

Welcome to the ASCN webinar:



Developing and Sustaining Effective Partnerships to Advance Change in STEM Higher Education

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The diagram illustrates the Zoom interface controls and their functions:

- Top Bar Controls:** Mute, Start Video, Invite, Participants (2), Share Screen, Chat, Record, and a red **Leave Meeting** button.
- Callout 1 (Mute/Start Video):** A box with an upward arrow pointing to the Mute and Start Video icons. Text: "Please leave your audio muted and video off (both indicated by a red slash)".
- Callout 2 (Participants):** A box with an upward arrow pointing to the Participants icon. Text: "Click to open the Participants box. This will allow you to give nonverbal feedback." Below this box is a callout pointing to the bottom toolbar.
- Bottom Toolbar (Nonverbal Feedback):** Includes icons for "raise hand", "yes", "no", "go slower", and "go faster".
- Callout 3 (Chat):** A box with an upward arrow pointing to the Chat icon. Text: "Click to open the Chat box. This will allow you to chat with Hosts and Participants". Below this box is a callout pointing to the chat input area.
- Chat Input Area:** A box containing "To: Everyone", a text input field "Type message here...", and a "More" dropdown menu.

ASCN Webinar:

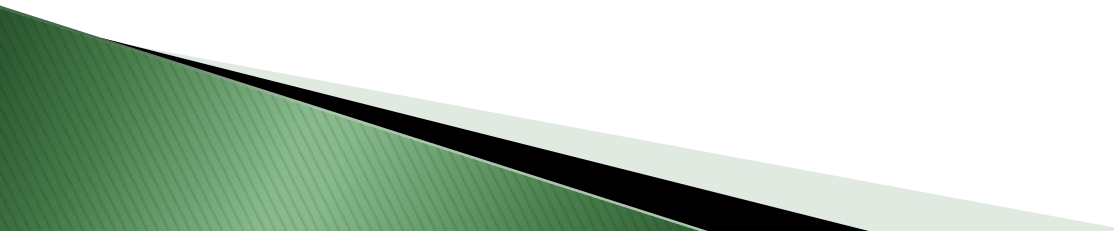
Developing and Sustaining Effective Partnerships to Advance Change in STEM Higher Education

- **Picking Good Partners: Challenges and Strategies for Developing Effective Partnerships**
 - Marilyn J. Amey, Michigan State University
- **Working in Interdisciplinary Teams: Lessons Learned in Influencing STEM Change**
 - Sarah Rodriguez, Iowa State University
- **Making the Most of Multi-Sector Collaboration Through Key Boundary-Spanning Individuals**
 - Lucas Hill, University of Wisconsin-Madison

Picking Good Partners: Challenges and Strategies for Developing Effective Partnerships

Marilyn J. Amey
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amey@msu.edu

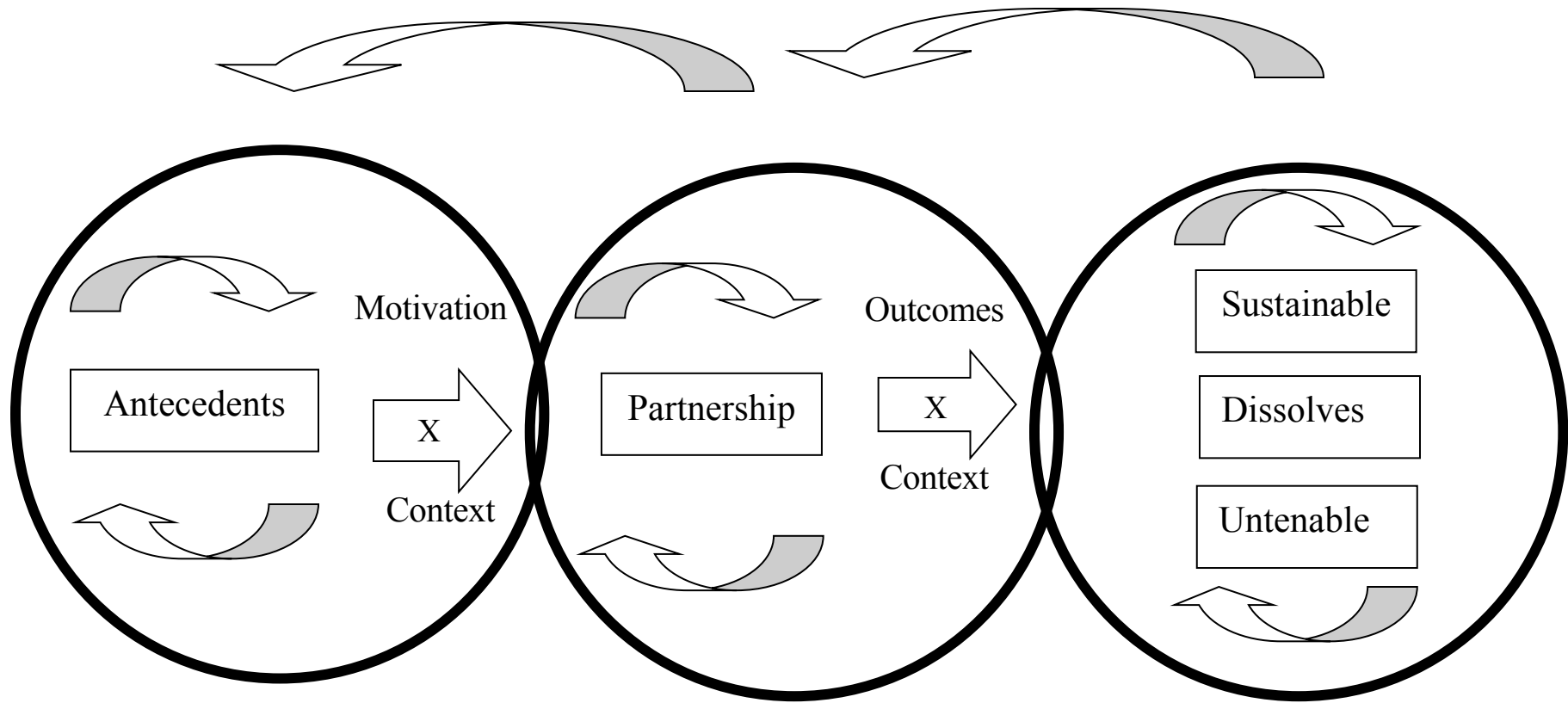
Where I'm coming from

- ▶ Over 15 years of studying educational partnerships, collaborations, consortia, networks
 - ▶ Within and cross-institution, domestic and international
 - ▶ Most recently, BEACON Science and Technology Center [5 universities] and AGEP-CIRTL Network Improvement Community [9 universities]
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Why partnerships?

