



CARNEGIE MATH
PATHWAYS
WestEd 



The Role of Leadership in Scaling Implementation of Developmental Math Reform

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Scaling Up through Networked Improvement (NSF IUSE)

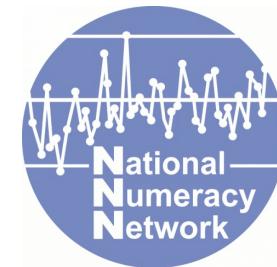
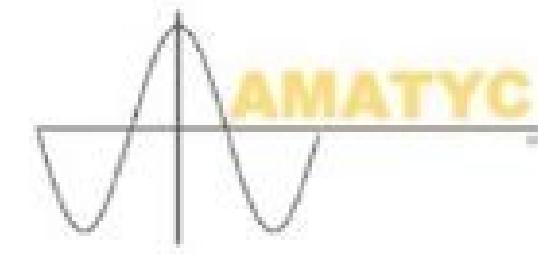
Problem

Innovation, even those ideas that are proven effective in some contexts, is **difficult to implement at scale, effectively and sustainably.**

We need to better understand what it takes to **achieve institutionalization of innovation** and how to support its success.

Carnegie Math Pathways

Endorsed by:



Quantway

Quantitative Reasoning Pathway

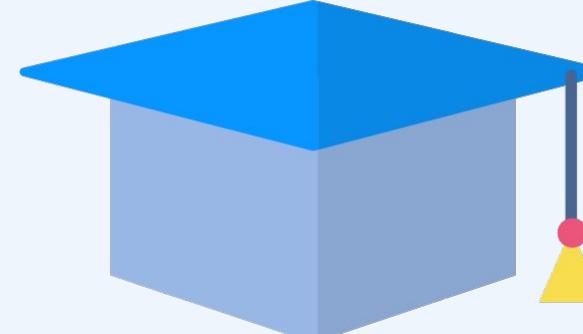


Statway

Statistical Reasoning Pathway

Carnegie Math Pathways Design

Accelerated pathways



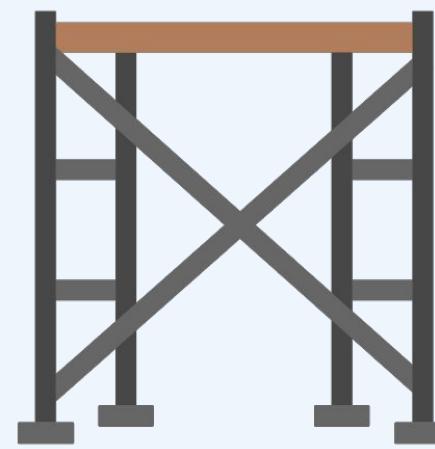
Help more students achieve college math credit in less time and advance toward their goals

Relevant curriculum and researched-based pedagogy



Ensure high quality learning opportunities for all students

Appropriate supports built into the course



Deliver targeted and effective scaffolding for students who need additional support

Embedded social emotional supports



Foster growth mindset, confidence, and belonging to support the whole learner

Scaling Up through Networked Improvement (NSF IUSE)

Problem

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Project Goal

Examine how institutional leaders plan, implement, and scale Carnegie Math Pathways programs supported by leadership coaching

Discussion

What **barriers** do institutions face in achieving the goal of institutionalization of innovation/reform/improvement?

What **supports** do you think would help institutions to achieve this goal?

Based on your experience working with and studying institutional change and innovation in community colleges, what issues do you think we (as a field) need to better understand? What questions should we ask?



Scaling Up through Networked Improvement (NSF IUSE)

