




# **The Chesapeake Bay Watershed and Knowledge Systems for Sustainability**

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A satellite map of the Chesapeake Bay region, showing the intricate network of waterways and surrounding green land. The text is overlaid on the upper portion of the map.

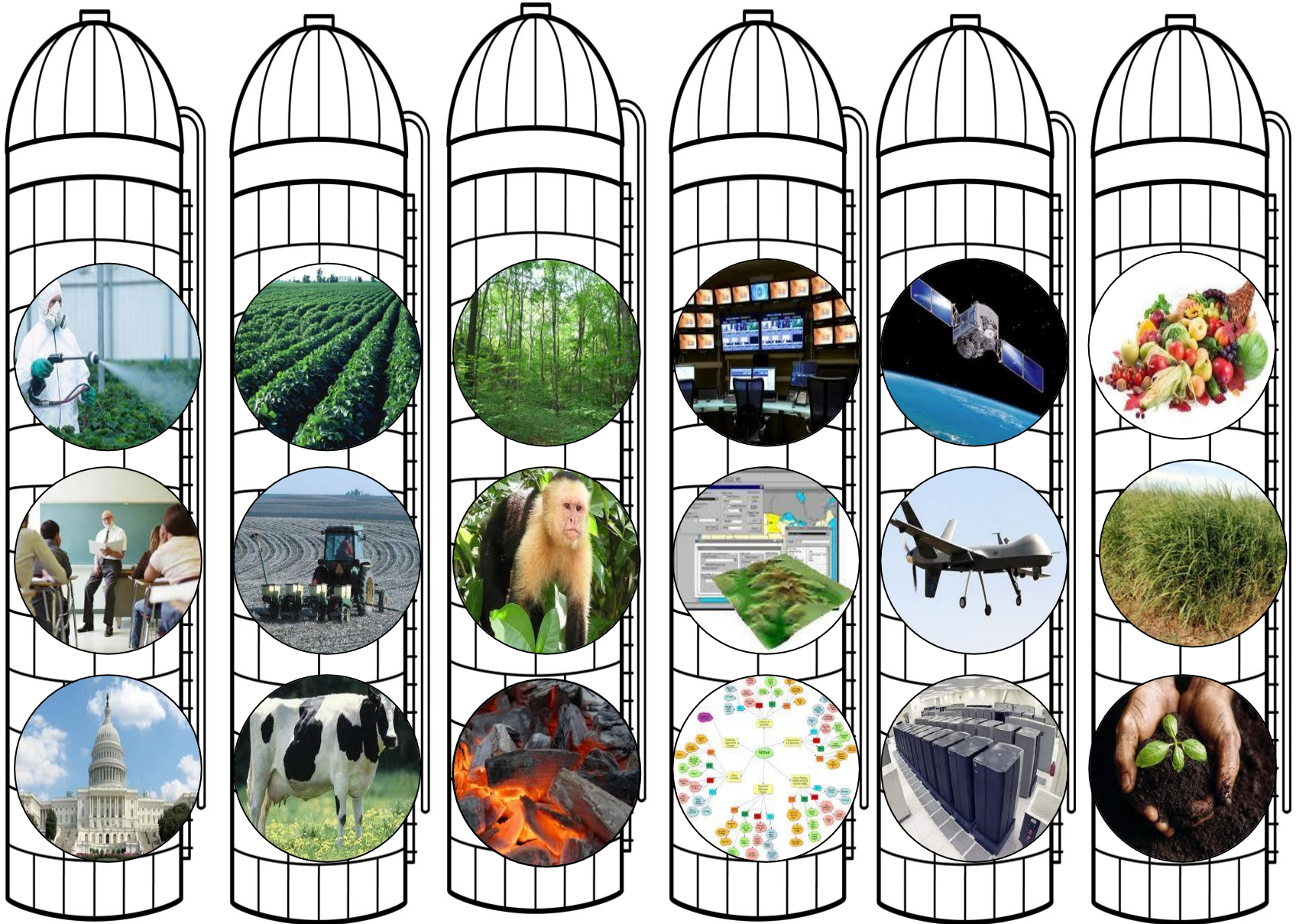
# Chesapeake Bay Program & Knowledge Systems for Sustainability

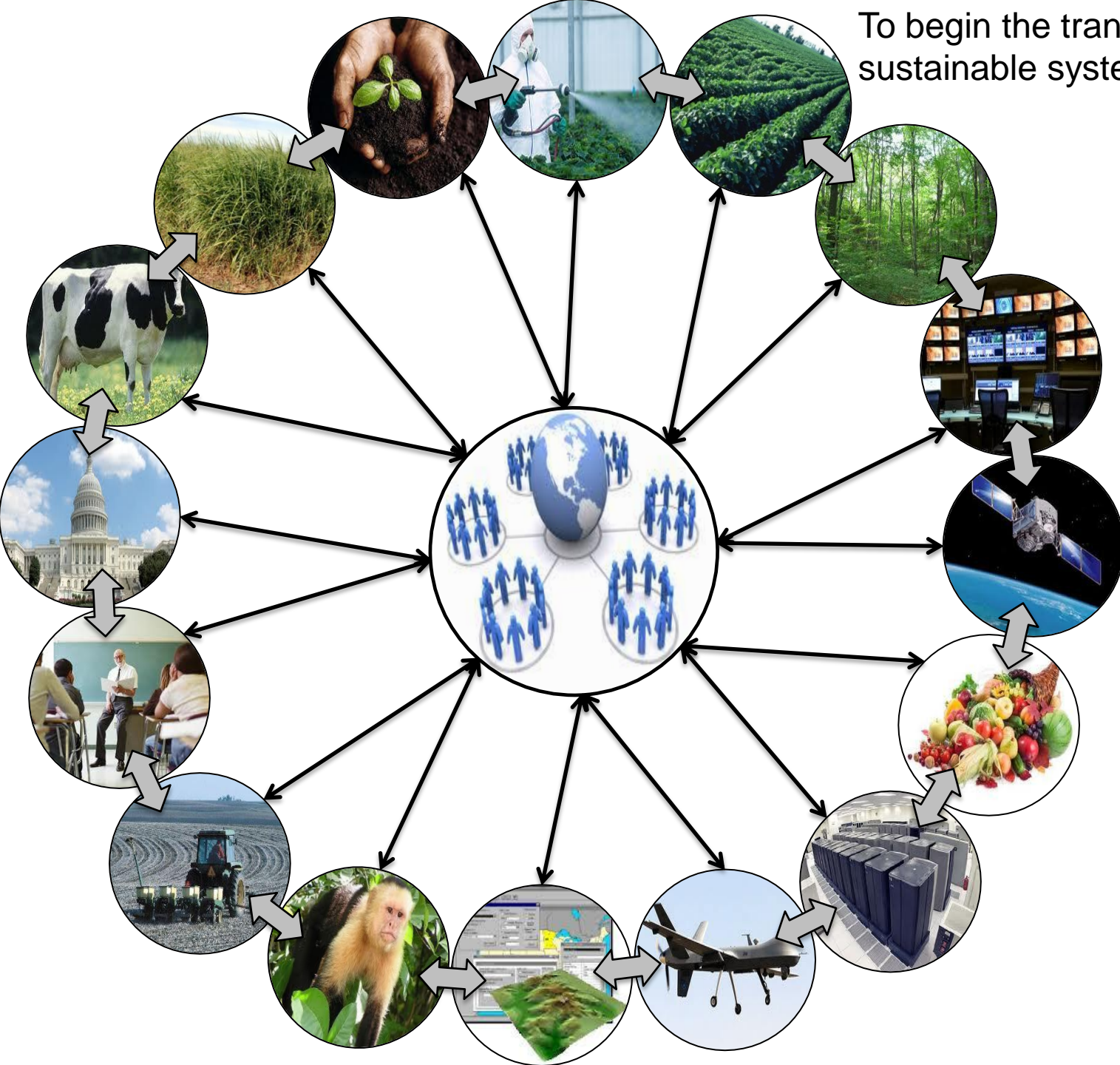
## Quick timeline:

- Oct. 2012 introduction at Penn State
- Nov. 2012 follow up discussion at Oak Ridge
- May 2013 discussion in Annapolis
  - Introduction of ideas
  - Exploration of possibilities
- June 2013 STAC presentation
- On-going: additional follow up



# Our socio-ecological systems are highly siloed







# A global community of practice anchored in the research community: Knowledge systems for sustainability



Environmental  
Virtual — Pilot —  
Observatory —



ecoagriculturepartners  
landscapes for people, food and nature



Anglia Ruskin  
University



PRIFYSGOL  
BANGOR  
UNIVERSITY



CSIRO



Formerly known as Wildlife Trust



Government  
Office for  
Science

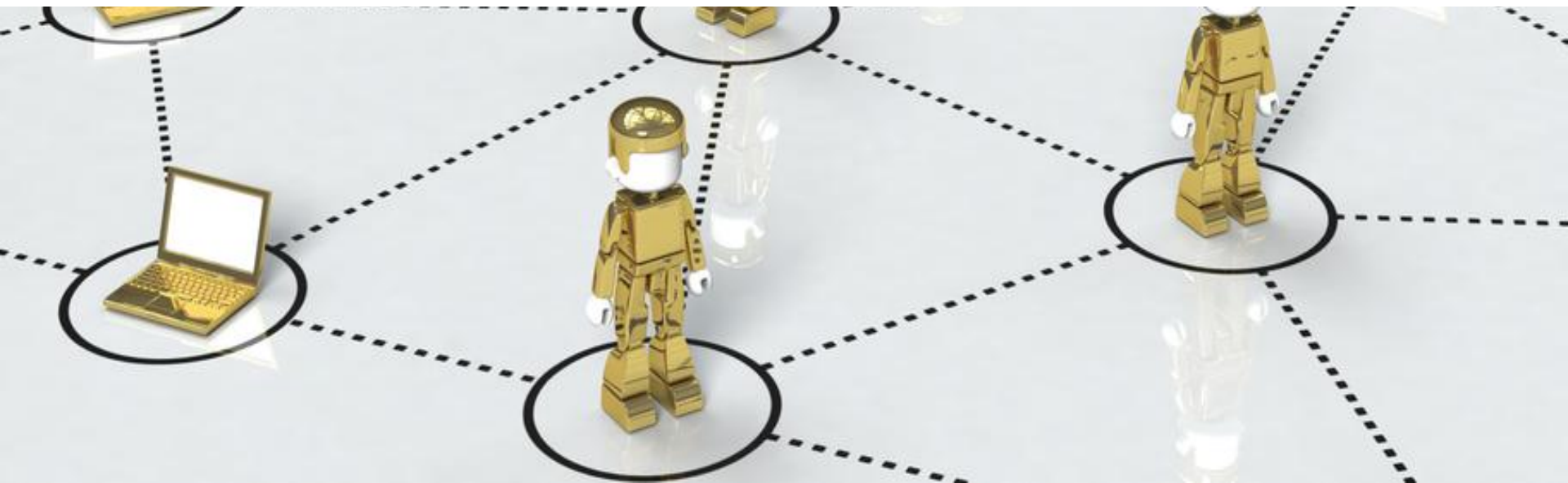


McGill





A vision for the future?  
Working to create trusted information sharing  
environments in a pre-competitive space,  
across sectors, for collective benefit



Critical issues

land, water, energy

real &  
measurable  
restoration

Resources

technical, financial, other

-Data systems + models

- Decision sciences

Knowledge

research  $\leftrightarrow$  decision makers

- Multiple scales

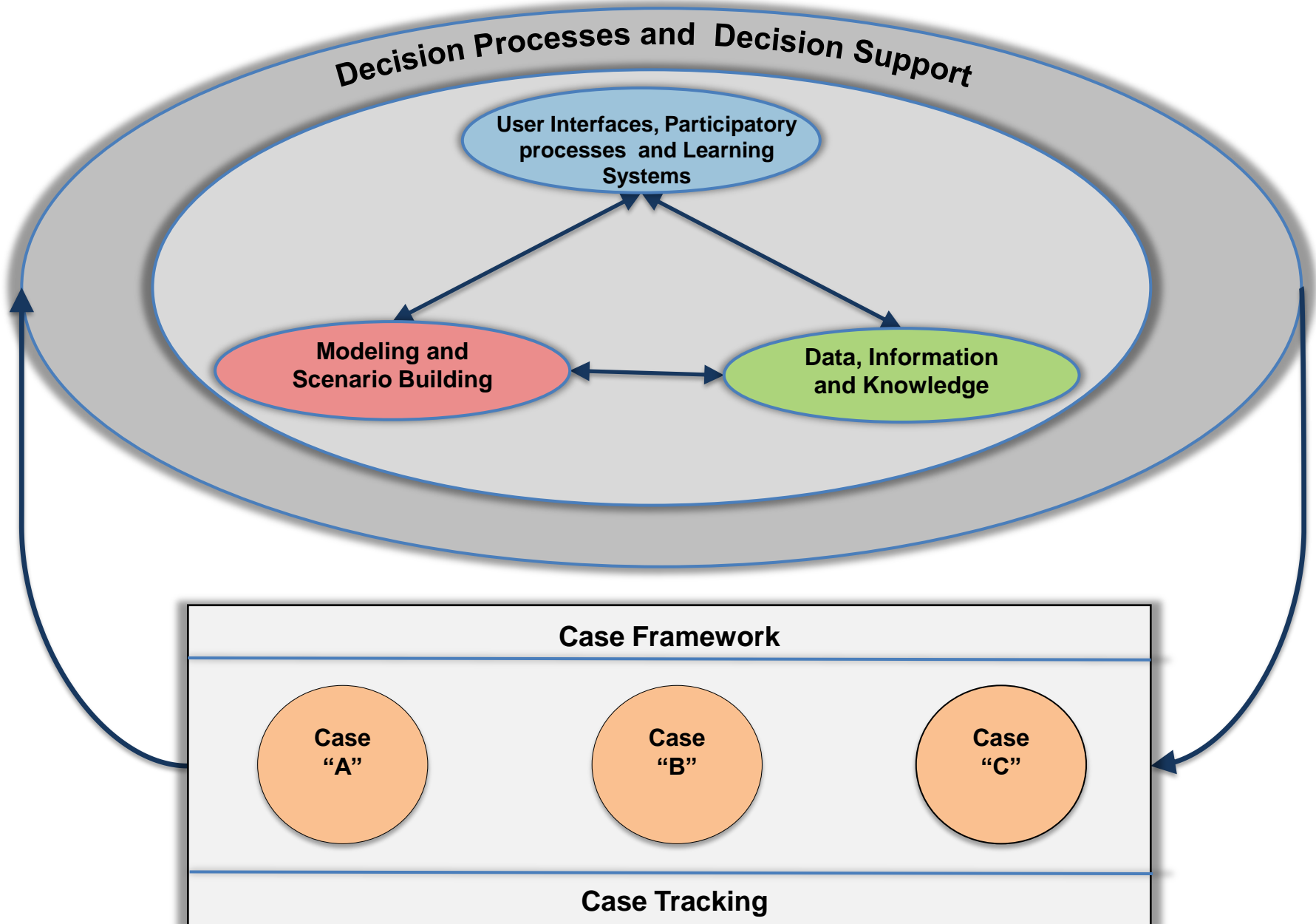
- Multiple decisions

# So Who or (What) is “Knowledge Systems for Sustainability”?

- Network of people working on issues with similar themes/ideas/focus
- Framework for thinking about how to address our really difficult issues
- Challenge: we collectively can do better
  - Sharing what we know and how to do it, and
  - Sharing what we don't know and working together to find solutions



# Dimensions of a KSS Platform



# KSS Portal – Starting the experiment

## Knowledge System for Sustainability

How to feed 9 billion people and not wreck the planet?

KSS Search

I'm Feeling Lucky

- Constructing the knowledge-to-action and action-to-knowledge pathways
- Begin tracking the impacts of each intervention
- Compare the structural and functional similarities and differences of Cases
- Adaptively manage for the needs of the decision maker



# May 2-3 2013 Discussion

## Areas of Concern (A. Swanson)

- Manure management
- Storm water
- Backdrop of population growth



Photos from Chesapeake Bay Program



# May 2-3, 2013 Discussion

## **Participants (~35 people)**

- Chesapeake Bay Program
- Chesapeake Bay Commission
- Members of STAC, other researchers
- KSS representatives
- Other interested participants

## **CBP identified action items for follow up:**

1. Integrate social sciences
2. Develop modeling laboratory
3. Develop spatially explicit + scalable tools
4. Build new relationships, expand existing partnerships to leverage change
5. Leverage additional resources beyond current scope of CBP



# Follow Up So Far...

## May

- Meeting with Ann Mills, USDA
- Discussion with Puget Sound Partnership
- Follow up discussion with Oak Ridge National Laboratory

## June

- Initial discussion at Penn State re: Dairy CAP project
  - \$10 million USDA grant to examine greenhouse gas emissions of dairy farms- are there ways to leverage this for water quality concerns as well?
- Beginning to explore potential positive examples
  - Wisconsin producers, other
- Draft document summarizing potential actions

## July

- STAC presentation
- Beginning discussions with agricultural producers

# Next Steps

- Briefings, discussions with work groups/committees
- Further outreach to producers
- Seek funding/resources/partners outside of CBP
  - Further follow up with Ann Mills
  - Create partnerships/leverage opportunities that don't already exist
    - i.e., integration of social sciences
    - Dairy CAP project
    - Pacific Northwest National Laboratory work



# Questions/Discussion

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