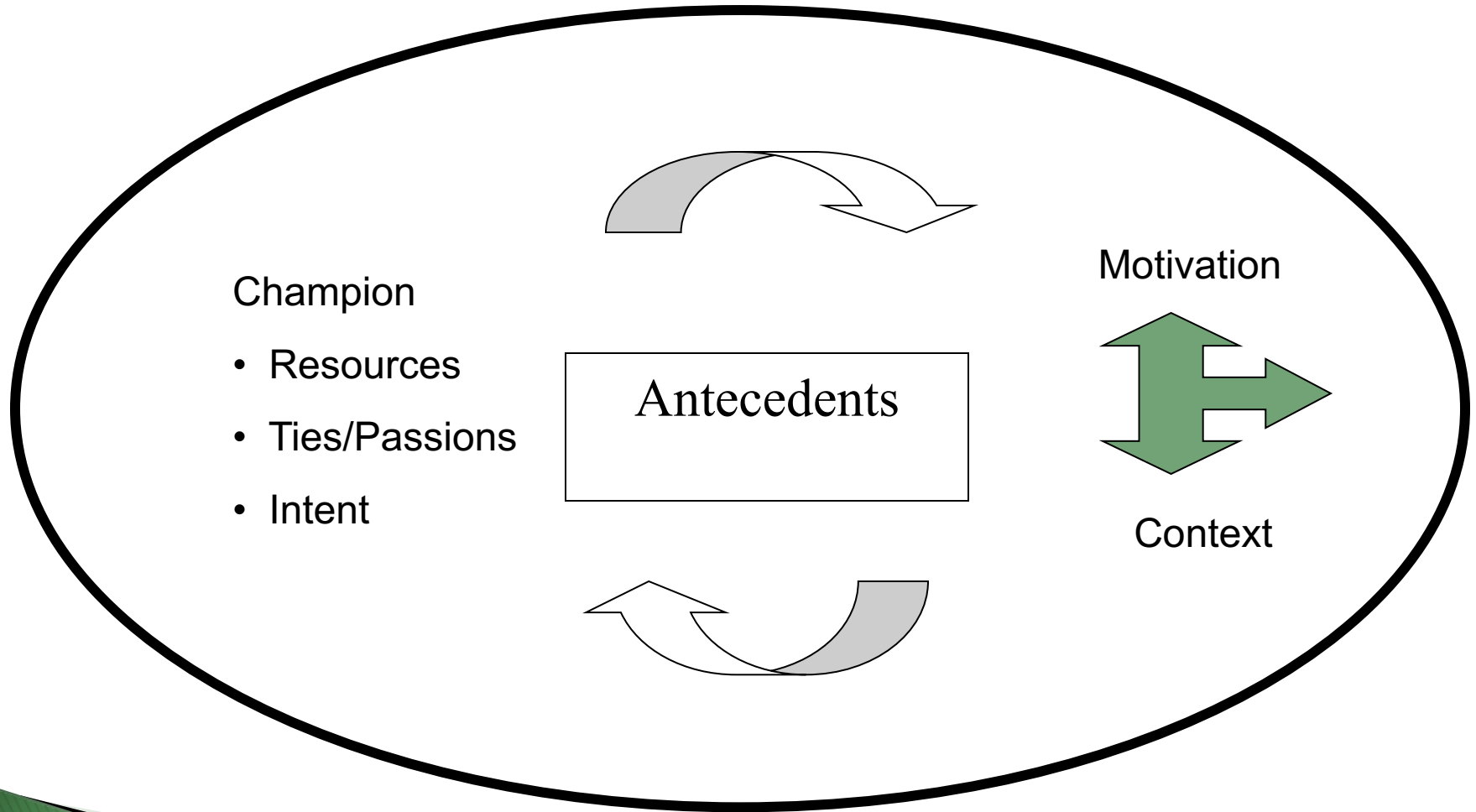
- ▶ Partnerships can be useful
- ▶ Partnerships are often hard to develop and sustain
- ▶ Strategic partnerships are possible

