

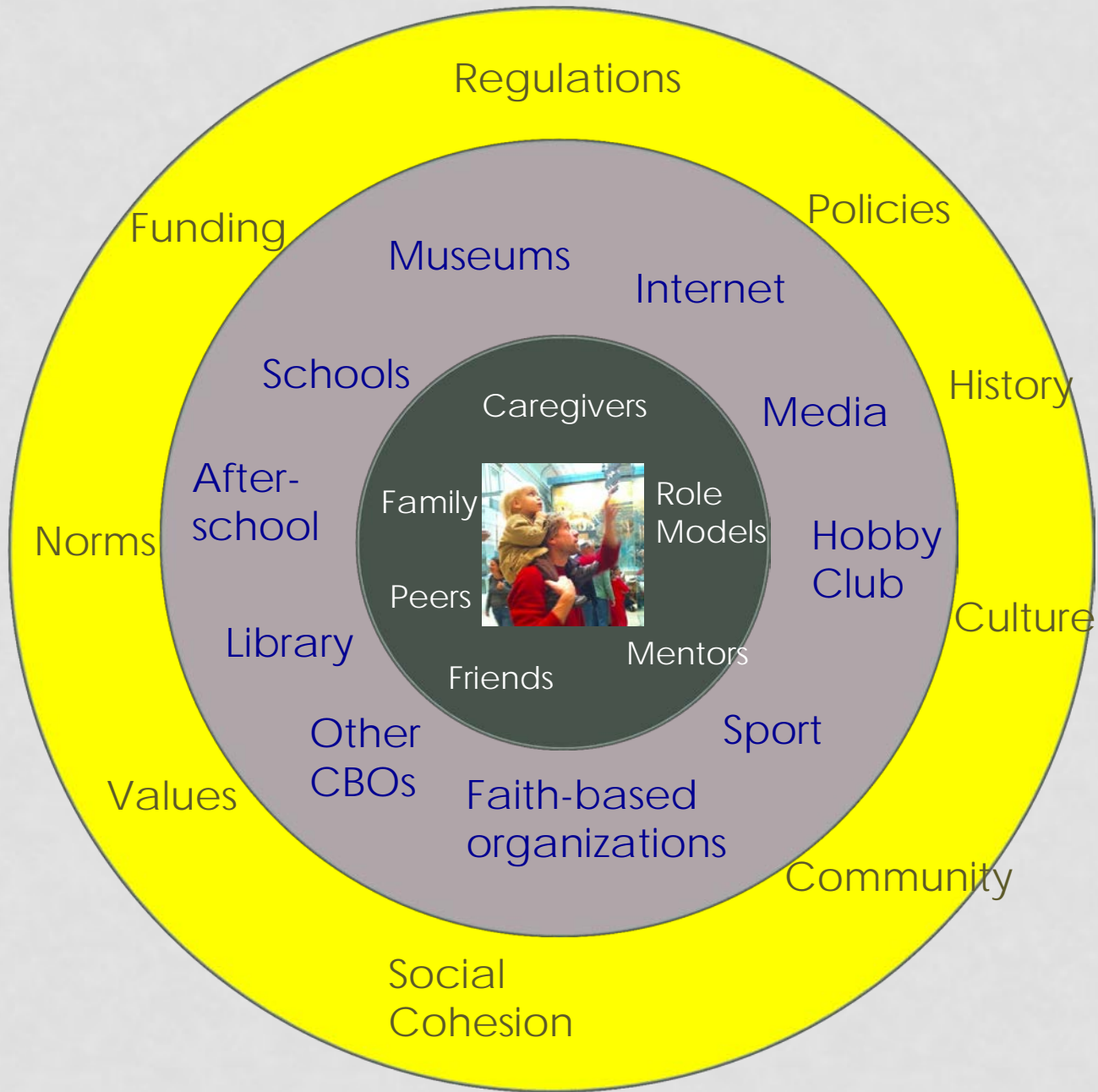
# “BEST PRACTICES” IN INFORMAL STEM EDUCATION AND SCIENCE COMMUNICATION

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Education (CAISE)

