

Systemic Engagement: Universities as partners in systemic approaches to community and systems change

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Engagement Scholarship Consortium Conference

September 30, 2015

How can universities partner with communities to more effectively resolve complex problems?



The Isolated Impact Approach

- Addresses a single problem
- Limited attention to context
- Modest short-term effects within a narrow range of outcomes for targeted population
- Dynamics of system are unchanged
- Lack of coordination among efforts

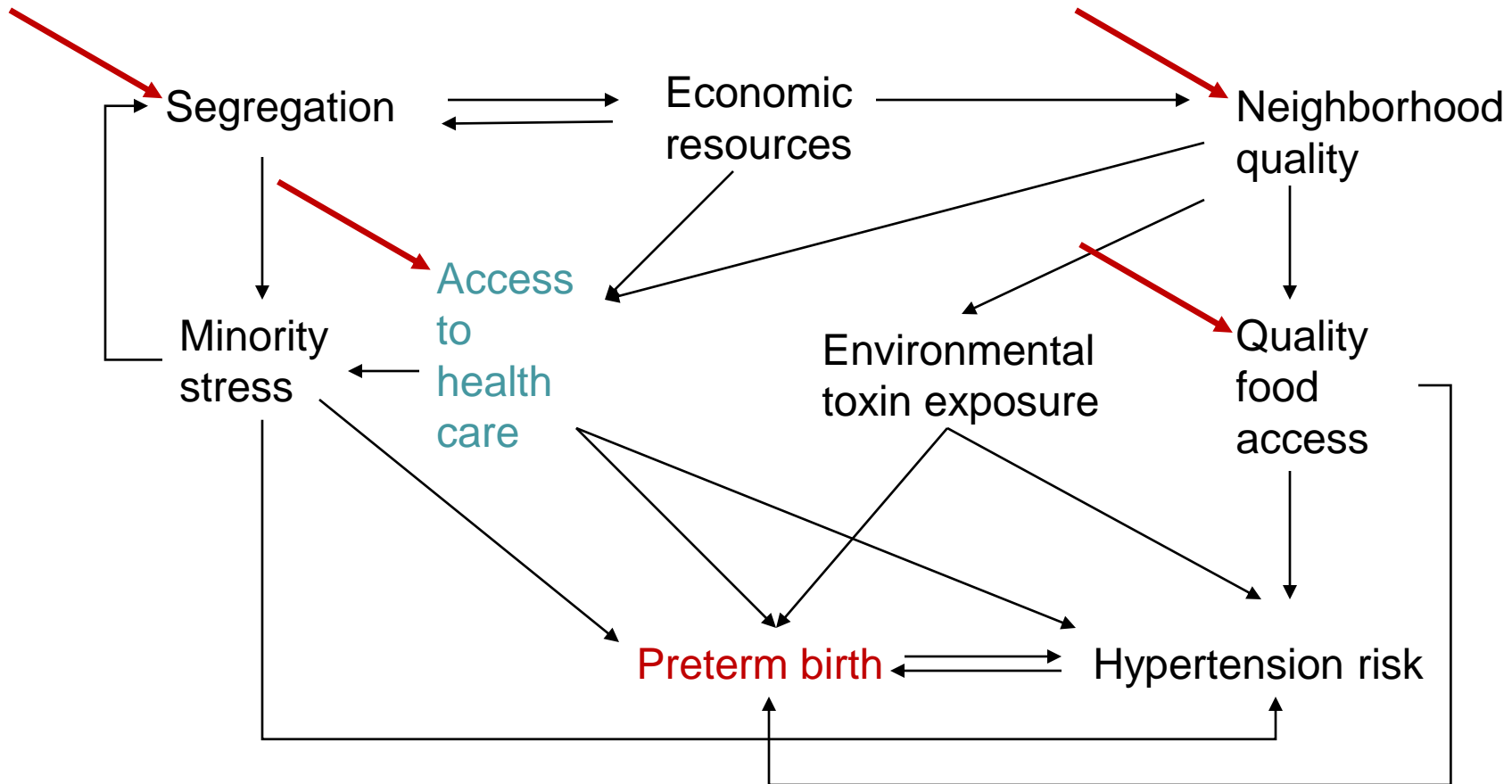
Mess

A system or complex and dynamically interacting web of ill-defined or wicked problems (Alpaslan and Mittroff, 2011, p. 169)

Related Concepts

- **Wicked Problems** (Rittel and Webber 1973)
- **Syndemics** (Singer, 1994)
 - *“set of synergistic or intertwined and mutual enhancing health and social problems facing the urban poor” (1994, p. 933).*

Pre-term birth and hypertension



“A partial solution to a whole system of problems is better than whole solutions of each of its parts taken separately” (Ackoff, 1999, p. 324).

Systemic Engagement

Universities as partners in *systemic*
approaches to community and systems
change.



Origins of Systemic Engagement



Frustration is the father of
systems approaches

Origins of System Engagement

Systems Thinking & Modeling

**Hard Systems
Approaches**

**Soft Systems
Approaches**

Collaborative Approaches to Research & Evaluation

**Community-
Based
Participatory
Research**

**Participatory
Action Research**

**Systemic Action
Research**

**Developmental
Evaluation**

Systemic Approaches to Community & Systems Change

**Collective
Impact**

**ABLE Change
Framework**

Six Principles of Systemic Engagement

Six Principles of Systemic Engagement

1. Systems thinking
2. Collaborative inquiry
3. Support for ongoing learning
4. Emergent design
5. Multiple strands of inquiry and action
6. Transdisciplinarity/transsectorality

Wiba Anung Partnership

- Michigan State University
- Inter-Tribal Council of Michigan
- Bay Mills Community College
- Nine Michigan tribes