Partnership Model

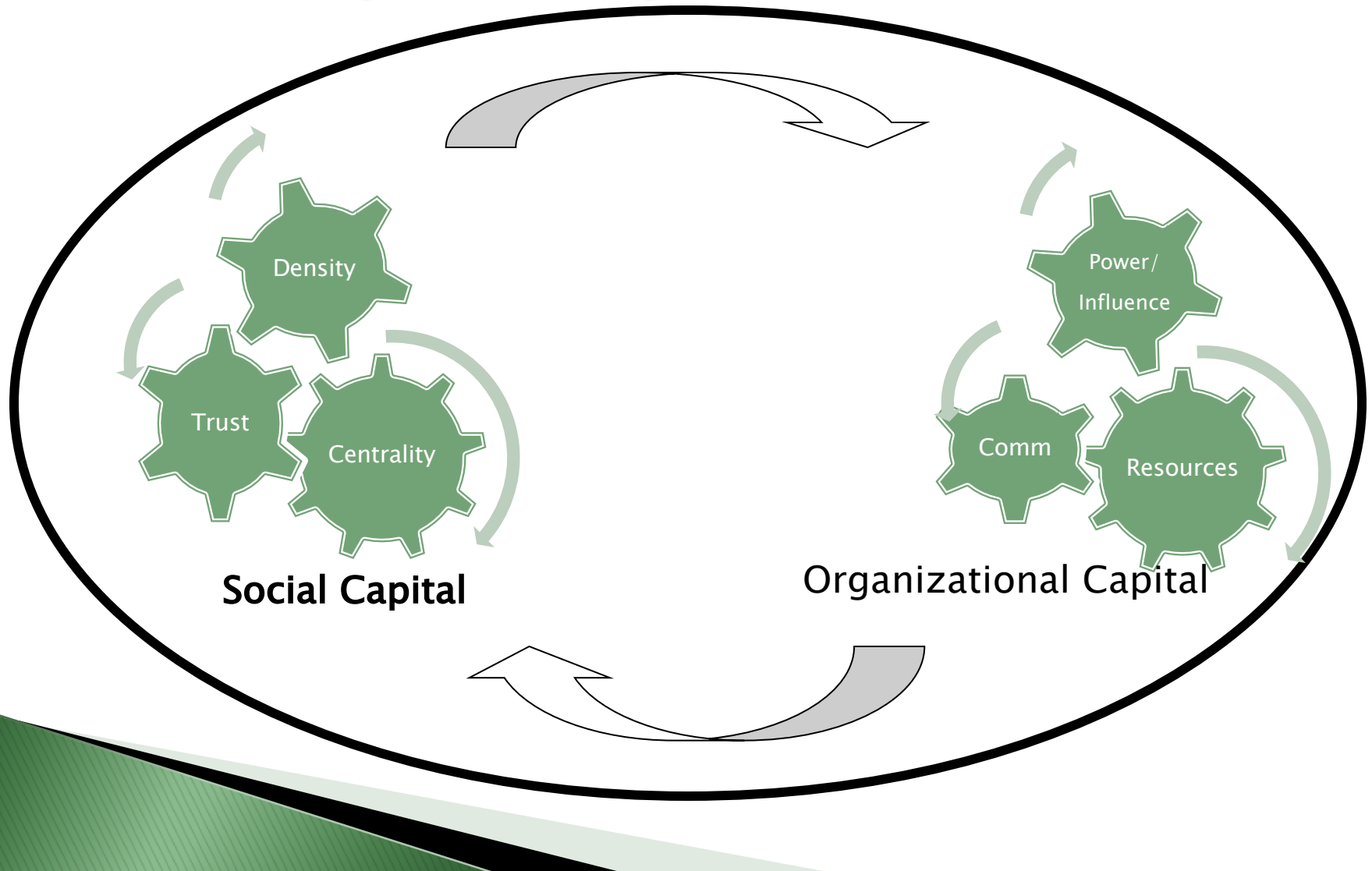


Stage I – Antecedents

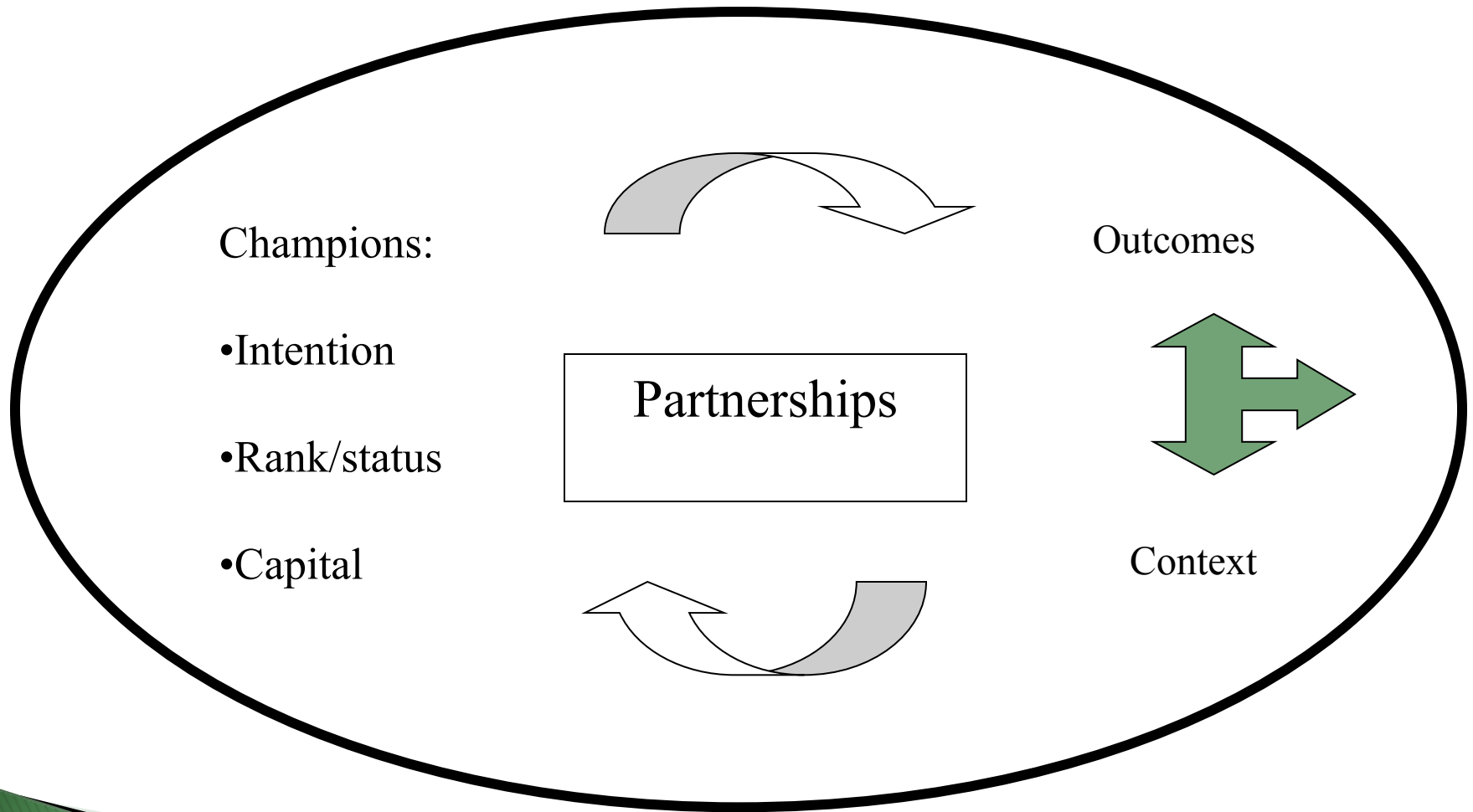
Champion's Role—



Stage I – Antecedents: Social & Organizational Capital in Partnership Development