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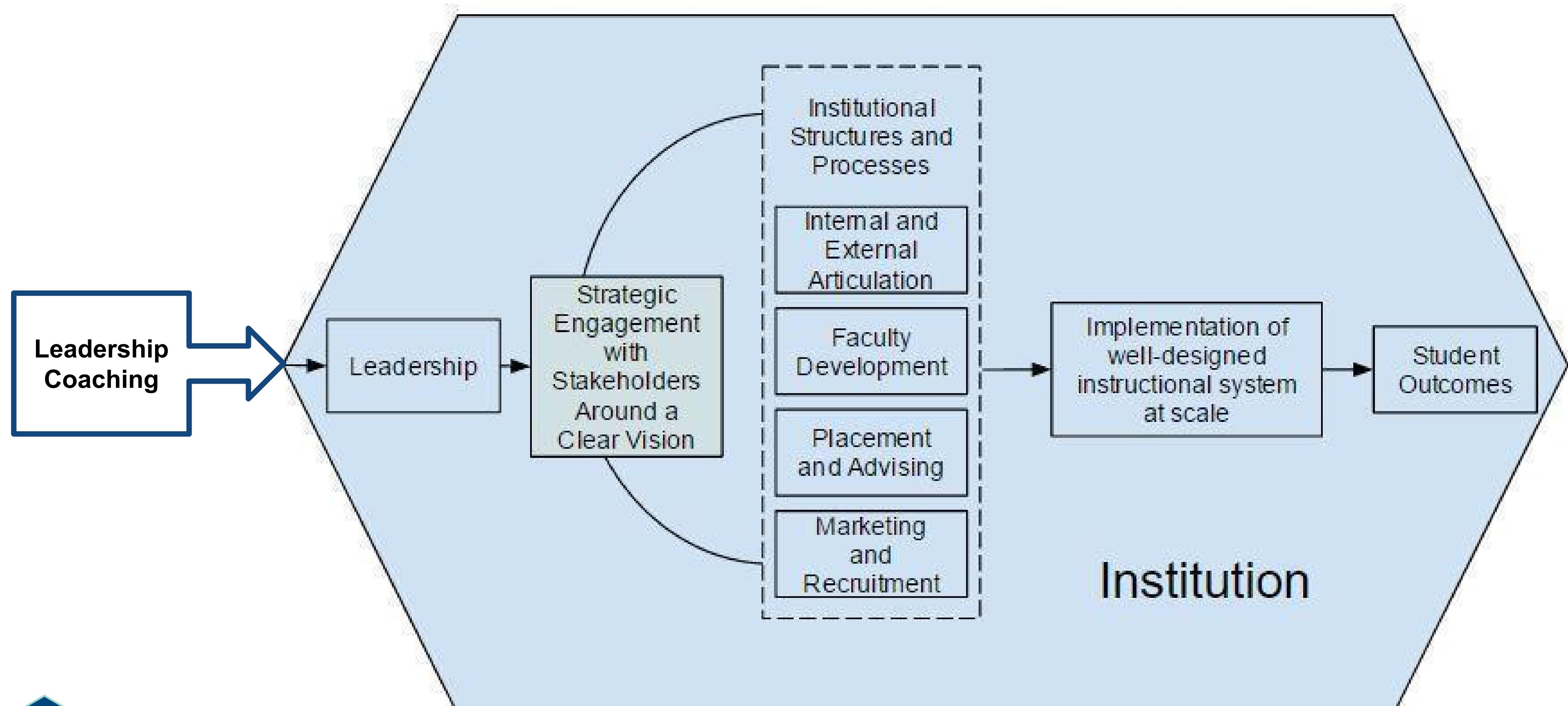
- Learn about **institutional implementation activities** leadership undertake
- Examine **how formal and informal improvement-focused coaching can support leaders** to effectively manage the institutional changes needed to implement the program effectively, sustainably, and at scale
- Determine the **impact** of the program on student mathematics outcomes