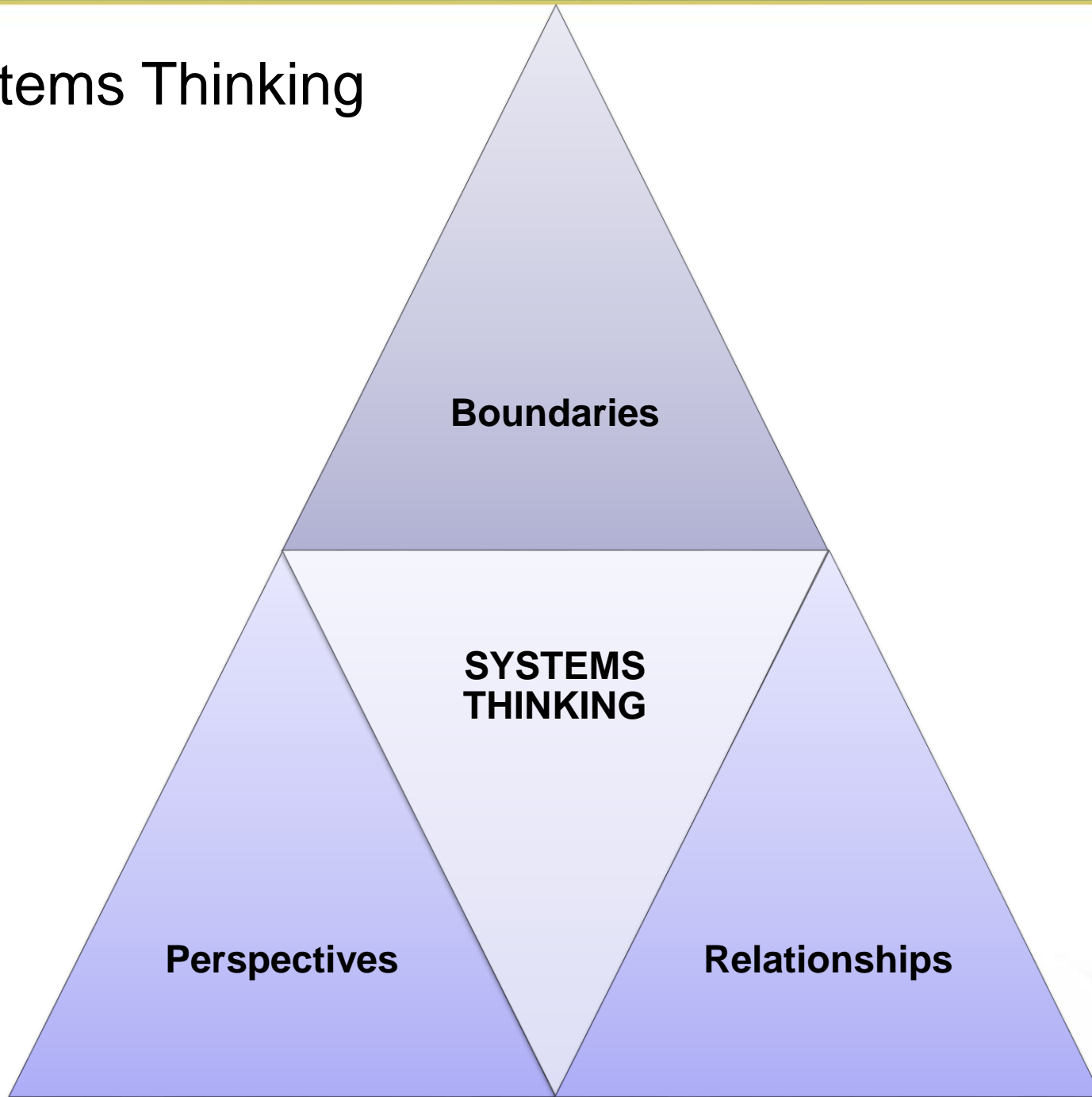


Wiba Anung Partnership: Purpose

- Disparities in early childhood education outcomes
- Lack of early childhood research in tribal communities