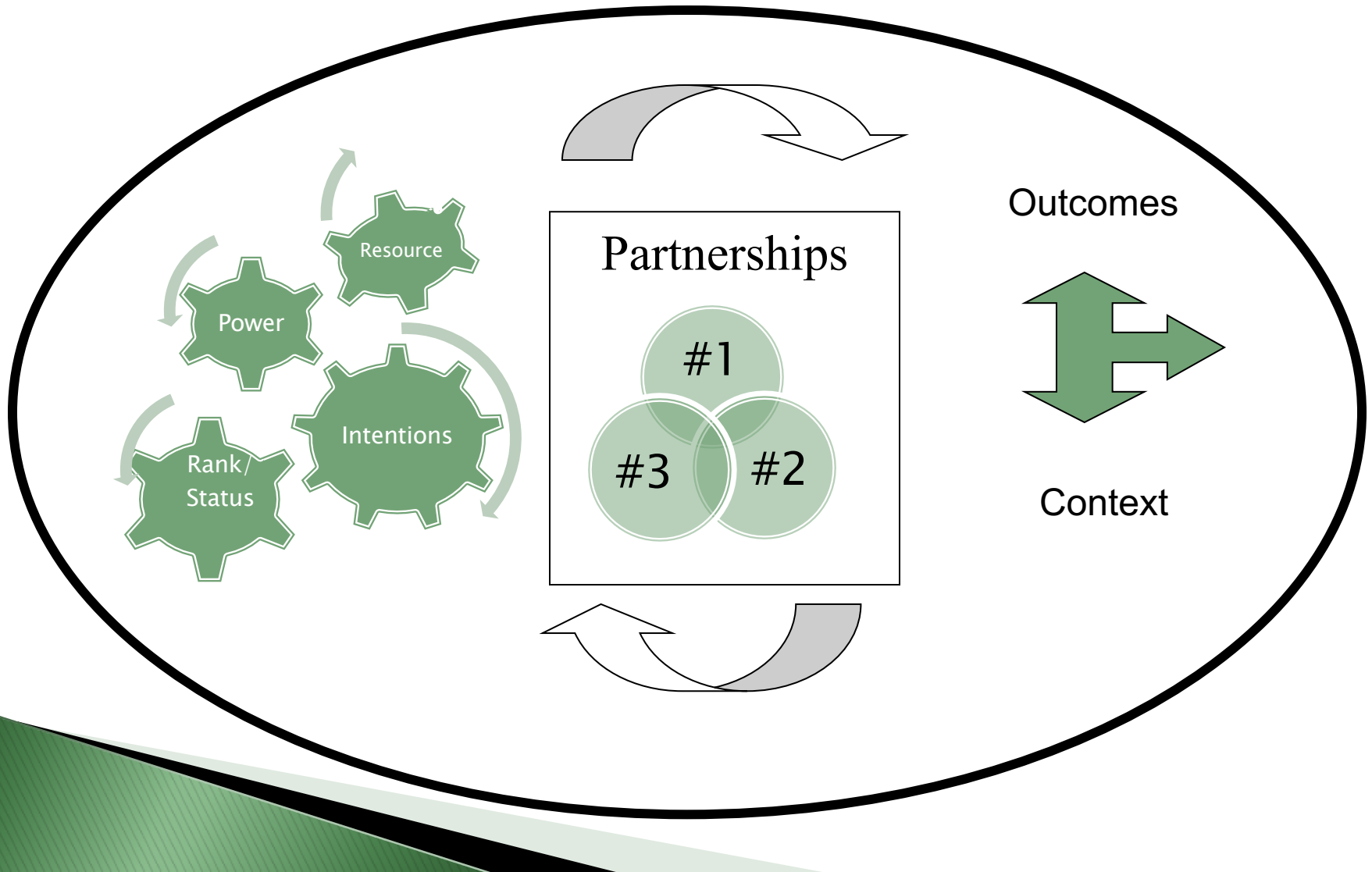


Stage II – Developing Partnership Champion's Role—



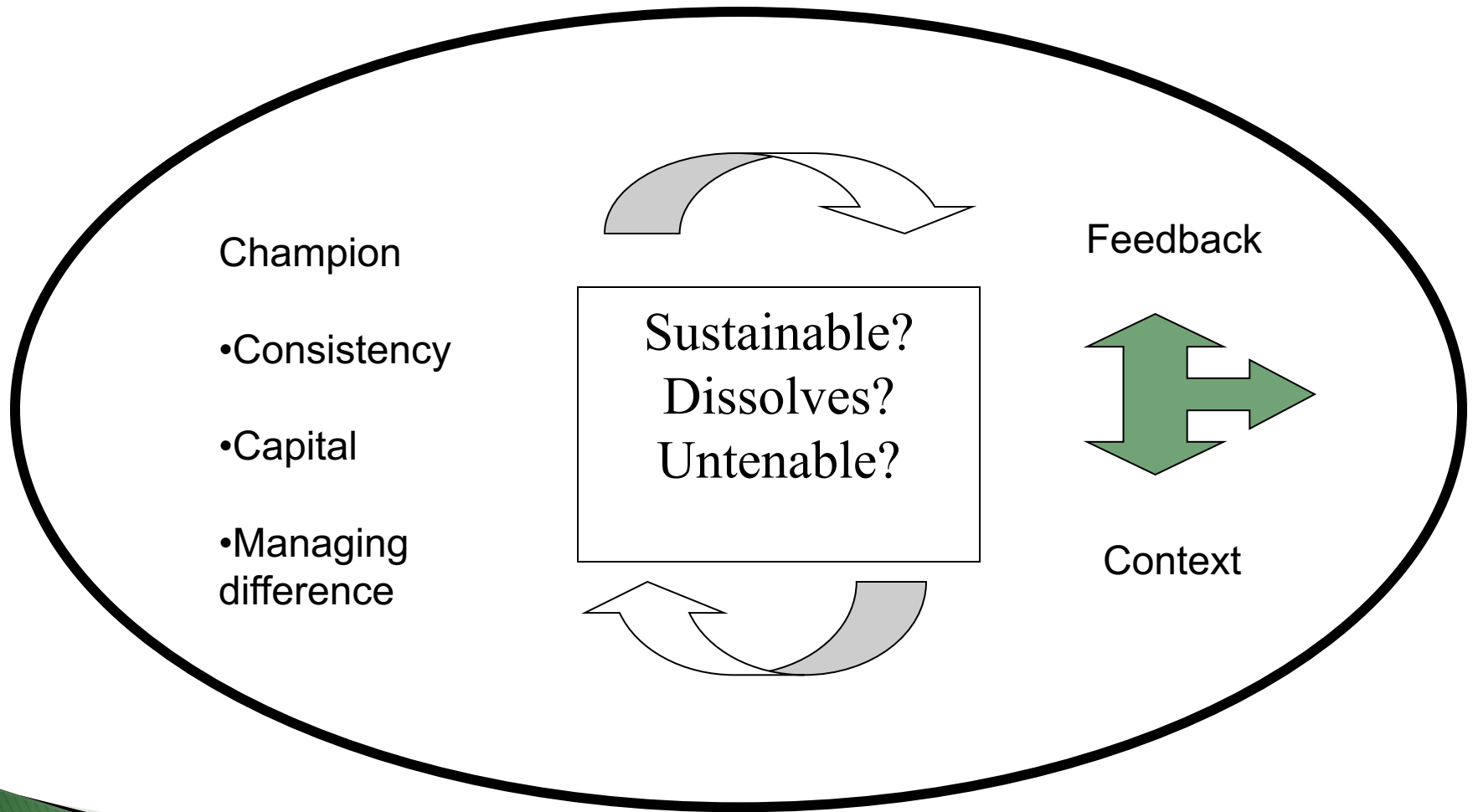
Stage II – The Developing Partnership

Negotiating Social Capital

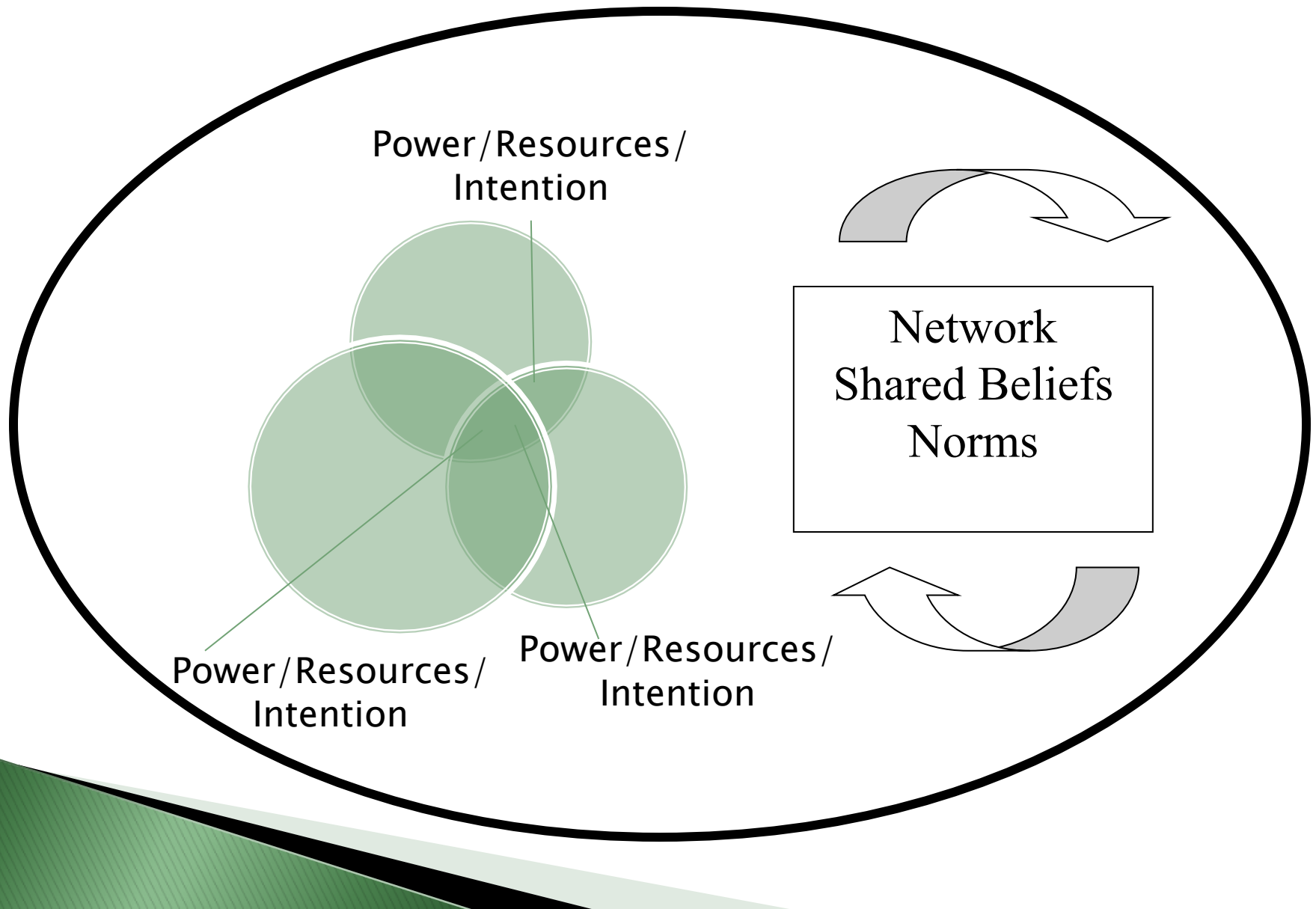


Stage III – Institutionalizing...or Not

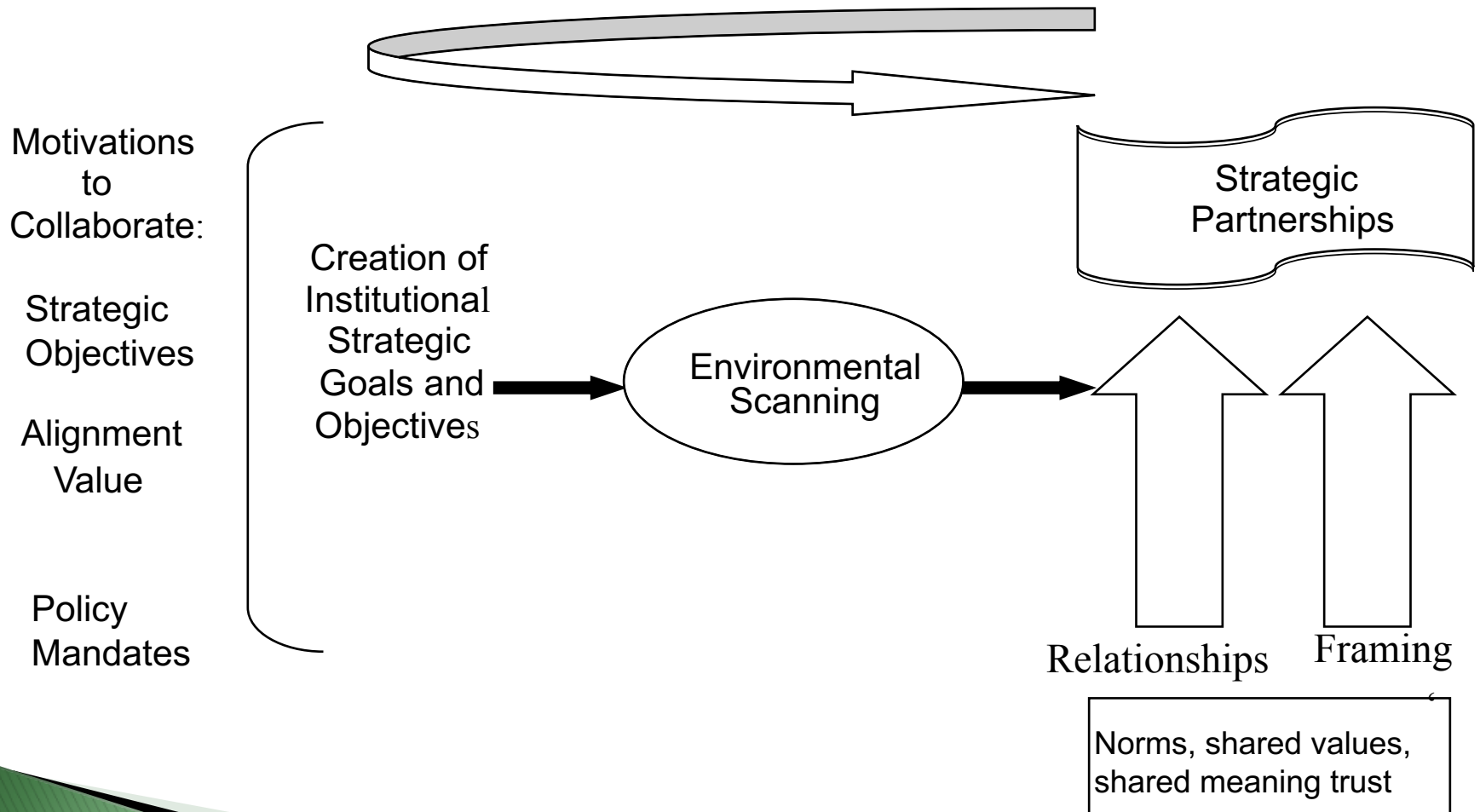
Champion's Role—



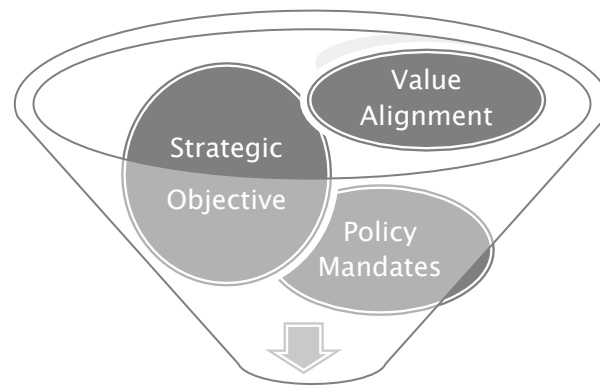
Stage III – Partnership Capital—



Strategic Partnerships

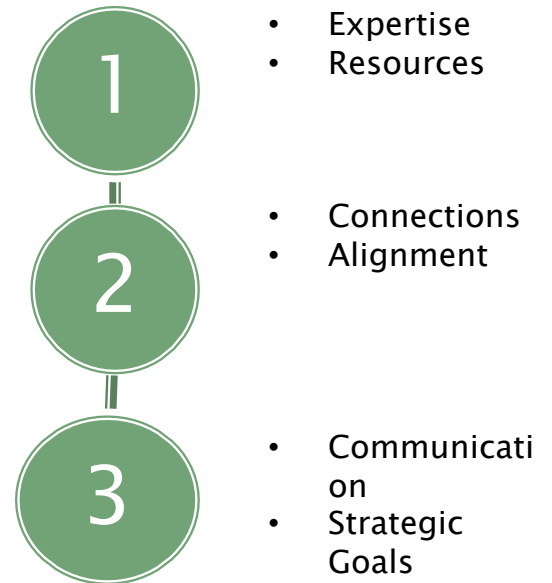


Strategic Partnership Model



Motivation to Partner

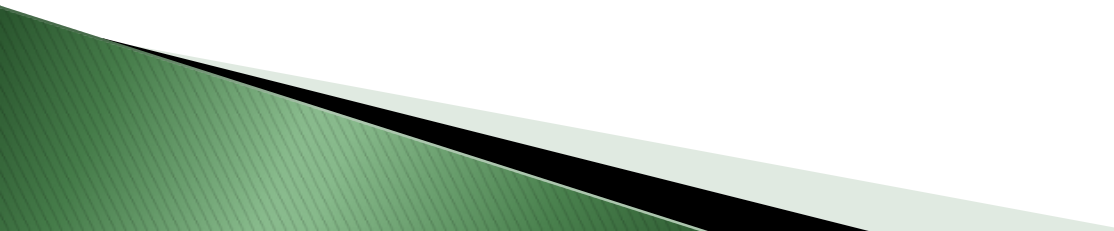
Relationships



Framing



Take-aways

- ▶ Partnerships cannot be mandated but can be intentionally developed
 - ▶ Champions are important but not role-specific
 - ▶ Partnerships are a form of interdisciplinary and cross-disciplinary work
 - ▶ Strategic partnerships stand the greatest chance of being sustained
