

Dana Center
Mathematics
PATHWAYS

Administrators, Advisors, Support Services



Introductions



Dr. Corley Dennison

Vice Chancellor for Academic Affairs

West Virginia Higher Education Policy

Commission

Workshop outcomes

Participants will . . .

- Identify the key supports that need to be in place at your institution to enable co-requisite work.
- Establish a plan for putting those processes or resources into place.

HB2223

What does HB2223 mean for your institution?

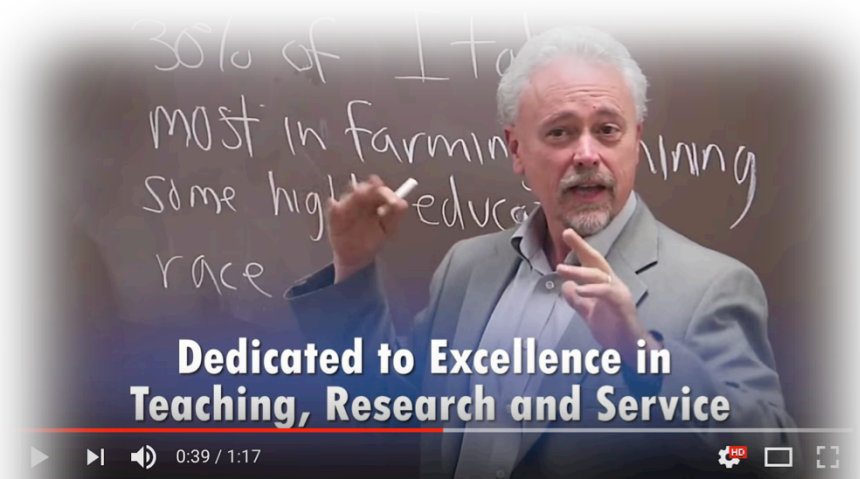
Student Voices

Our students are seeking to improve their lives...

<https://youtu.be/SdjbqLENinM?t=58s>

What should be a goal for your institution?

Supporting faculty innovation and course redesign efforts to improve student outcomes through co-requisite delivery, especially in courses with historically high failure rates.



An Extraordinary Mission of Student Success

Student-centered

Faculty-driven

Administrator-
supported

Policy-enabled

Culturally-reinforced

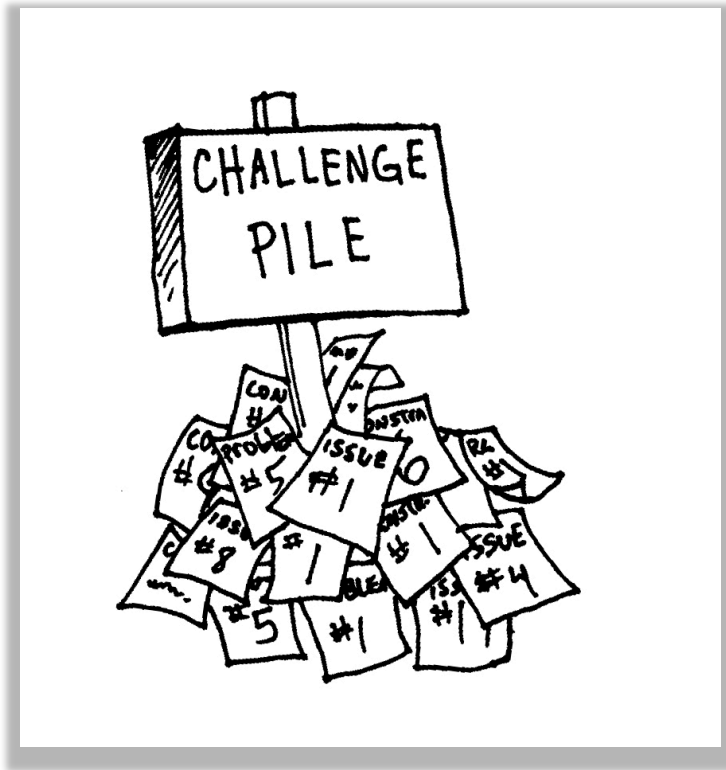
Reflection and discussion

Think, Pair, Share

- What are faculty concerns about implementing co-requisites?
- What are some barriers/challenges you anticipate?
- What are you excited about?
- What are assets, resources, and supports that you can provide to faculty?