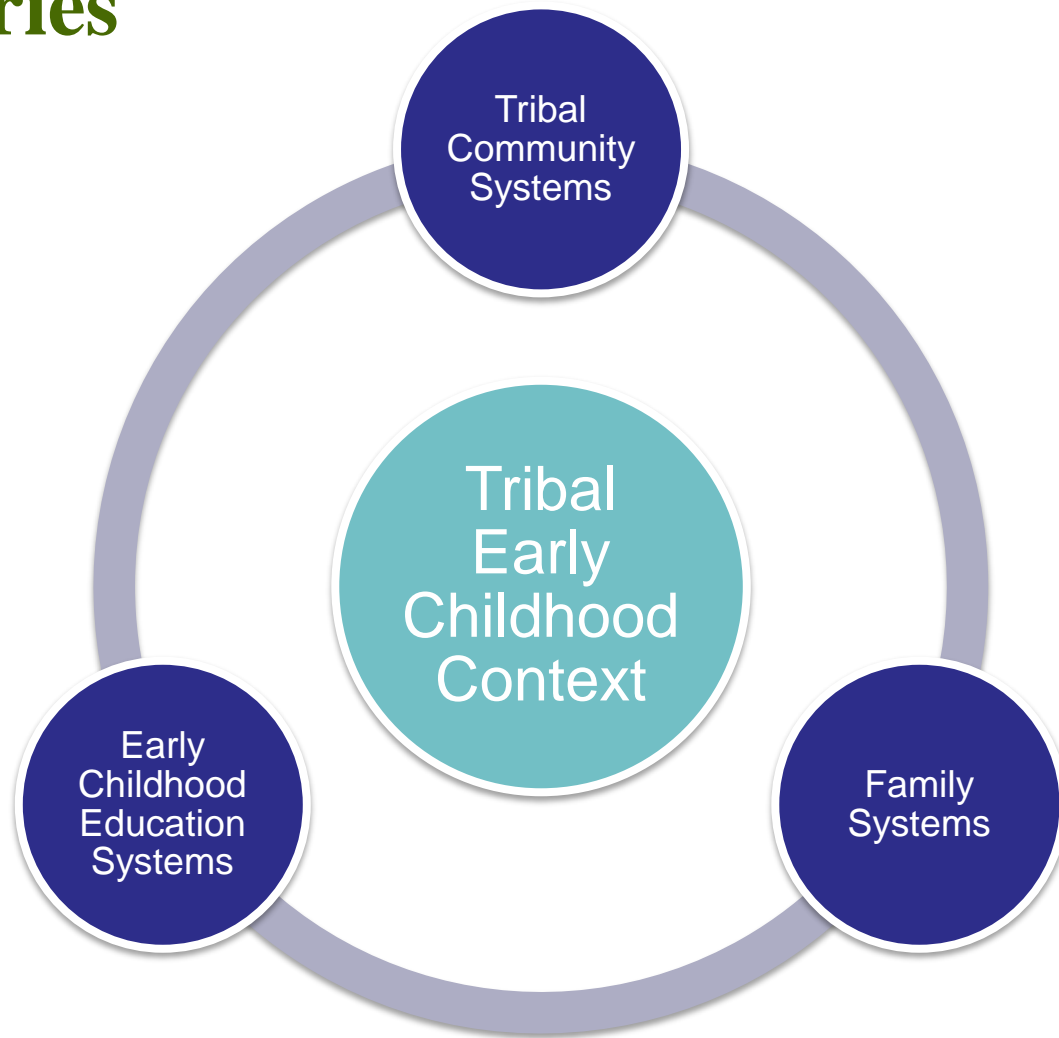
1. Systems Thinking



Boundaries

- Systems perspective is inclined towards holism
- Boundaries are arbitrary but essential
- Boundaries determine who/what is included
 - Whose perspectives are considered relevant?
 - What elements of the context are included?

Boundaries

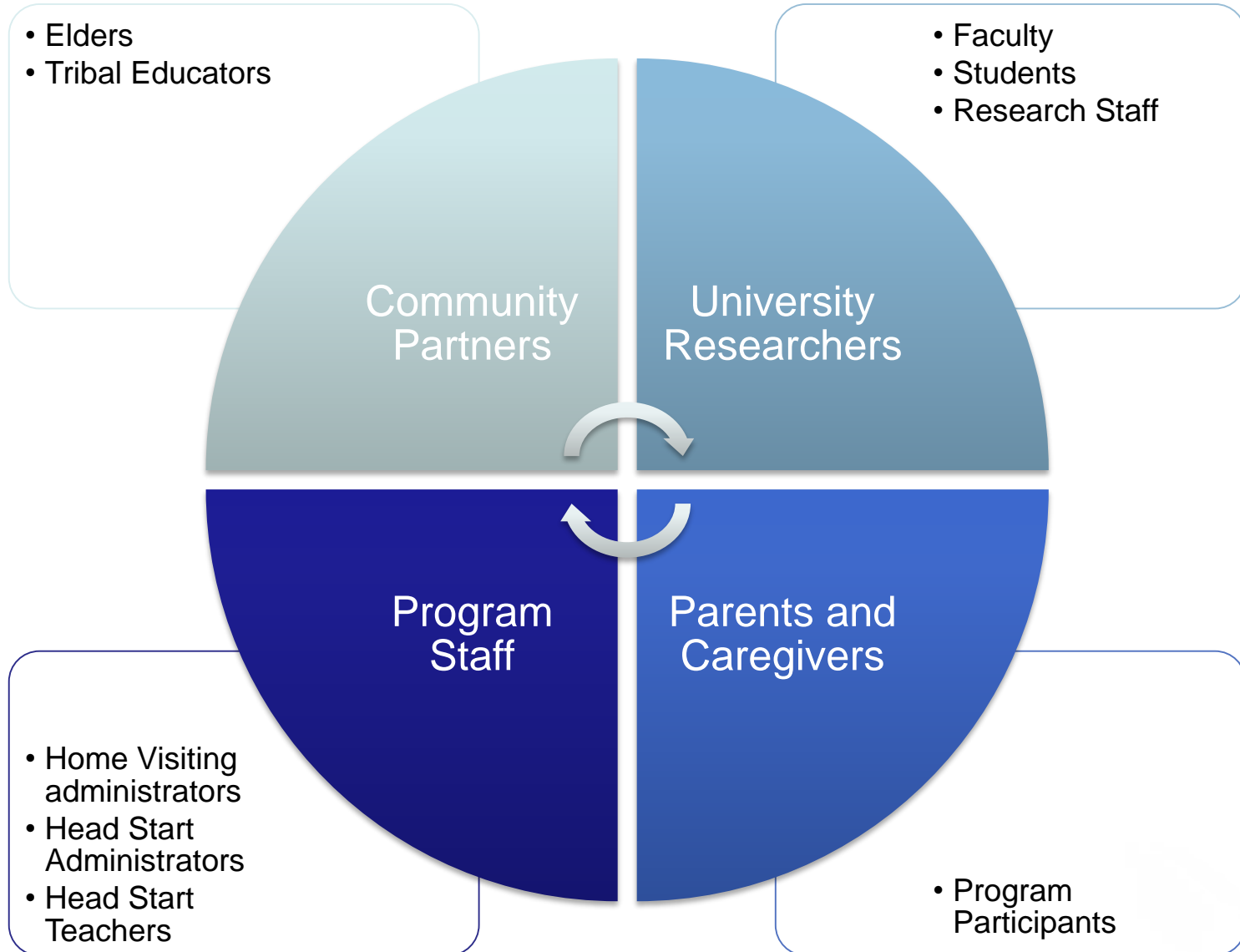




Perspectives

- SE pushes out the boundaries of inclusion to incorporate the perspectives of a broad range of both community-based and university-based actors with a stake in the problem
- SE includes both *local and indigenous knowledge* and generalized university-based knowledge both in understanding problems and in generating solutions to manage them