SUNI Leadership Study: Analytical Approach

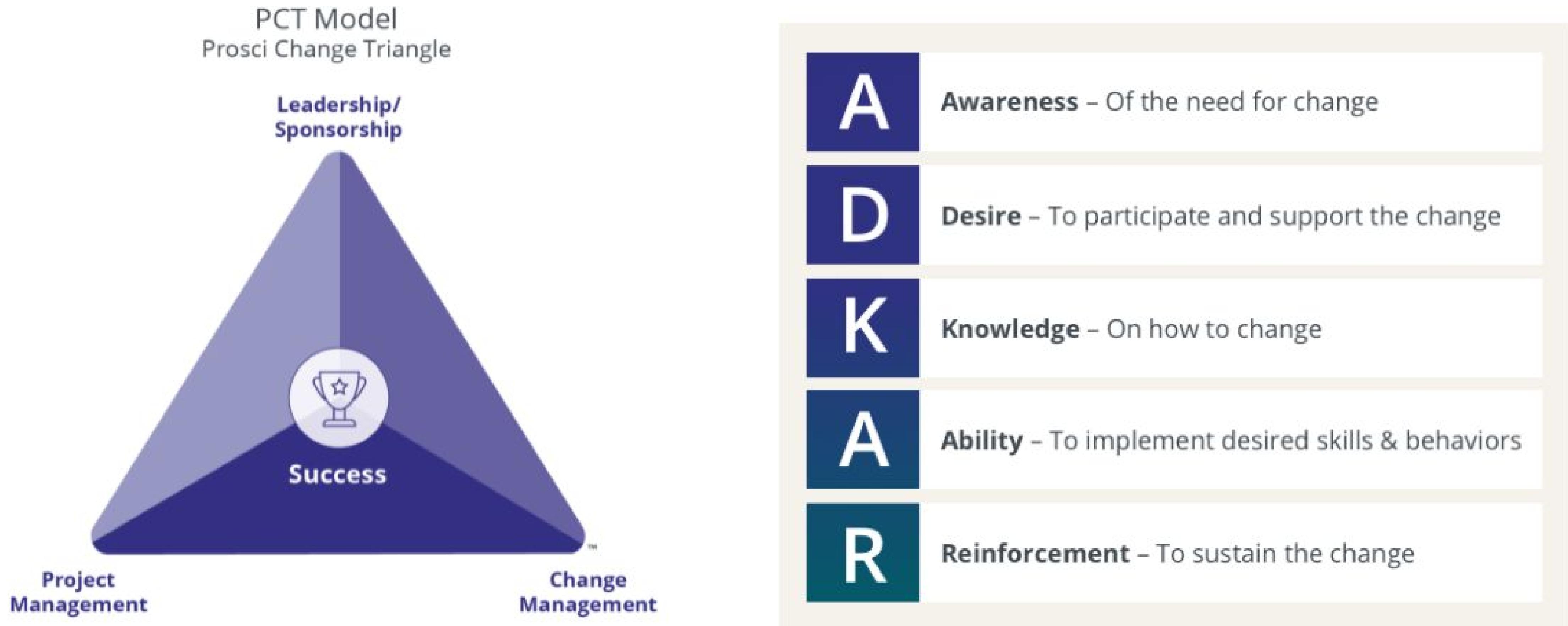
Case study analysis within and across institutions (i.e., the engagements and work of institutional teams) to examine:

1. Extent to which and how **differences in institutional context shape the implementation** process (e.g., supports and resources, obstacles, leaders' decisions, leaders' actions, etc.)
2. Extent to which and how **the coaching content and process support leaders' efforts** to implement at scale, effectively, and sustainably.

SUNI Leadership Study: Implementation Framework (a practical theory)



Leadership Coaching



Participants and Data

Participating Institutions (teams = 4-6 instructional, advising, and administrative leaders)

Cohort 1	Cohort 2
Institution A <ul style="list-style-type: none">• Mid-sized, urban, East coast community college• Approximately 60% enrolled full-time• Majority minority serving institution	Institution C <ul style="list-style-type: none">• Large, urban, Midwest technical college• Approximately 30% enrolled full-time• Majority minority serving institution
Institution B <ul style="list-style-type: none">• Large, urban/suburban, West coast community college• Approximately 30% enrolled full-time• Majority Hispanic serving institution	Institution D <ul style="list-style-type: none">• Mid-sized, rural/suburban, 4-year public comprehensive research university• Majority full time enrollment• Other descriptive data not reported to preserve anonymity

Data

- Steering committee/Leadership team meetings
- Coaches' notes and debriefs
- Emails/communications with teams
- Site visits (in-person and virtual)
- Project meetings, including kickoffs, annual project meetings
- Faculty Mentor communications
- Debriefs with Faculty Mentors

Preliminary Themes/Findings

Role and organization of institutional leadership

Authority for decision making is distributed across and accountable to multiple units and stakeholders

- Implementation at scale needs broad agreement by key decision-makers that the change is a worthy investment of effort and resources
- Sustainability (i.e., institutionalization) requires involvement and coordination of multiple units
- This layering of authority can form barriers to implementation, as leadership team members have different arenas of authority
 - E.g., tensions between institutional policy or mandate (sometimes driven by system or state-level policies, such as developmental education reform) and faculty autonomy.