Supporting the work

Challenges



Strategies



Faculty Considerations

CSU Math Co-req Summit August 2017



A publication of the Scaling Innovation project

Faculty Orientations Toward Instructional Reform

Some of the most promising developmental education innovations require that instructors significantly change their classroom practice. For example, instructors may be asked to teach to a more heterogeneous group of students, prepare students for statistics rather than algebra, or attend more explicitly to students' nonacademic needs. Responsibility for cultivating such behavioral change usually falls on the leaders who are working to launch or scale a new approach to teaching and learning. Reform leaders often report that generating and sustaining change in classroom practice requires buy-in from faculty, and that obtaining buy-in is one

Inside Out delves into these broad categories to examine the diversity of perspectives within each and the implications for faculty members' investment in instructional reform.

Three Orientations Toward Instructional Reform

When a new instructional reform is introduced, faculty members' perspectives toward participation can be broadly grouped into three categories (see figure on p. 2). These orientations are both fluid (subject to change over time) and contextual (formulated in reaction to the specific proposed reform). In this section, we describe these orientations, the

Voices from the field



Voices from the Field

- **Corley Dennison**, *Vice Chancellor for Academic Affairs*
West Virginia Higher Education Policy Commission
- **German Vargas**, *Assistant Vice President for Academic Student Engagement Associate Professor of Mathematics*
College of Coastal Georgia
- **Sandra Kay King**, *Assistant Vice President for Remediation and Innovation*
Ivy Tech Community College

Voices from the Field

- **Casey Sacks**, *Vice Chancellor*
West Virginia Council for Community College and
Technical College Education
- **Peter Adams**, *Professor Emeritus*
Community College of Baltimore County
- **Paula Short**, *Senior Vice President for Academic Affairs and
Provost*
University of Houston

Corley Dennison

Vice Chancellor for Academic Affairs

West Virginia Higher Education Policy Commission

- “Clearly communicate why you are implementing co-requisite (use data for your state).”
- “Find faculty members who will champion the cause and are successful in the classroom. Use them as peer leaders.”
- “Continue professional development for faculty even after the schools have implemented co-req.”

German Vargas

Assistant Vice President for Academic Student Engagement
Associate Professor of Mathematics
College of Coastal Georgia

- “Provide the necessary institutional research support. Having individual institutional data will be key to create a sense of urgency; although it is likely that this data will align with the challenges faced in other systems and institutions, it will not be sufficient to bring national or state data if faculty members do not directly associate these challenges to their students.”

German Vargas

Assistant Vice President for Academic Student Engagement
Associate Professor of Mathematics
College of Coastal Georgia

- “Once the sense of urgency has been created, identify faculty champions at each institution, support them and empower them to be the change agents. It is important to find the right level of system engagement in a spectrum that may start at level of “system support”, pass through “strong directive”, and may end at “mandate”. Co-requisite remediation may be counterintuitive for some faculty, so in many cases it is important to have those faculty champions to drive the narrative.”

German Vargas

Assistant Vice President for Academic Student Engagement
Associate Professor of Mathematics
College of Coastal Georgia

- “Adapt and Adopt: While transforming remedial education and implementing a co-requisite model can be a daunting task, there is no need to reinvent the wheel. Use the resources created by other systems and states (recommendations, implementation parameters, best practices, sample curriculum proposals, sample syllabi, course materials, etc.) and simply adapt these resources to guide and support an implementation that fits the characteristics and needs of your system.”

Saundra Kay King

Assistant Vice President for Remediation and Innovation **Ivy Tech Community College**

- “It’s important that faculty be involved from day 1 in the planning and implementation. Also, include an ongoing review and assessment.”
- “Ongoing professional development is critical. It’s not just for the front end... If at any time you are uncertain what type of professional development is needed – ask, they will tell you!”
- “Provide funds or offloads for course development as needed.”