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2017



**Oregon State  
University**



Regulations

Policies

Funding

Museums

Internet

Schools

History

Caregivers

Media

After-school

Family

Role Models

Norms

Hobby Club

Peers

Mentors

Culture

Library

Friends

Sport

Values

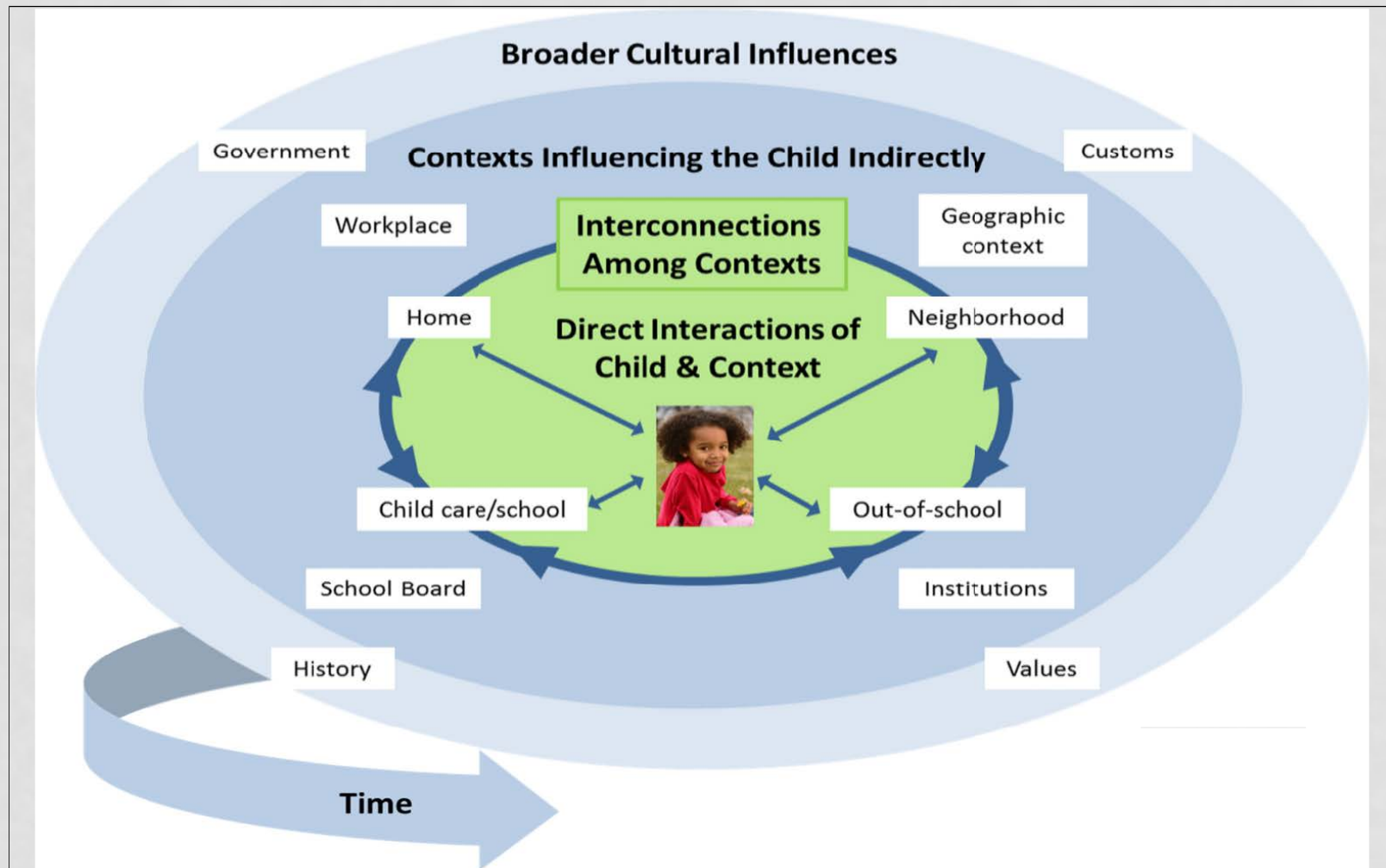
Other CBOs

Faith-based organizations

Community