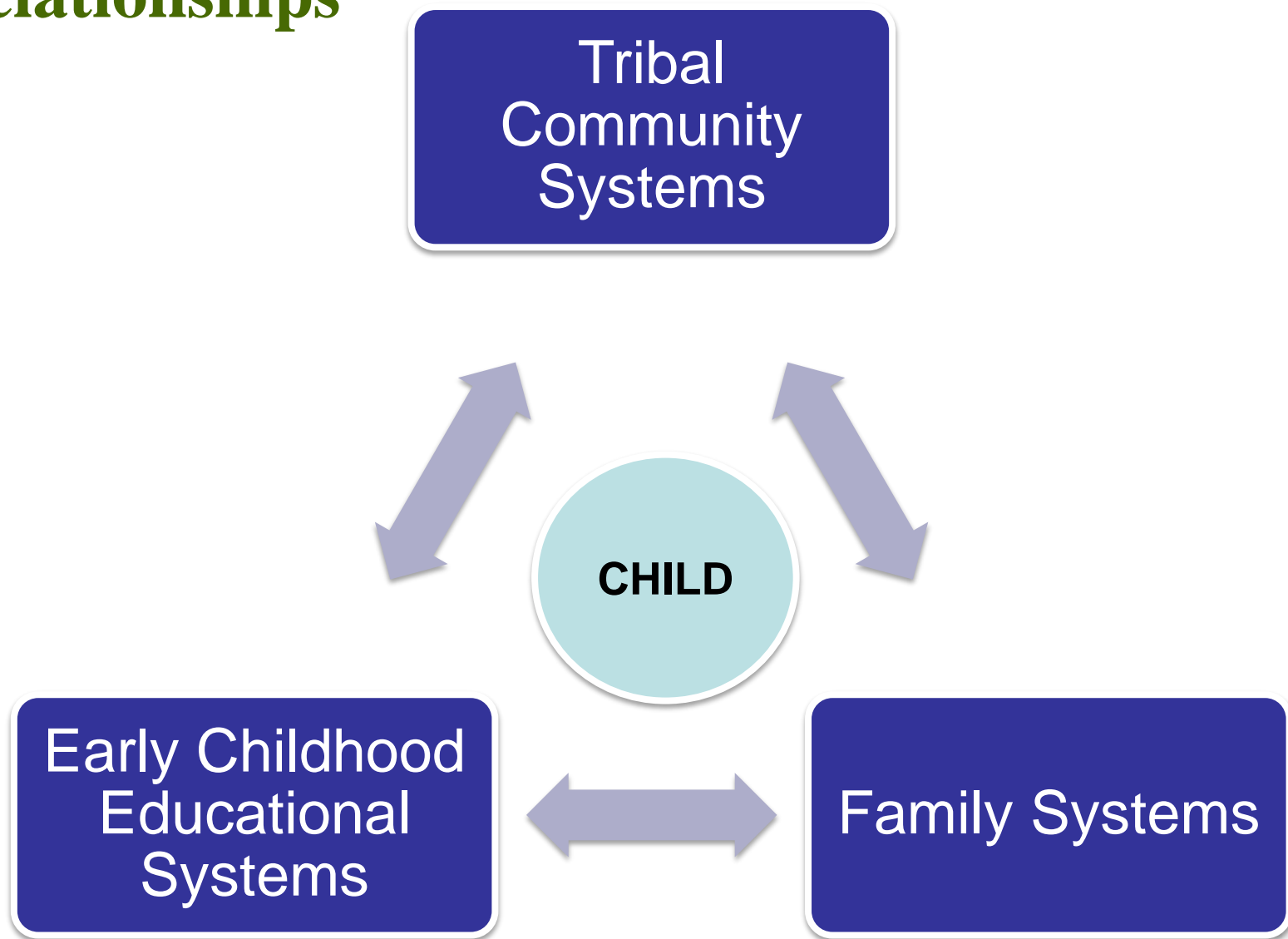
Wiba Anung Partnership Team

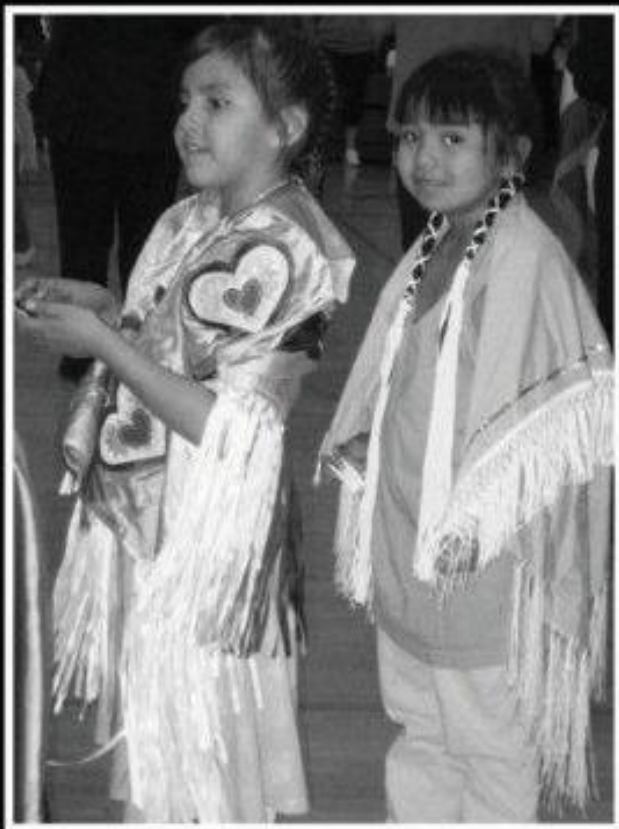


Relationships

- SE explores the relationships between systems and subsystems and among the components of systems to reveal the complex dynamics that perpetuate the problem of concern.

Relationships





Honoring Our Children



The Heartbeat

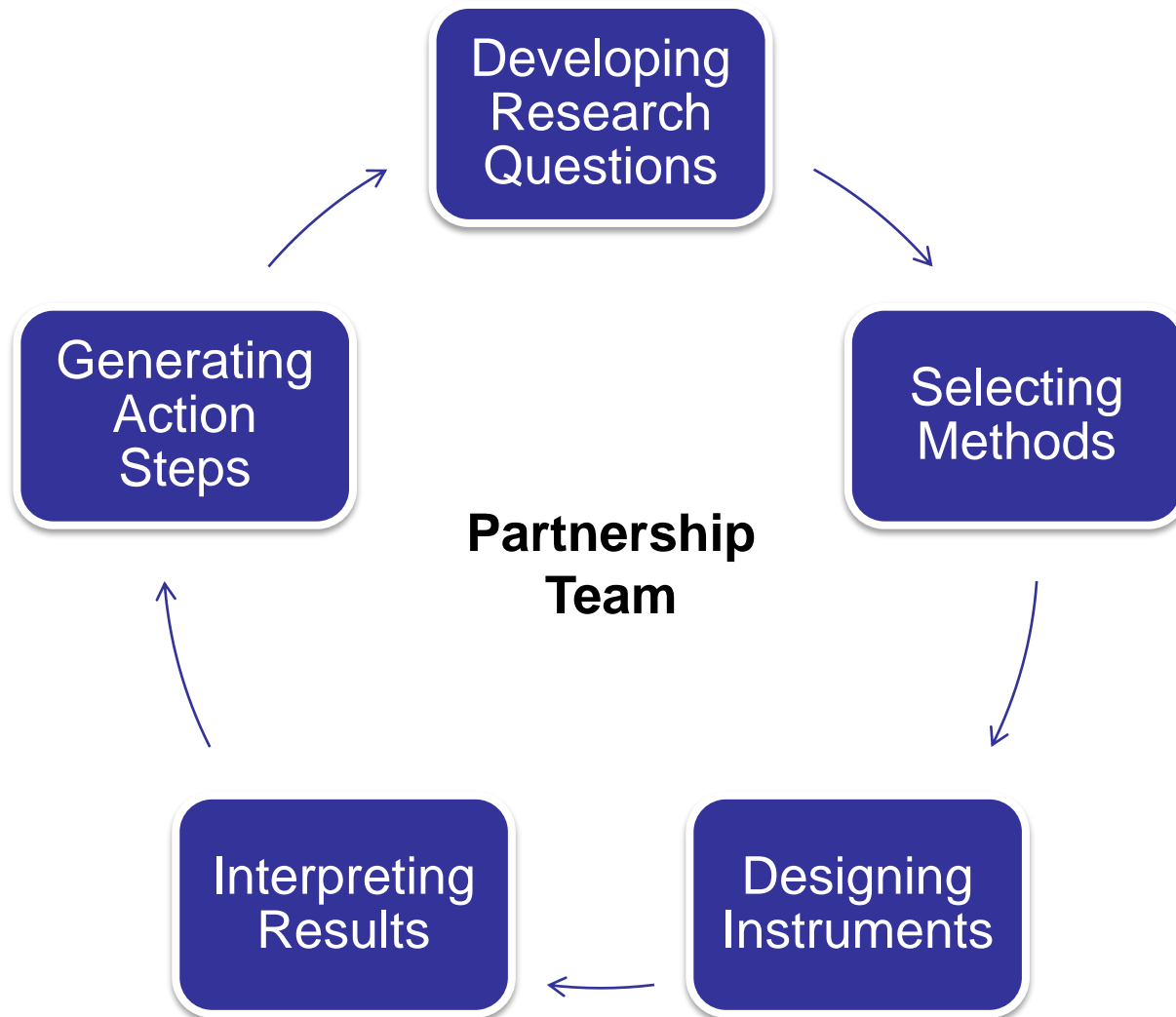


Opportunities

2. Collaborative Inquiry & Action

- Use of collaborative and participatory approaches to research and evaluation:
 - Community-Based Participatory Research
 - Participatory Action Research
 - Participatory Evaluation

Collaborative Inquiry & Action

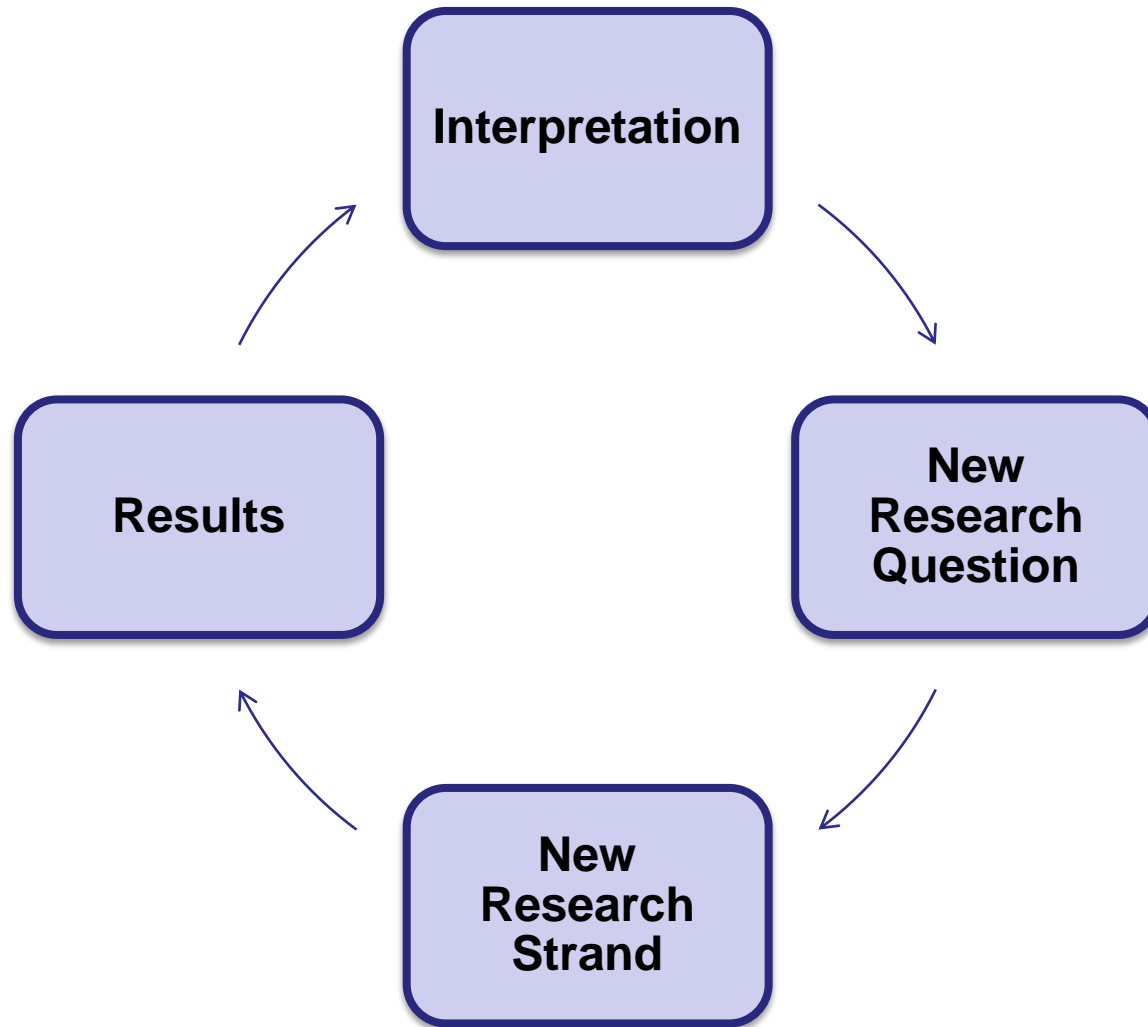


3. Support for Ongoing Learning

Community/systems change initiatives:

- require **flexible, adaptive approaches to inquiry** that produce findings in real time to support ongoing learning and action.
- involve **ongoing cycles of inquiry and action**, with evaluators and researchers providing continuous support to learning teams

Support for Ongoing Learning



4. Emergent Design

- Operating in the context of complex dynamic systems requires an approach to inquiry that is **flexible, adaptable, and responsive** to context.
- Design, methods, and measures are sketched out initially in very broad terms, with the **specific elements of the design emerging based on what is being learned.**

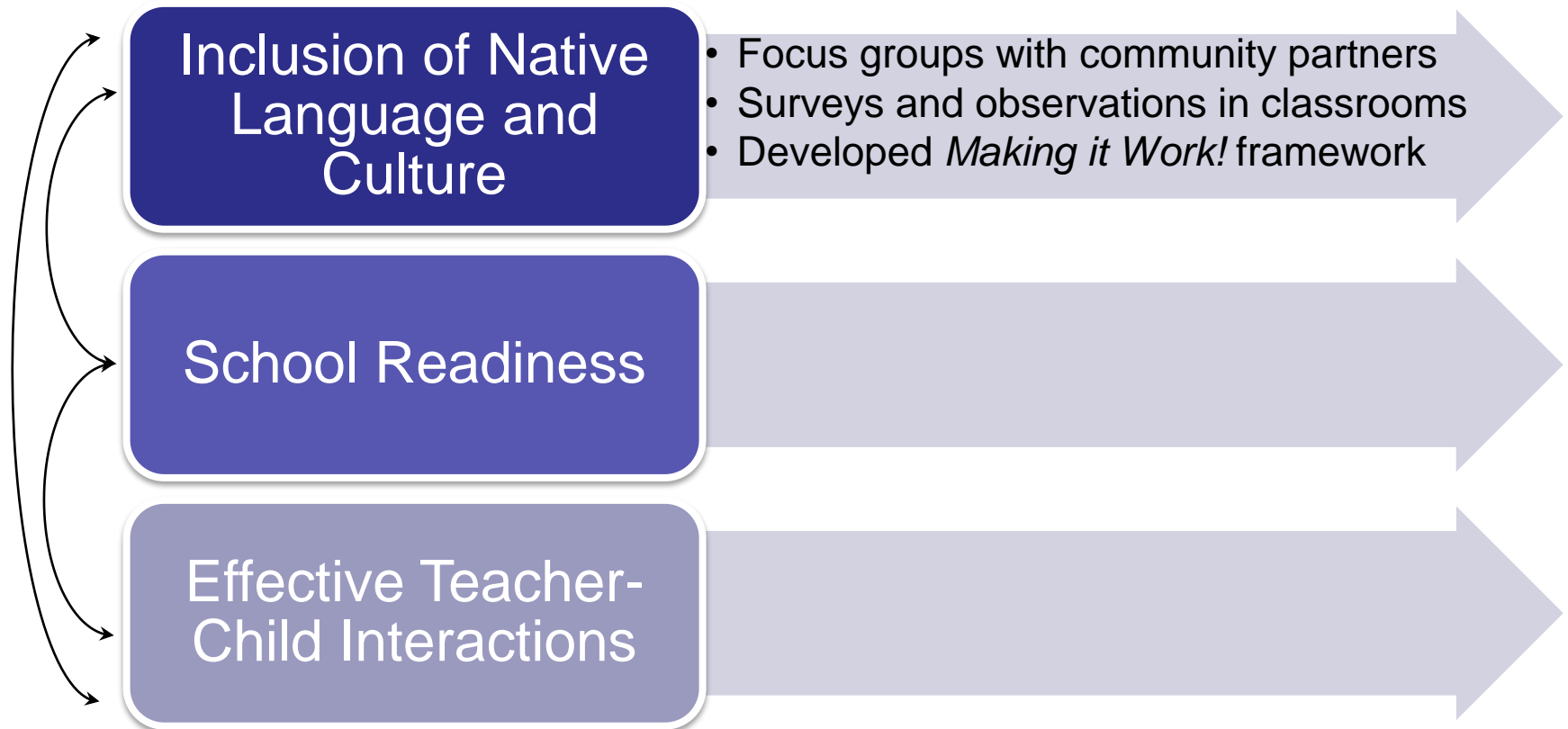


Multiple Strands of Inquiry and Action

- The effective management of messes depends on the mobilization of multiple strands of inquiry and action, with each strand directed at a particular element within a larger mess.