Paula Short

Senior Vice President for Academic Affairs and Provost University of Houston

- “Start with data to create a sense of urgency by seeing and understanding the problems, understanding the cost (not just \$) to the students, and the potential impact of co-requisite model (success at other institutions using the co-requisite model). Faculty need to work through their own biases to come to the realization that action is needed and data are a great facilitator for this necessary process.”

Paula Short

Senior Vice President for Academic Affairs and Provost University of Houston

- “Give them the tools to develop and implement. Provide training and resources, including best practices, regarding co-requisite models and how to implement them in courses of interest. Seeing and interacting first hand with those who successfully implemented co-requisite is very important. This was the focus of the **Corequisite Remediation Policy Institute** held by Houston GPS last year which seemed to be a turning point for many who attended.”

Paula Short

Senior Vice President for Academic Affairs and Provost University of Houston

- “Faculty will engage in ‘status loss’ thinking in the face of change that impacts their work, their position, their sense of power. It is important to plan for such changes and the impact on faculty with the goal of creating opportunity even if it is someplace else. Failure to do this can blow up in one’s face politically, especially with long-held structures and roles.”

Casey Sacks

Vice Chancellor

West Virginia Council for Community College and Technical College Education

- “Think though how to be creative with your financial models. Don’t let money or rules about instructor to student ratios be the reason you can’t start this implementation. Do the implementation and make the finances work to meet student/program needs. Your administration should not be the roadblock about why the work can’t happen.”

Casey Sacks

Vice Chancellor

West Virginia Council for Community College and Technical College Education

- “If you can, protect people’s jobs. One of the reasons this is particularly challenging is because colleges have historically hired people who do not have the credentials to teach college level coursework. If this is the case at your school – talk about it. What’s your plan to upskill people, train existing people, help them keep their positions? Being really transparent that you’re not using this as a way to fire people, and then sticking to that is a big deal.”

Casey Sacks

Vice Chancellor

West Virginia Council for Community College and Technical College Education

- “Really support your faculty leaders. If people are doing this work and you want it to expand give them whatever perks you can to show your support. Parking spaces, a better office, course release time, opportunity to pick sections or classrooms they want first. Whatever leverage you have, use that. Be the bad guy if you have to but put lots of resources into supporting the people who are leading this effort on the front lines.”

Peter Adams

Professor Emeritus

Community College of Baltimore County

- “Support for faculty development.”
- “Provide data to show why the change is needed and to measure how much improvement occurs. ”
- “Help schools to solve credential issues (working with SACS to insure faculty with reading degrees can teach writing courses. Devise a humane solution to the problem of faculty who have taught developmental courses for years with only a BA to be able to teach the comp course in a co-req pair.)”

Leadership

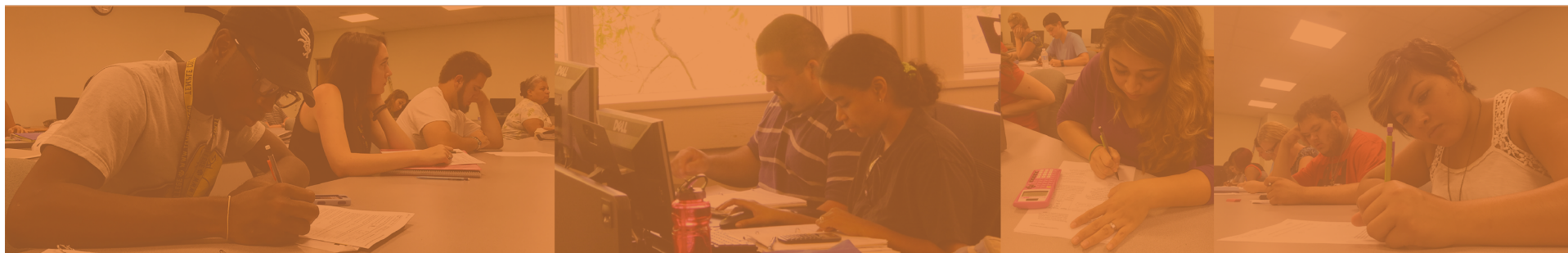
- Grasp the Magnitude
- Understand the work will be hard
- Build the Shared Vision, and keep sharing it, and sharing it, and sharing it...
- Leverage and reallocate resources to promote and enable change
- Align structures/policies to the pathways model
- