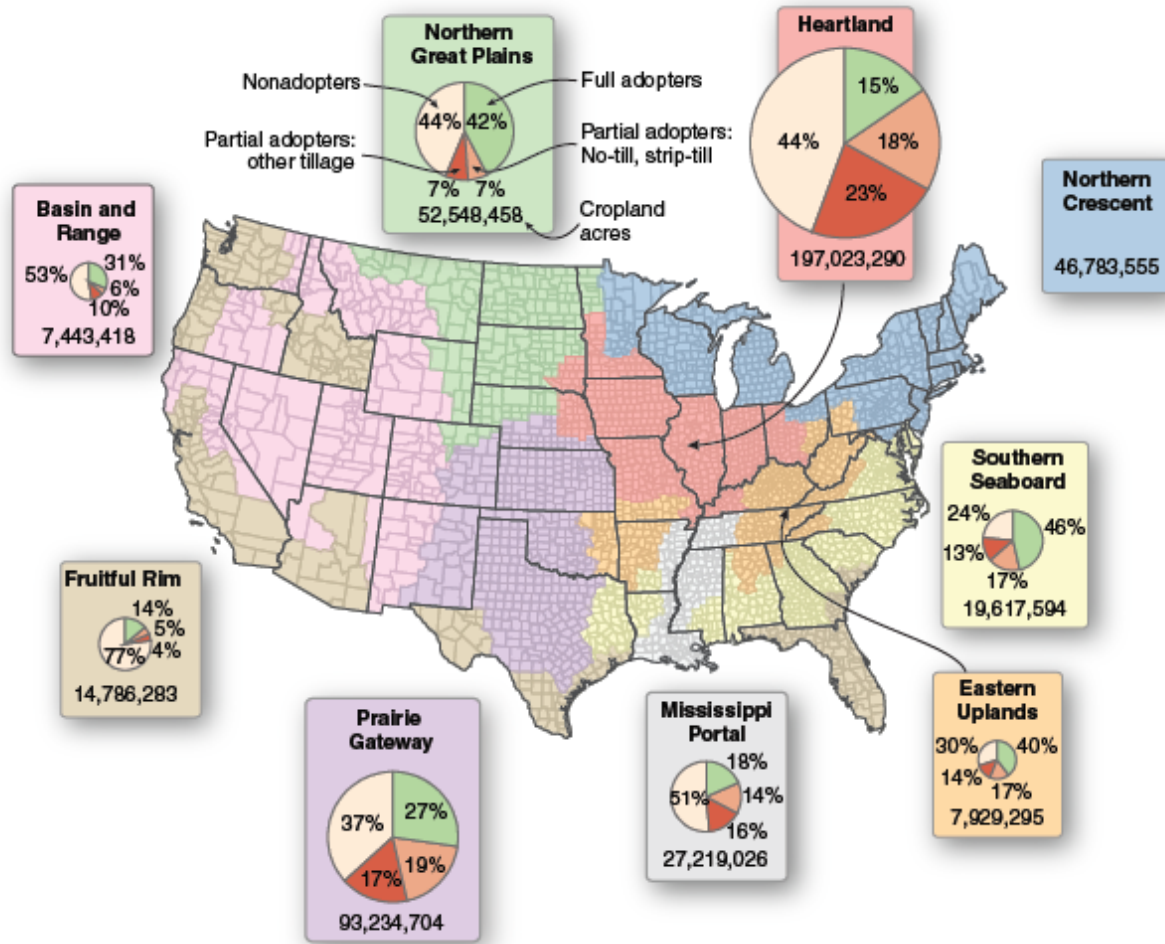
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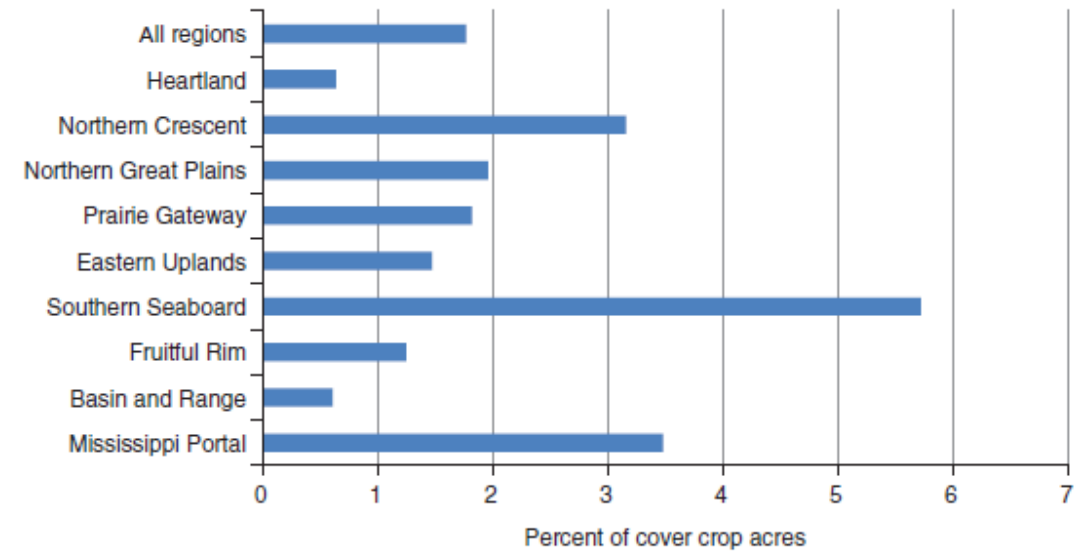
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# Advancing Conservation Practice Adoption: Infield Conservation Practice Adoption Rates



Cover crops as a percent of cropland by region, 2010-11

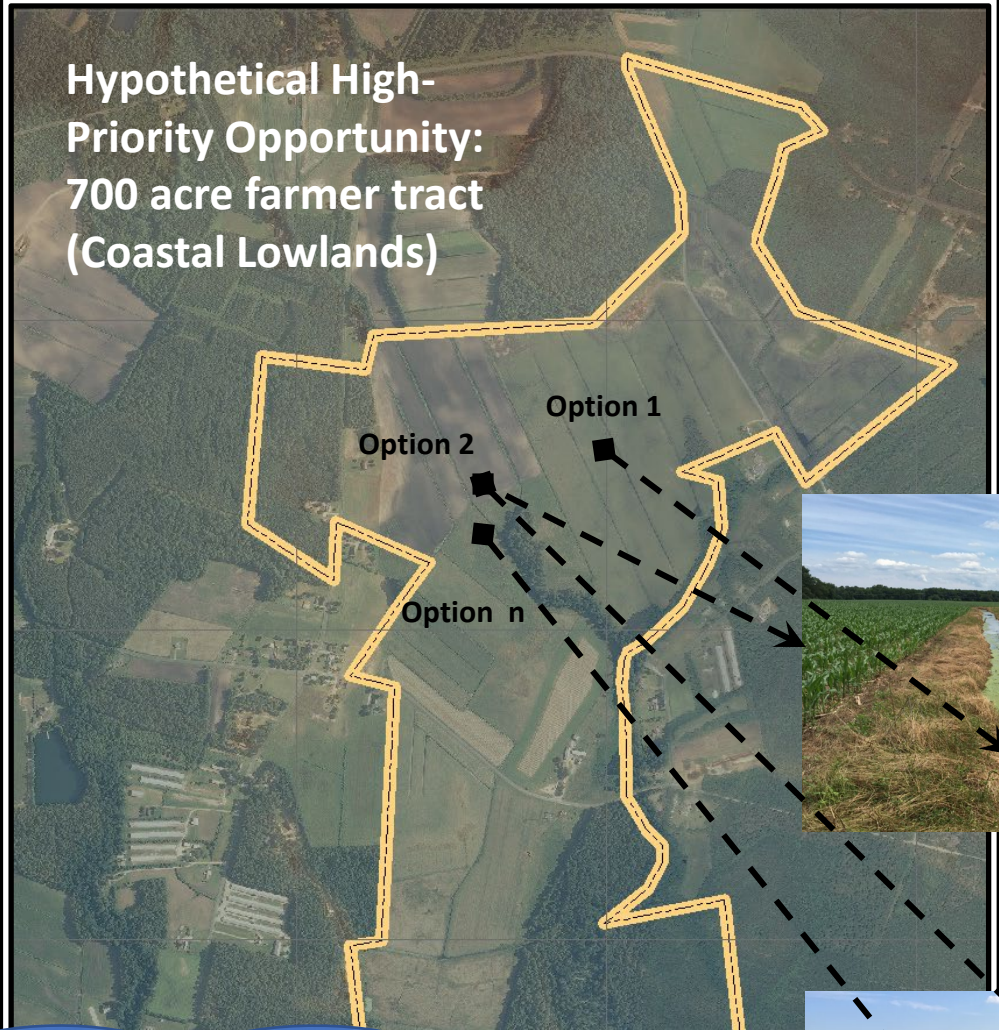
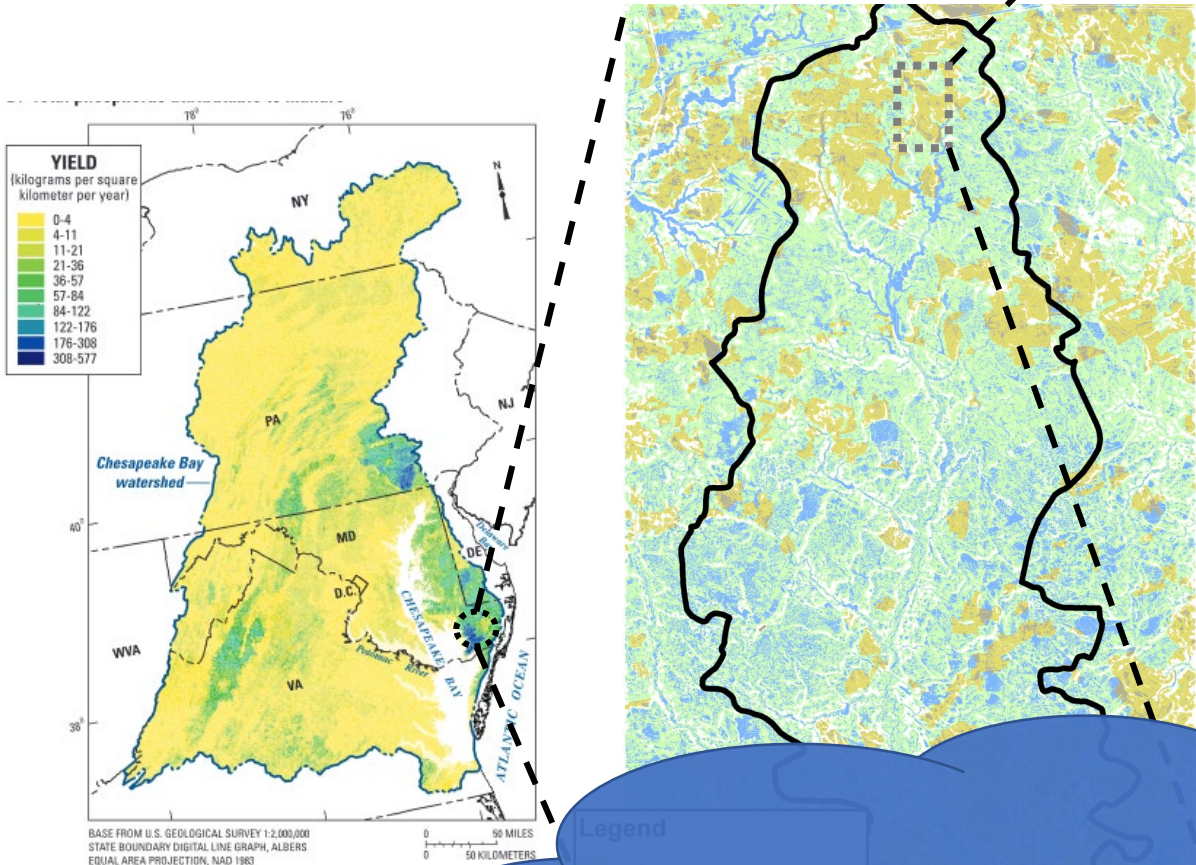


Source: USDA, Economic Research Service and USDA, National Agricultural Statistics Service, Agricultural Resource Management Survey, 2010-11.

Wade, Tara, Roger Claassen, and Steven Wallander. *Conservation-Practice Adoption Rates Vary Widely by Crop and Region*, EIB-147, U.S. Department of Agriculture, Economic Research Service, December 2015.

... lots of opportunity to advance soil and watershed restoration goals!

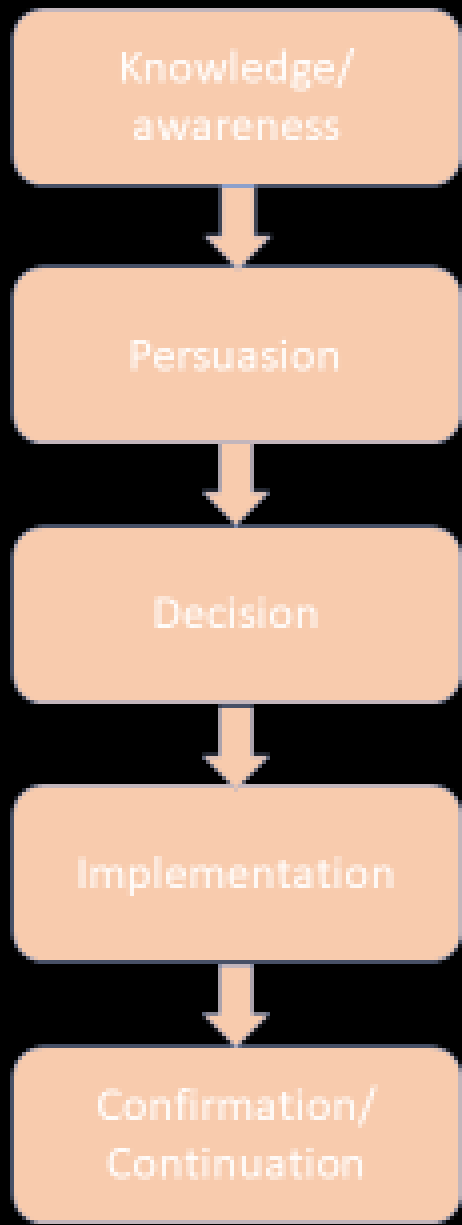
# Agreeing on the Decision Context:



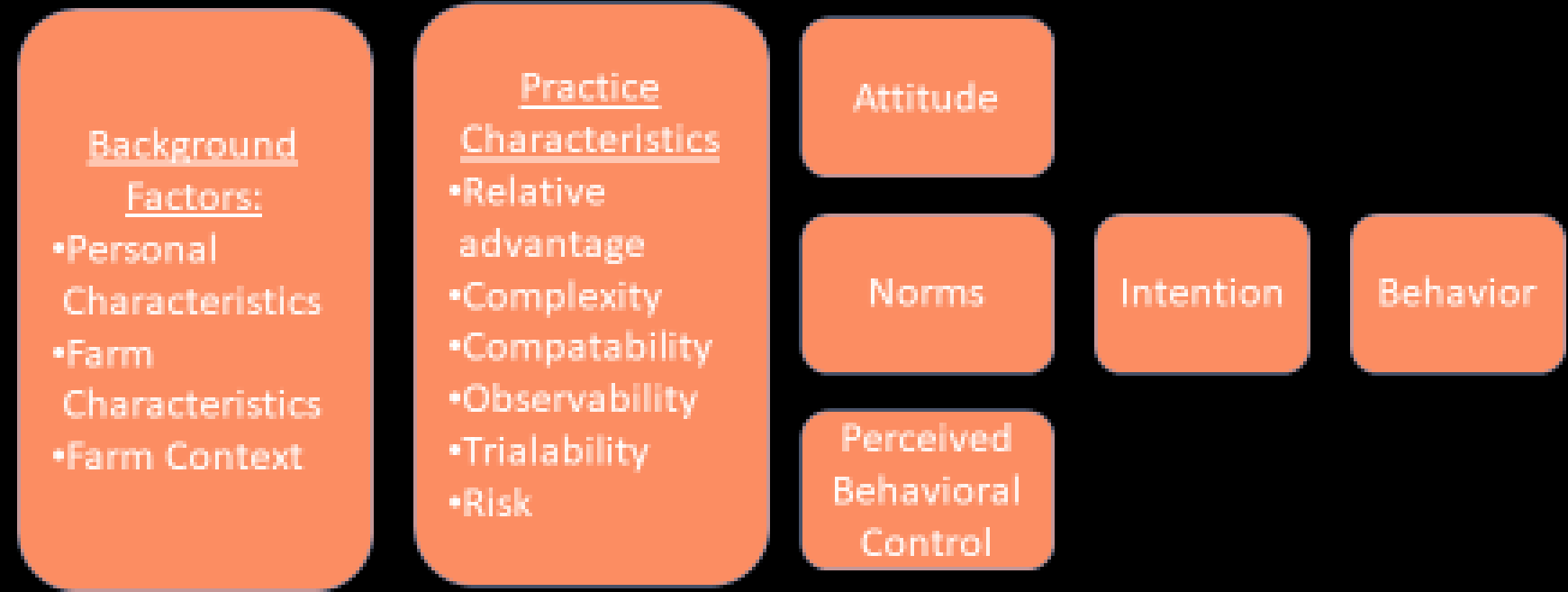
Legend

- High Priority Area
- Open
- Low Priority Area
- Upland Area

How do we convince a farmer to adopt ag BMPs?  
How do we invest time and resources?

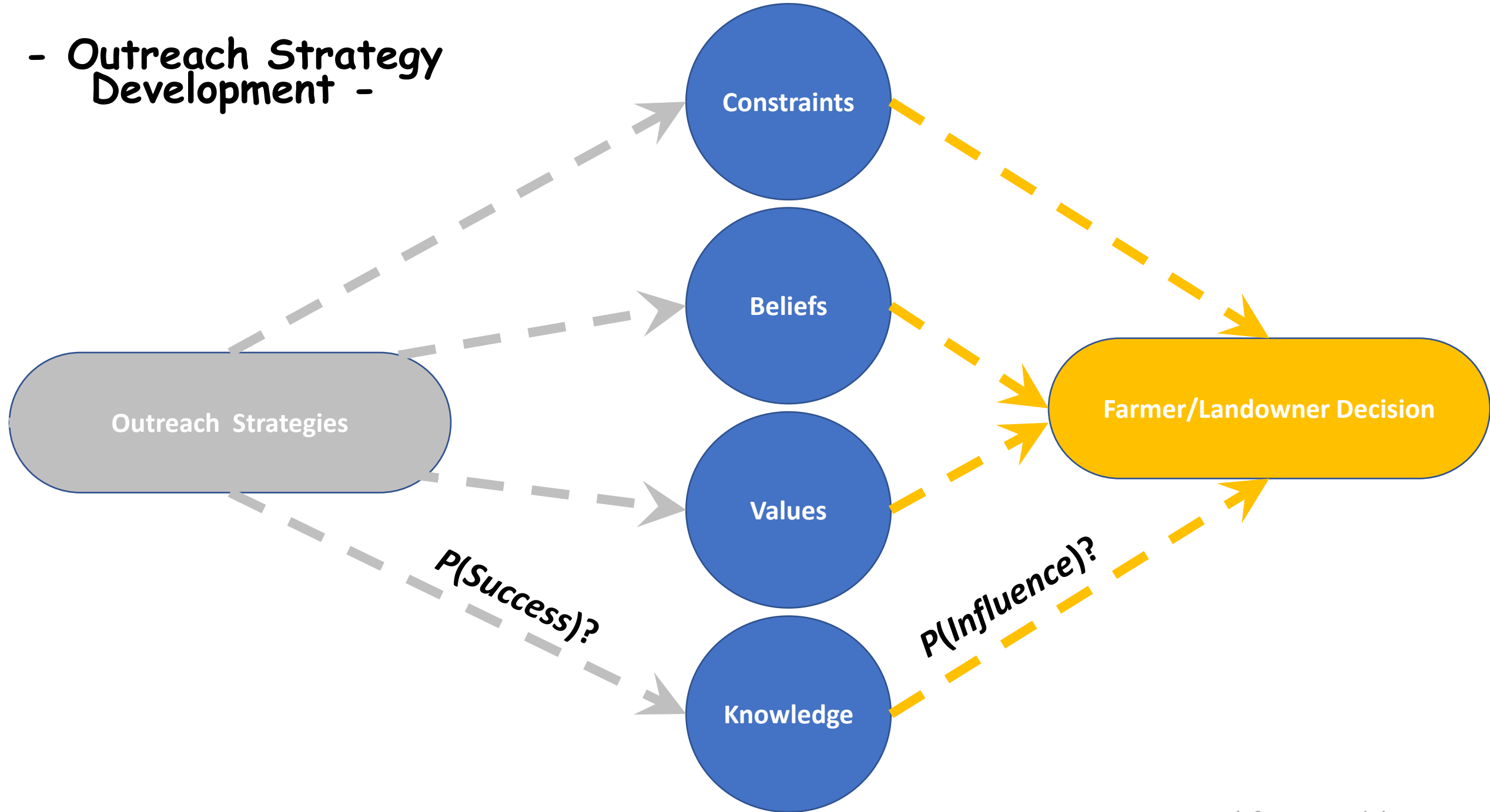


Rogers



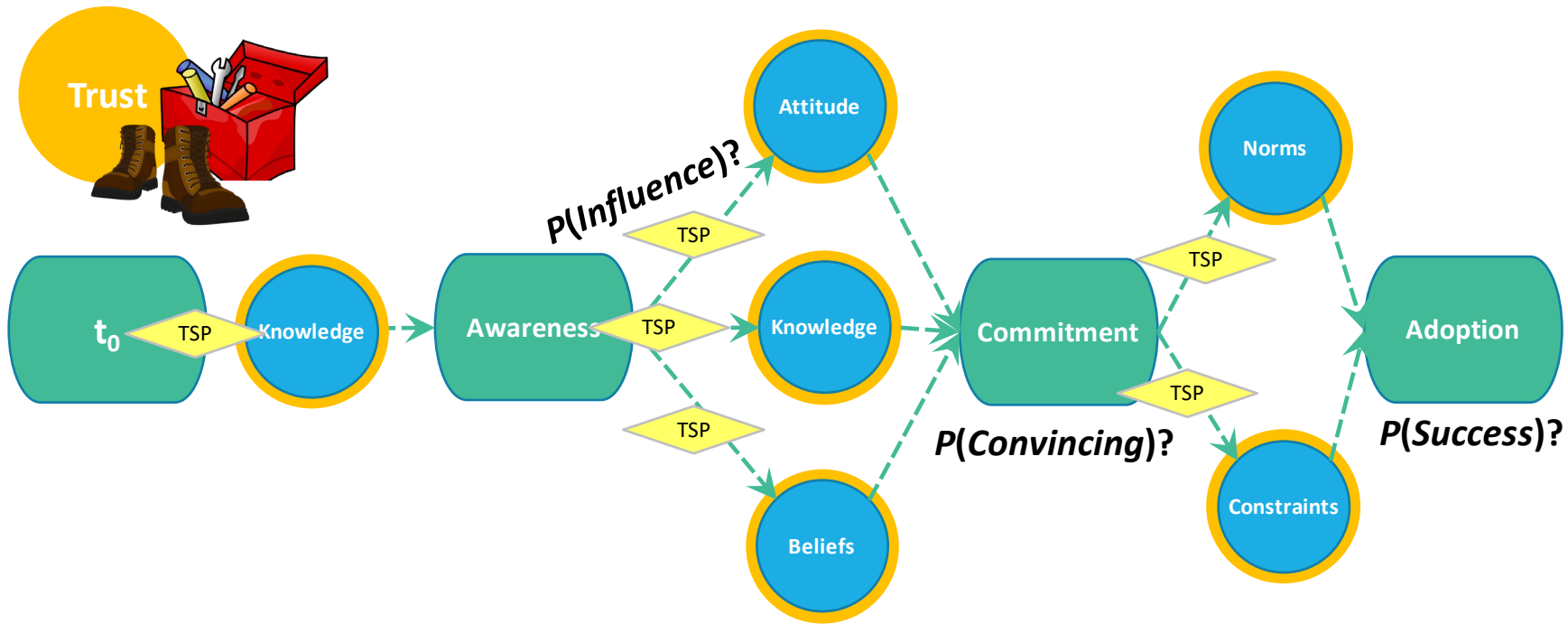
Reimer et al., 2012  
 Arbuckle and Roesch-McNally, 2015  
 Rogers 2003  
 Fishbein and Ajzen, 2010

**- Outreach Strategy Development -**



Social Indicators of Behavior<sup>1</sup>

<sup>1</sup> from Hindsley 2002




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CAN THIS FRAMEWORK SERVE AS A PREDICTIVE MODEL FOR CONSERVATION PRACTICE ADOPTION?

# Decision Context: Which Outreach Practitioners?

Federal Agent

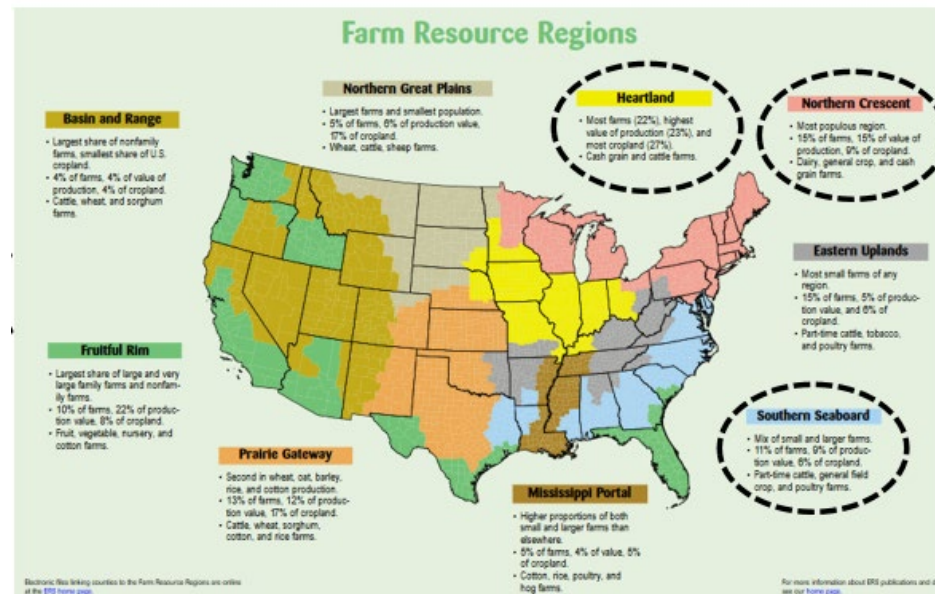
State Agent

For Profit Agent

Network Agent

Non-Profit Agent

- NRCS
- University Extension
- Soil Water Conservation District staff
- State Department of Agriculture staff
- State Departments of Natural Resources/Environmental Quality
- Retail Agronomists/Crop Advisors/Consultants/Corporate Agriculture Representatives
- Other Farmers (including farm bureau, SCD officers, commodity groups etc.)
- Non-profits – ?need to articulate the diversity of NGO's (e.g., farming, environmental)?





# Take-home Points

Does the skeleton of the framework provide a useful sequence of events?