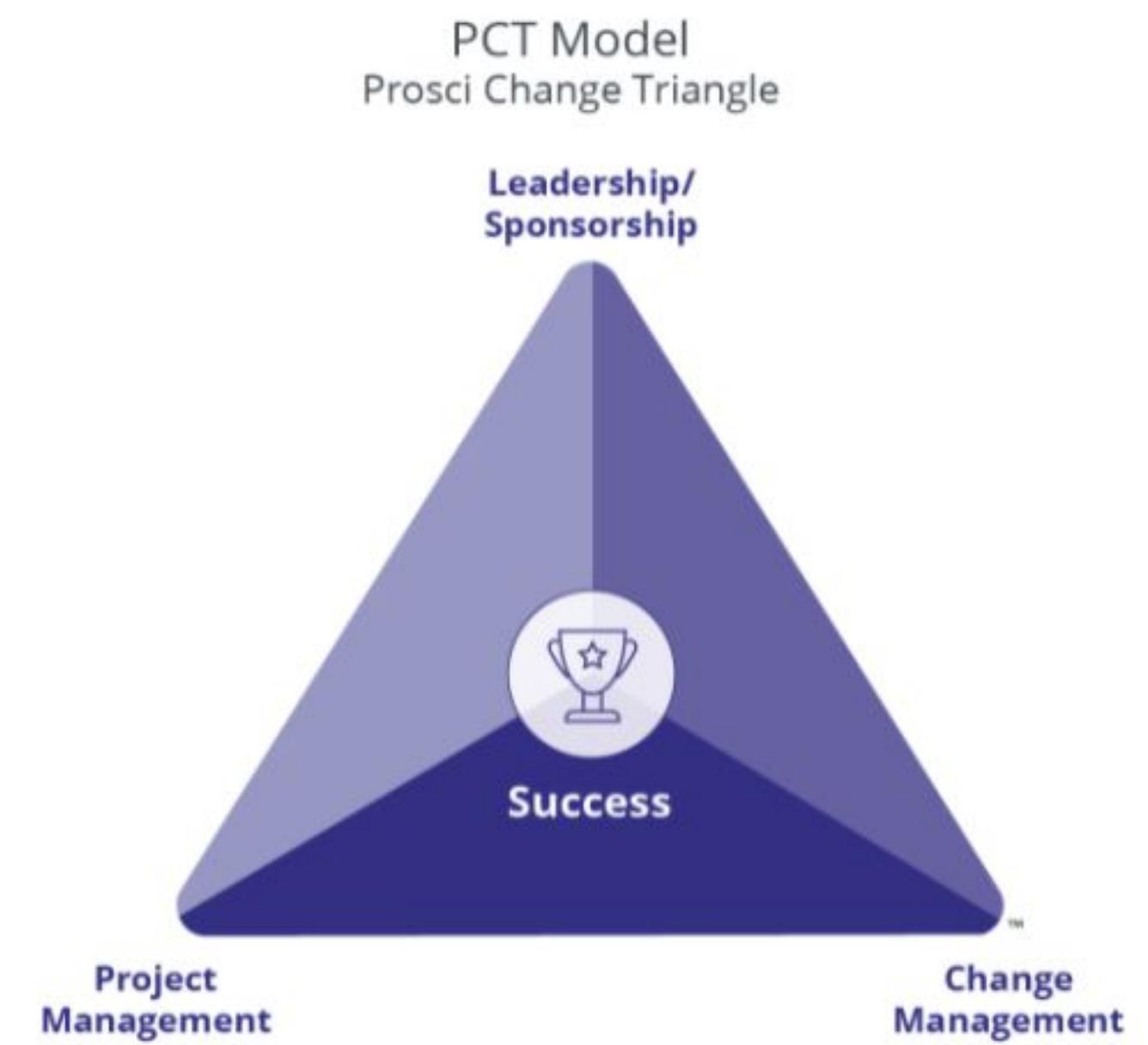
Key Stakeholders

- **Instructional leaders**
- **Advising and placement**
- **Dean-level**
- **Provost, Chief Academic Officer, and/or the President**

Preliminary Themes/Findings

Change as a constant in institutional leadership and organization

- Leadership for implementation requires the skills to manage changes (predictable or unexpected) that are not part of the plan (including a change in leadership!).
- Alignment of the innovation to other campus initiatives (e.g., guided pathways or state policy mandates)
- The capacity of the program implementation to persist through change depends on:
 - Strength of stakeholders' relationships and level of mutual trust
 - Quality of communications and coordination between units
 - Coherence of shared goals and mutual understanding of roles and responsibilities in meeting the goals
 - Extent to which the leadership team members can rally support and buy-in from their respective stakeholder groups



Preliminary Themes/Findings

Developing leadership capacity through coaching

- Significant variability in engagement in and uptake of coaching
 - Differences in leaders' motivations and accountabilities
 - Familiarity with leadership coaching as a resource is not yet developed in higher education
- Top-down mandates for participation are unsustainable
- Modeling by top-level leadership helps to establish a culture of collaboration
- Coaching must meet leader's felt need, which varies by individual and by institution

Thank You

For more information about SUNI

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You can also visit us at:

-  www.CarnegieMathPathways.org
-  [/CarnegieMathPathways](https://www.facebook.com/CarnegieMathPathways)
-  [@CarnegieMath](https://twitter.com/CarnegieMath)
-  [/Carnegie-Math-Pathways](https://www.linkedin.com/company/carnegie-math-pathways/)

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