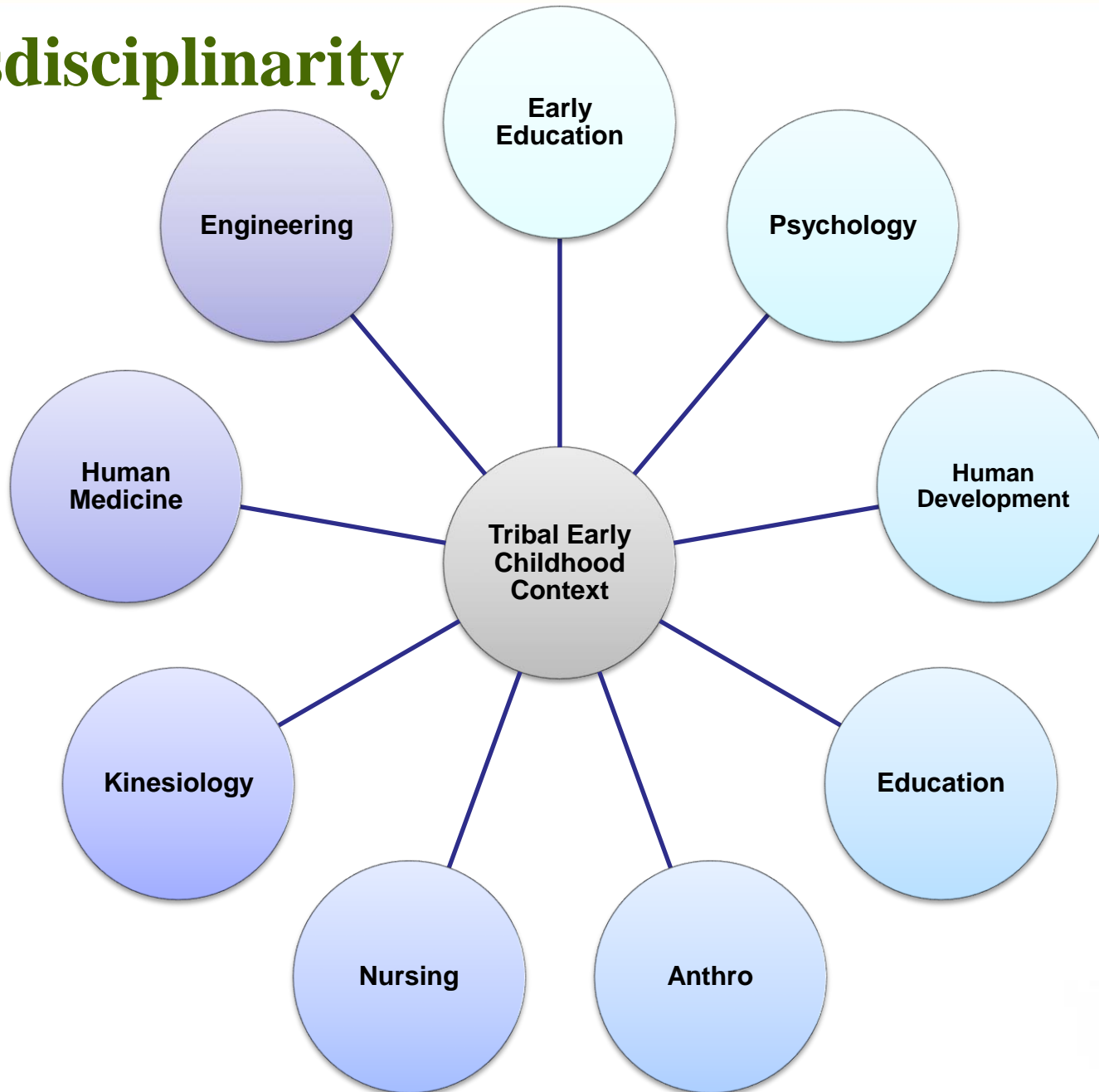
Multiple Strands of Inquiry & Action



Transdisciplinarity/Transsectorality

- Complex social problems do not respect the boundaries of academic disciplines
- They require *transdisciplinarity*, or the participation of multiple disciplines in addressing messes.