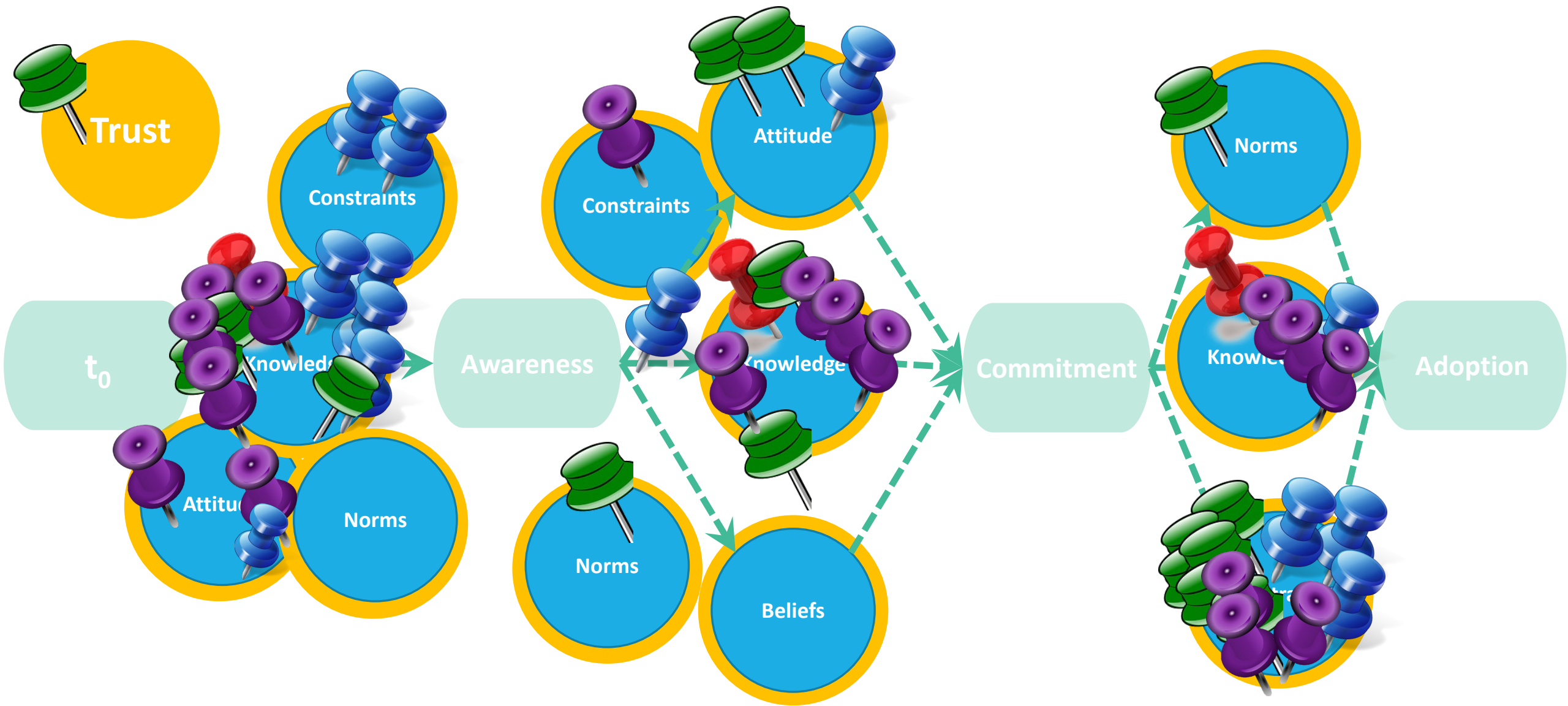
- Yes





Does the framework, as is, provide a useful conceptual structure to discuss practices?

- Yes

Can the framework, as is, be the basis of a predictive model for conservation adoption?

- No
- There are some missing elements
- The causal linkages are not yet clear
- But there's promise...



 Outreach TSP (n = 6)	 Farmer (n = 1)	 Researcher (n = 5)	 Other (n = 6)
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Workshop Participant Survey Response Rate: ~40%

# SESSION II: Concerns

- **Financial impediments...** it's complicated!
  - Integrating short- vs- long-term risks
  - Complexity of day-to-day operations
  - Risk (e.g., threat of extreme weather events) adds to complexity
- **Policies, regulations, programs... often constraining rather than helpful**
  - Inflexibility
  - Reliability of decision criteria for qualifying
  - Complexity of programs
- **Time...** for evaluating the risk of practice adoption, as well as time for implementation and maintenance
- **Soil health and watershed health...** but too much uncertainty in prescribed practices, which presents too much risk in terms of vulnerability to policy constraints or sunk costs. Need for better access to technical support.

# Q16-17: Outreach Exchange

	Awareness	Willingness	Adoption
Outreach Practitioners (n=5)	Farm Days & Tours* Press Releases Social Media Information Brochures & Targeted Letters Billboard Advertising Focus on field benefits	Financial Incentives Non-financial Incentives Workshops Field Days & Tours 1:1 Farm Field Visits Technical Support	Technical Support Manage Contractors Paperwork Management Follow-up Engagement Incentives Rewards Programs Monetary Incentives
Farmers (n = 1)	Farm Days & Tours Social Media	Financial Incentives In-person Technical Support	Maintenance Plan Manage Paperwork
Social Scientists (n = 8)	Farm/Field Days & Tours* Meals for Outreach Information Campaigns Peer-to-Peer Networks Rewards Programs Press Releases	1:1 Conversations Trust-building Engagements Cost-Sharing Bonuses Ecosystem Service Payments Certification & Rewards Programs Design Flexibility Strategic Messengers	Equipment Co-ops Paperwork Management Permit Management Trusted Technical Support Implementation Assistance Continued Engagement Annual Payment Programs Rewards Programs Local Action Networks Maintenance Support
Other (n = 7)	Farm/Field Days & Tours* Ag Retailer Outreach Farmer Networks Social Media Workshops	Practice Demonstration Precision Conservation Maps & Identification of Marginal Lands Cost-sharing 1:1 Farm Visits In-person Technical Support	Practice Demonstration Accessible Technical Support Stacked Incentives Follow-up Engagement Paperwork Support

# Trust, Relationship, Durability

A number of the activities that TSP's undertake are specifically designed to help develop this relationship

The relationship of the TSP to the local community is a foundational element

- Long-term relationship
- Connection to the community
- Trust

The hypothesis is that the nature of this relationship is a predictive factor in understanding the effect of any outreach practice

# Clarity about Values, Beliefs, Attitudes

The framework would benefit from explicit recognition of the *fundamental objectives* of the farmer or landowner