Social Cohesion

# STEM LEARNING ECOSYSTEMS ARE THE NEW FRONTIER IN ISE



# Identifying and Supporting Productive STEM Programs in Out-of-School Settings



NATIONAL RESEARCH COUNCIL  
OF THE NATIONAL ACADEMIES

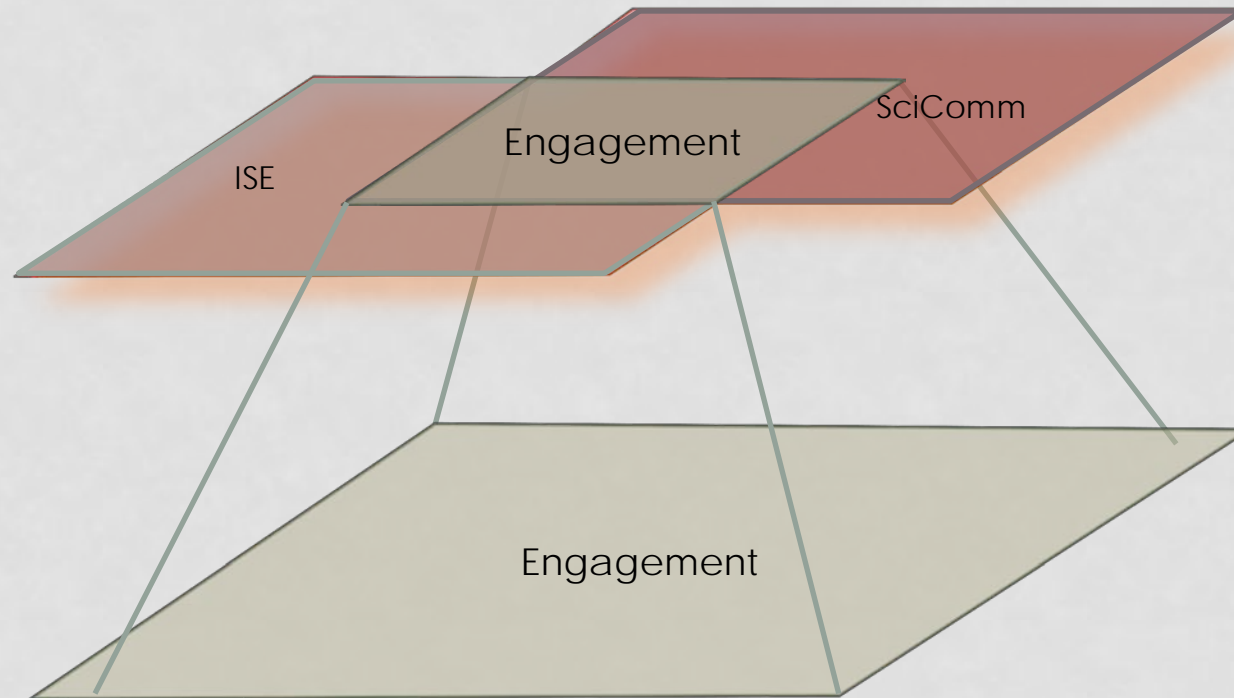
NATIONAL RESEARCH COUNCIL  
OF THE NATIONAL ACADEMIES

# STEM LEARNING IS EVERYWHERE

Summary of a  
Convocation on  