- 

IOWA STATE UNIVERSITY

School of Education

Working in Interdisciplinary Teams: Lessons Learned in Influencing STEM Change

Sarah Rodriguez
Iowa State University
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Overview

- Current Projects – Where I'm Coming From
- Working in interdisciplinary teams
 - Connecting with colleagues
 - Leveraging expertise
- Lessons learned about influencing cultural/structural change
 - Overcoming challenges
 - Celebrating Victories
 - Documenting Process and Change

Current Projects

Alliances for Graduate Education
and the Professoriate (AGEP)

--Network Level --

IUSE/Professional Formation of
Engineers: REvolutionizing
engineering and computer
science Departments

(IUSE/PFE: RED)

--Department Level--

Louis Stokes Alliances for
Minority Participation (LSAMP)

--Student/Campus Level--

NSF Scholarships in Science,
Technology, Engineering, and
Mathematics Program

(S-STEM)

--Student/Program Level--

Working in Interdisciplinary Teams

- Connecting with Colleagues
 - Seeking out the right colleagues, with the right expertise
 - New faculty, new ideas/perspective, “new normal”
- Reaching out early, not just as an add-on
- Valuing colleague expertise in their area; listen
- Think carefully about objectives, how to keep project fully integrated
 - Use of logic models

Working in Interdisciplinary Teams

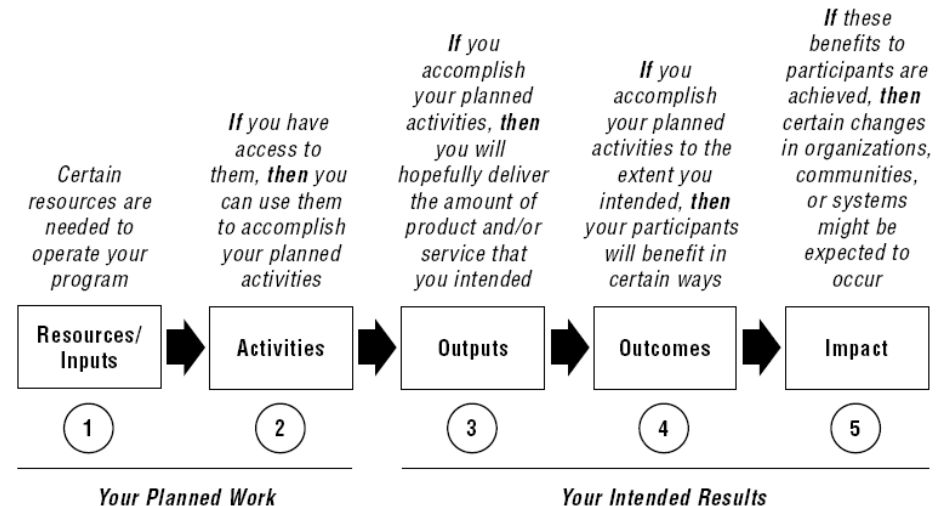
Poll: Does your project use a logic model? (Yes/No)

“A logic model is a **systematic and visual way** to present and share your understanding of the **relationships among the resources** you have to operate your program, the **activities** you plan, and the changes or **results** you hope to achieve.”

(W.K. Kellogg Foundation 2004)

Working in Interdisciplinary Teams

- Importance of Logic Models
- Engagement of Stakeholders
- Shared vision
- Explicit steps, actions
- Common vocabulary



Working in Interdisciplinary Teams

- Leveraging Expertise
 - Involve collaborators across areas of the project
- Understand the diverse array of skills/knowledge for change power
 - Examples: Creativity, exactitude, questioning, STEMism
- Acknowledging perhaps fundamentally differing views based on subject area (e.g. objectivity, constructivism)
- Create clear, valued feedback loops for multiple stakeholders in the project

Lessons learned about influencing cultural/structural change

- Overcoming Challenges
 - Be flexible, project change and evolve
- Be prepared for differing view points on process, approach (considering points, valuing expertise)
 - Disciplinary socialization is *very* real
- Keep the focus on the project's best interest, come back to this often
- Be kind, generous, and willing to connect
 - Share experiences, a meal, etc.

Lessons learned about influencing cultural/structural change

- Celebrating Victories
- Project retreats allow team members to show progress in multiple areas
- Space in meetings to share upcoming opportunities, dissemination, publications, briefs
- Acknowledgement and amplification of each other's work and project goals/successes
 - Meetings, email, social media
 - Media, press releases

Lessons learned about influencing cultural/structural change

Question: How does (or would) your team celebrate victories or acknowledge team members' contributions?

Think about...

- What motivates your team members?
- How do they like to be recognized?
- What milestones do you celebrate?

Lessons learned about influencing cultural/structural change

- Documenting Process and Changes
- Document early and often, especially around project choices, revisions
 - Much shifting in multi-year, multi-discipline projects
- Capturing perspectives of change from multiple angles
 - Example: engineering education, social science, psychology, etc.
- Early discussion of dissemination plans, outlets, audiences

Take-aways

- Working in interdisciplinary teams
 - Making meaningful connections
 - Honoring expertise of collaborators
 - Establishing a culture of feedback, cycles
- Lessons learned about influencing cultural/structural change
 - Being patient (but also pushing the envelope)
 - Celebrating victories of all kinds
 - Sharing amongst the team, problem-solving from multiple angles

Contact Information

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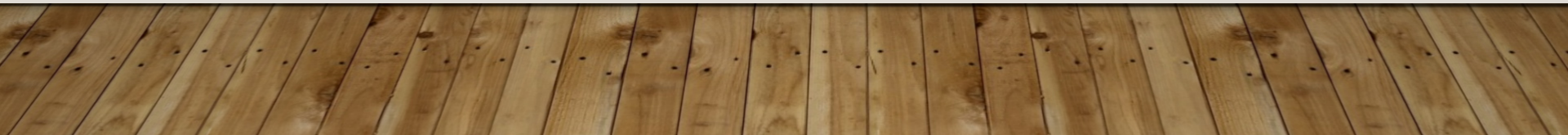
Making the Most of Multi-Sector Collaboration Through Key Boundary-Spanning Individuals

Lucas Hill, Ph.D.

Assistant Researcher

Wisconsin Center For Education Research

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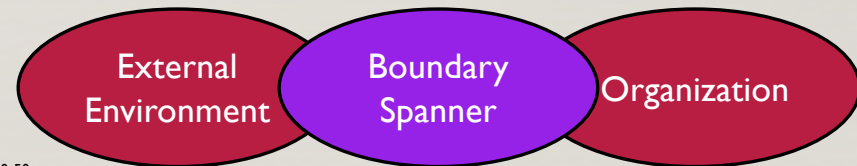


OVERVIEW

- Findings from a study of formal institutional representatives in the Center for the Integration of Research, Teaching, and Learning (CIRTL)
 - Inter- and Intra-Organizational Connections
 - Four Boundary-Spanning Behaviors
 - Key Boundary-Spanner Characteristics
- Presentation of a boundary-spanning framework
- Discussion of experiences in the CIRTL INCLUDES project where appropriate

WHAT IS BOUNDARY-SPANNING?

- Boundary spanning is the act of an individual or group extending beyond an organizational boundary to influence or be influenced by either side of that boundary.
- Organizational boundary is “the demarcation line or region between one system or another, that protects the members of the system from extrasystemic influences and that regulates the flow of information, material, and people into or out of the system.”*
- Organizational members mediating the organization’s relationship with the external environment



* p.41, Leifer, R., & Delbecq, A. (1978). Organizational/environmental interchange: A model of boundary spanning activity. *Academy of Management Review*, 3(1), 40-50.

WHY STUDY BOUNDARY SPANNING?

- Strong impetus to reform undergraduate STEM education for decades
 - Yet, limited adoption of improved teaching practices
 - Recent push towards systemic and coordinated approaches to STEM reform
 - Multi-institutional reform partnerships and networks have become common
 - Limited empirical evidence to support the effectiveness of collaborative change mechanisms
- Organizational representatives in change networks and partnerships perform an important boundary spanning role
- **My study explored:** What connections? What boundary-spanning behaviors? What boundary-spanner characteristics?

STUDY METHODS

- **The Center for the Integration of Research, Teaching, and Learning (CIRTL)**
 - 41 research universities focused on improving the preparation of future STEM faculty in effective teaching practices
 - 4 case institutions selected based on extent of local programming and time in CIRTL
- **Data**
 - Qualitative social network maps of institutional representatives ($n = 9$)
 - Interviews with institutional representatives, with named campus connections related to CIRTL, and with members of CIRTL's central administrative team ($n = 51$)
- **Thematic analysis**

CIRTL INCLUDES: DESIGN & DEVELOPMENT LAUNCH PILOT

- Goal is to “develop STEM faculty, for all sectors of postsecondary education, able to use and adapt evidence-based, inclusive teaching, mentoring and advising practices that yield increased success of URG students.”
- Three strategic goal groups focused on...
 - Teaching, advising, mentoring practices for all faculty
 - Preparation of community college faculty
 - Preparation of URG graduate students for faculty roles
- CIRTL campuses plus 23 additional organizational partners (e.g., APLU, AAU)