- That is, some marriage of prescriptive and descriptive decision theory might be valuable
- A better understanding of the common array of fundamental objectives would help
  - Economic objectives
  - Conservation objectives
  - Impacts to neighbors and community
  - Reputation (of farmer)
  - Generational legacy

The relationship between values, beliefs, and attitudes is more complex than characterized

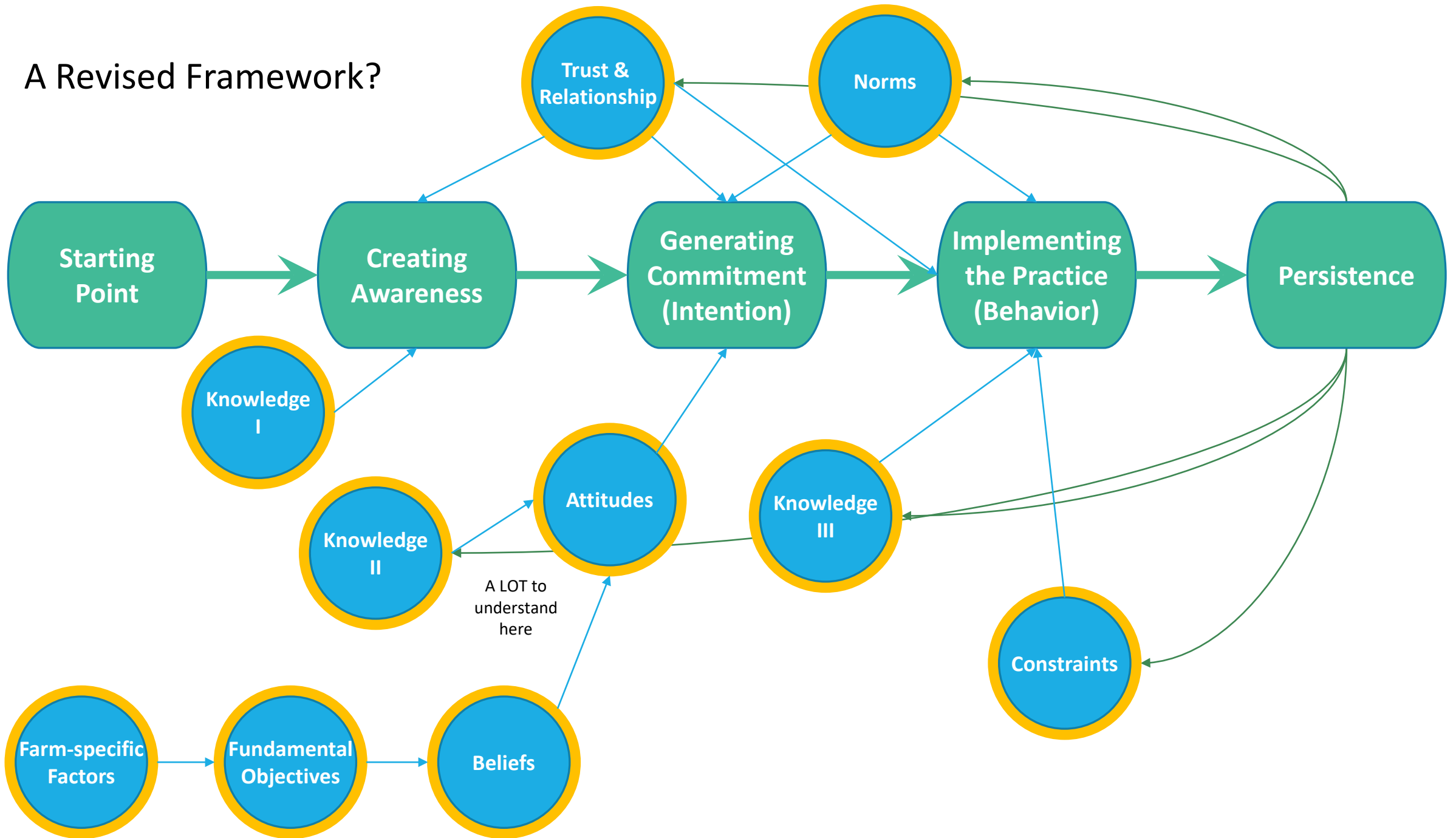
- The causal connections could be better depicted

# Formation of Attitudes

How are farmer's synthesizing the information available to them, the beliefs and values they hold, to determine an attitude about practices?

- Weighing conflicting objectives
- Grappling with risk
- Considering short- vs. long-term costs and benefits
- Thinking about portfolios of actions: how conservation actions integrate with farm operations

# A Revised Framework?





# Closing Thoughts

This framework is a work in progress

- Key uncertainty: How can knowledge influence beliefs and attitudes
- What (biophysical) research is needed to address those information needs?

How important is it to develop a common framework for talking about these processes?

- Very important!

A common framework

- Allows clarity about hypotheses and causal assumptions
- Allows development of clear empirical studies to test assumptions and effect strength
- Allows learning to be passed more quickly among practitioners

# PENDING RFA: Achieving Conservation through Targeting Information, Outreach, and Networking (ACTION)



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