Transdisciplinarity



Challenges in Implementing Systemic Engagement



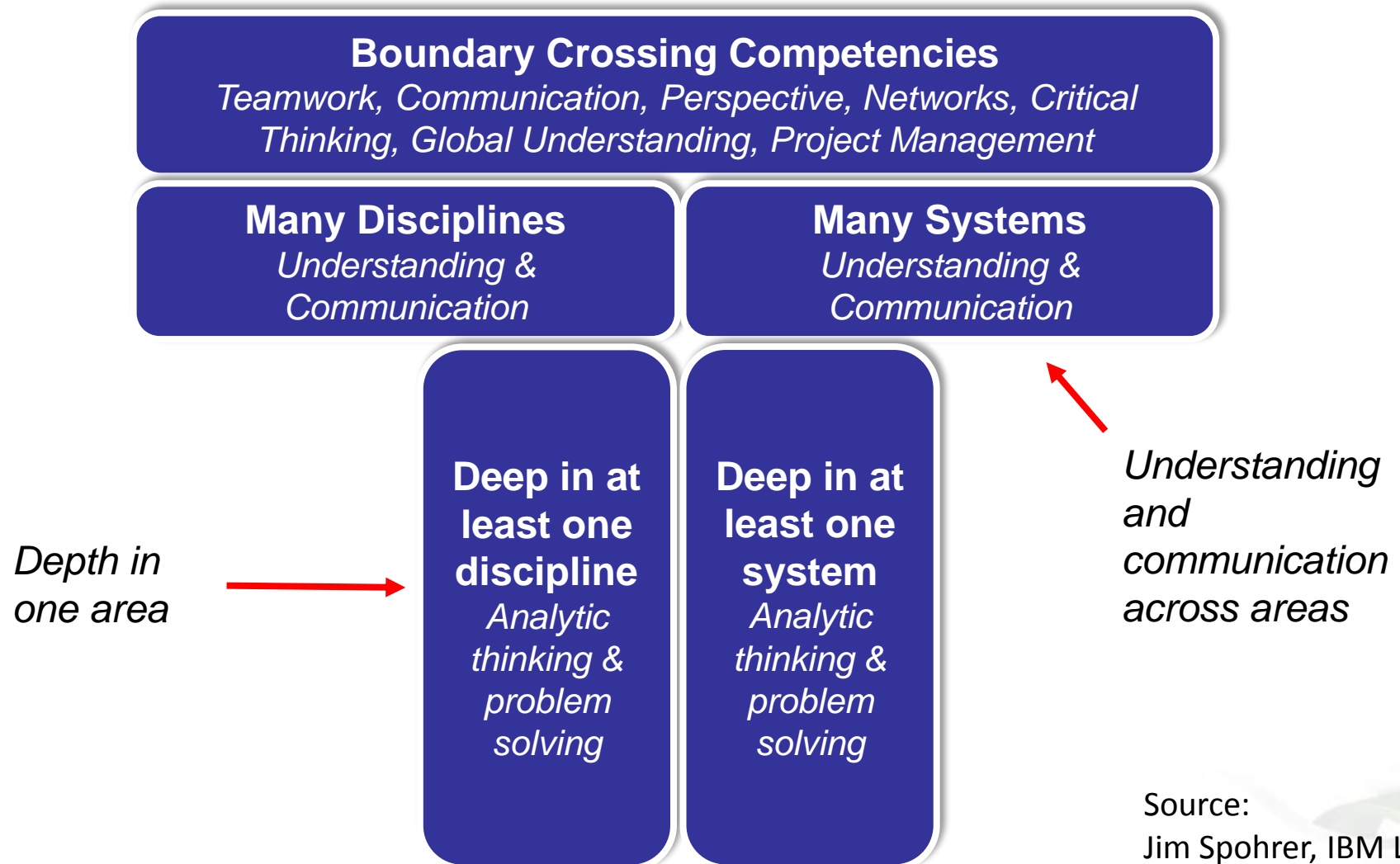
Barriers to *Systemic* Engagement

- Unfamiliarity with collaborative approaches inquiry
- Unfamiliarity with more open-ended approaches to inquiry (emergent design, support for ongoing learning)
- Coordination of multiple strands of inquiry
- Transdisciplinary/Transsectorality

The T-Shaped Professional

- “The need for T-shaped skills surfaces anywhere problem solving is required across different deep functional knowledge bases or at the juncture of such deep knowledge with an application area” (Leonard-Barton, 1995, p. 75).
- T-shaped professionals combine the benefits of deep problem-solving skills in one area, with broad complex-communication skills across many areas (Donofrio, Spohrer & Zadeh, 2010).

The T-Shaped Professional



Source:
Jim Spohrer, IBM Labs
Phil Gardner, MSU

Systems Thinking

Transdisciplinarity

Multiple Strands

SE

**Collaborative
Inquiry**

Boundary Crossing Competencies

Many Disciplines

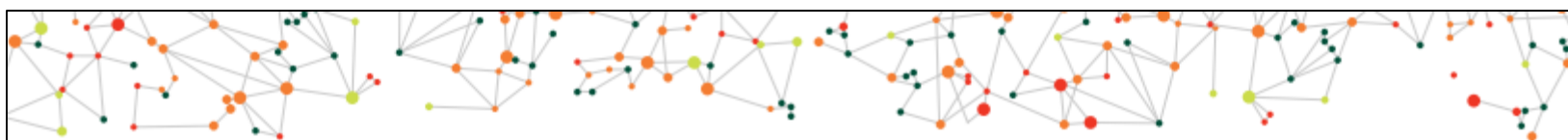
Many Systems

**Deep in
at least
one
discipline**

**Deep in
at least
one
system**

MSU Collegiate Employment Research Institute

<http://www.ceri.msu.edu/t-shaped-professionals/>



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PRESENTATIONS

We are soliciting presentations on:

- **Transdisciplinary (linked) modeling** that integrates knowledge and practice across disciplines
- **Participatory modeling** that involves stakeholders from a wide range of sectors
- **Quantitative systems modeling** techniques

For more information: **MODELING.OUTREACH.MSU.EDU**

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References

- Ackoff, R. (1999). *Recreating the corporation*. New York: Oxford University Press.
- Alpaslan and Mitroff (2011). *Swans, swine, and swindlers: Coping with the growing threat of mega-crises and mega-messes*. Stanford, CA: Stanford Business Books.
- Donofrio, N., Spohrer, J., & Zadeh, H. (2010). Research-driven medical education and practice: a case for T-shaped professionals. *IBM Working Document*. Available on Request.
- Kania, J., & Kramer, M. (2011, winter). Collective impact. *Stanford Social Innovation Review*, 36-41.
- Leonard-Barton, D. (1995). *Wellsprings of Knowledge: Building and Sustaining the Sources of Innovation*, Harvard Business School Press.
- McNall, M. A., Barnes-Najor, J. V., Doberneck, D. M., & Fitzgerald, H. E. (2015). Systemic engagement: Universities as partners in systemic approaches to community change. *Journal of Higher Education Outreach and Engagement*, 19(1), 7-32.
- Rittel, H. W. J., & Webber, M. W. (1973). Dilemmas in a general theory of planning. *Policy*
- Singer, M. (1994). AIDS and the health crisis of the U.S. urban poor: the perspective of critical medical anthropology. *Social Science & Medicine*, 39(7), 931-948.