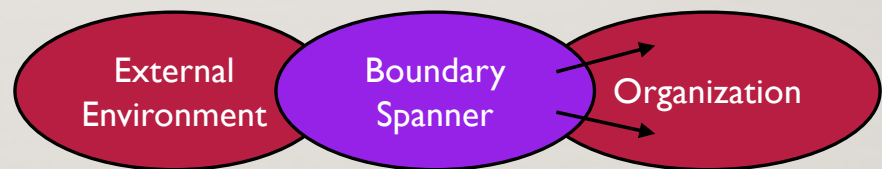
BOUNDARY-SPANNER CONNECTIONS

- **Interorganizational**

- Operations
- Contributions
- Collaboration
- Knowledge exchange
- Resources

- **Intra-organizational**

- STEM Reform activities
- Leadership
- Organizational Units & Members



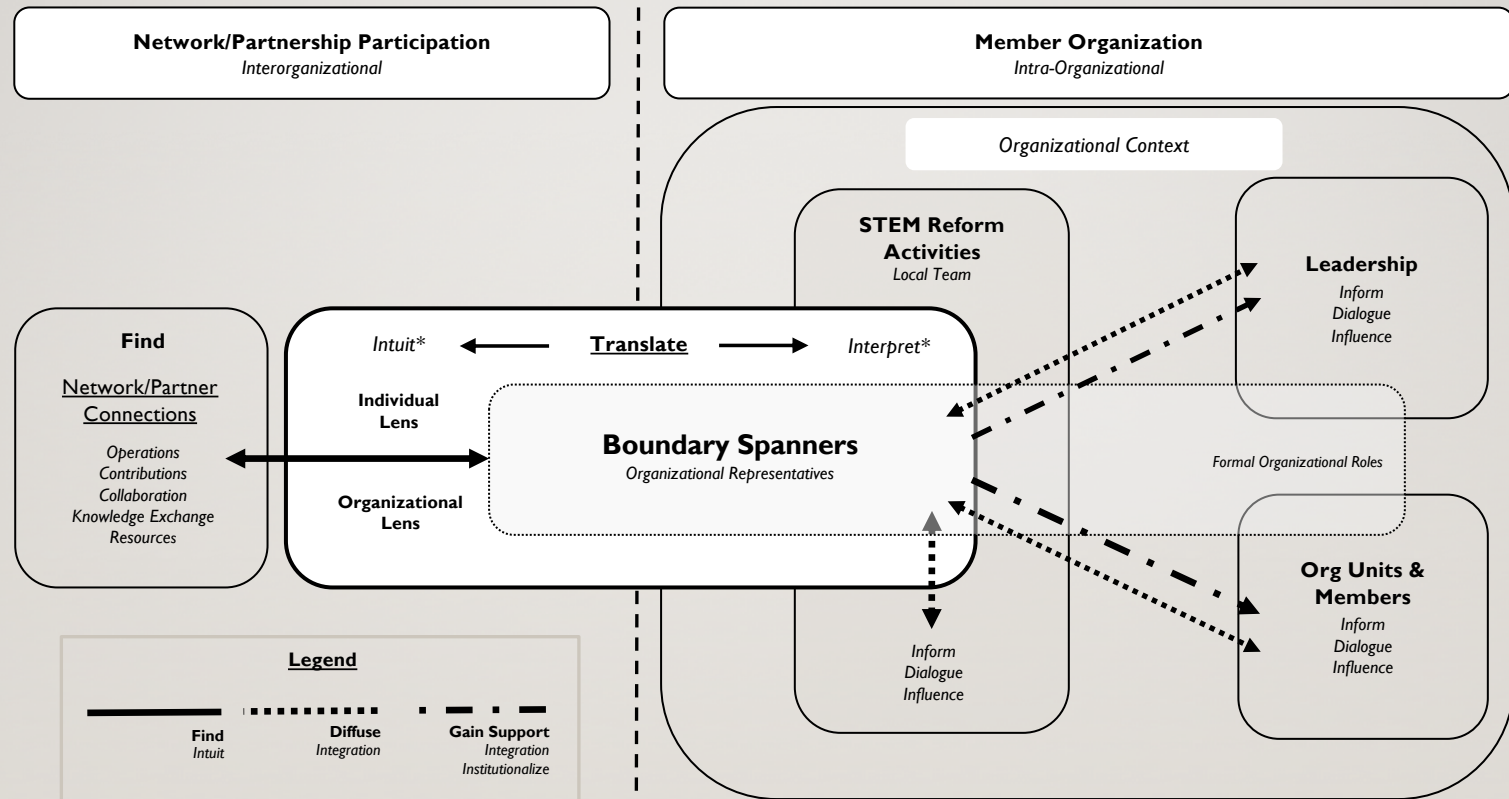
BOUNDARY-SPANNING BEHAVIORS

- **Finding**
 - Interorganizational interaction leading to personal and institutional benefits
- **Translation**
 - Formal representative & local team
 - *“You have to figure out how to adapt what somebody else is doing from whatever circumstances you have”*
- **Diffusion**
 - To local team
 - To local leadership
 - To local units and individuals
 - Through marketing channels
- **Gaining Institutional Support**
 - From administration/leadership and organizational units

LOCAL BOUNDARY-SPANNING EFFECTS

- **Inform**
 - Keeping local constituents up-to-date with Network/Partnership activities
- **Dialogue**
 - Expanding organizational discussion as a result of Network/Partnership membership
- **Influence**
 - Affecting changes in local activities and initiatives

BOUNDARY SPANNING FRAMEWORK



*Crossan, M. M., Lane, H. W., & White, R. E. (1999). An organizational learning framework: From intuition to institution. *The Academy of Management Review*, 24(3), 522-537.

WHAT SHOULD BE CONSIDERED BEFORE ENGAGING IN BOUNDARY-SPANNING?

- **Individual Attributes**

- Institutional role
- Committed and passionate
- Change & learning leader
- Connected
- Time management
- Team utilization

- **Influencing Organizational Characteristics**

- Alignment with the Network or Partnership (e.g., org goals)
- Local program/reform activity infrastructure
- Degree of decentralized organizational structure

IMPLICATIONS FOR STEM REFORM PARTNERSHIPS

- **Motivation**
 - Individual and institutional commitment simultaneously drive boundary spanning behaviors
 - The boundary spanning behavior of *finding* is a constant negotiation of perceived benefits, individual motivators, institutional motivators, and interorganizational connections
- **It Takes a Team**
 - Distribution and coordination of boundary spanning activities is an important success prerequisite
- **Alignment**
 - The need to factor in horizontal and vertical dimensions in seeking partnership-institution alignment
 - Alignment of work responsibilities with partnership activities

Thank you for attending the
ASCN webinar!



**Developing and Sustaining Effective Partnerships
to Advance Change in STEM Higher Education**

Upcoming Webinar:

Creating a Unified Community of Support:

Increasing Success for Underrepresented Students in STEM

Elizabeth Holcombe, University of Southern California

Wednesday, March 28th, 9:30am PT | 10:30 am MT | 11:30am CT | 12:30pm ET

Webinar Evaluation:

https://ascnhighered.org/ASCN/webinars/effective_partnerships/evaluation.html