Building Learning  
Systems



# “ENGAGEMENT” AS THE BRIDGE BETWEEN ISE AND SCIENCE COMMUNICATION



## SciComm -> ISE

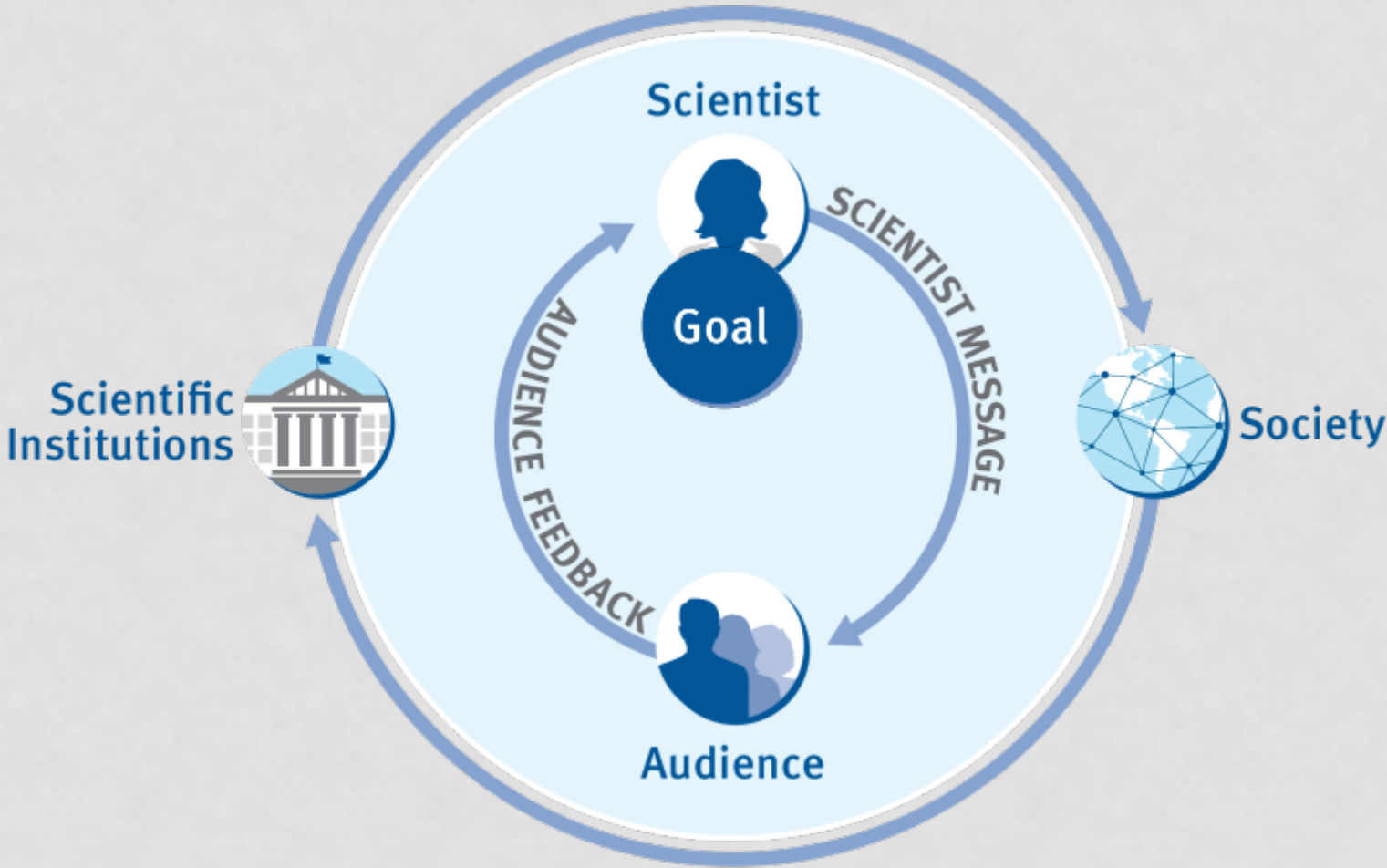
- Broader societal context of science discourse
- Psychology of attention and information processing
- Interaction between individual and group
- Understanding of language as means to connect (including visual languages)

## ISE -> SciComm

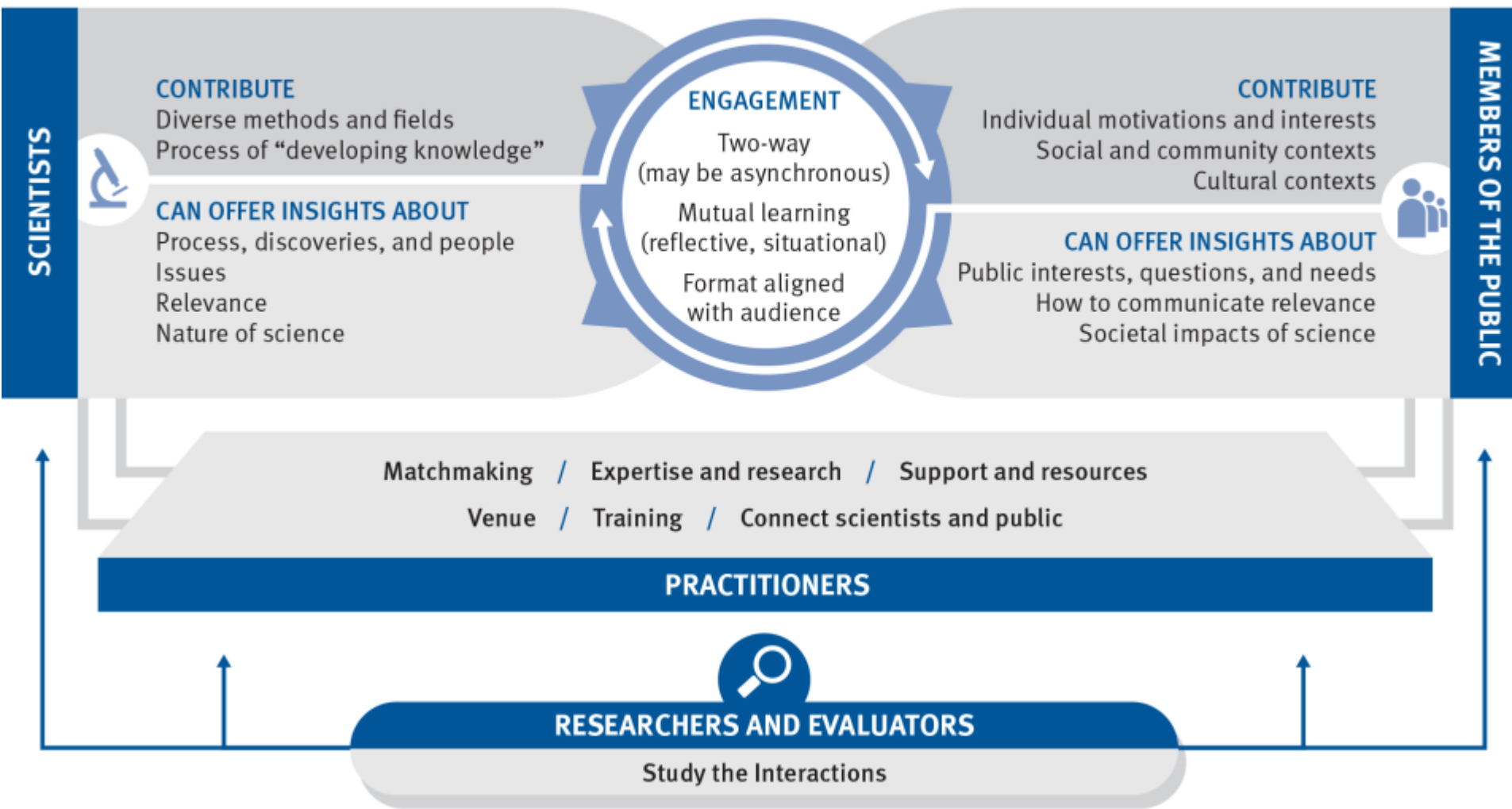
- Evaluation and use of evidence in design
- Broadening participation
- Partnerships with other social groups
- Ecology of learning framework (systems thinking)

# PUBLIC ENGAGEMENT FRAMEWORK

(SOURCE: AAAS)



# PUBLIC ENGAGEMENT WITH SCIENCE: A Visual Model



Source: AAAS

# ISE VS SCICOMM

	ISE	Engagement	SciComm
Museums	x	x	
Media	x		x
Afterschool	x	x	
School connections	x	x	
Involvement of scientists	x	x	x
Individual person driven possible		x	x
Learner centered	x	x	
Pedagogy	x	x	
Andragogy		x	x
Inquiry-based	x	x	



# PUBLIC ENGAGEMENT WITH SCIENCE

- Multi-directional dialogue
- Varied perspectives
- Listens to and respects the public
- Addresses benefits and limits of science
- Offers scientific evidence
- Responds to societal issues and concerns
- Process is important



Photo Credit: USDA

Source: AAAS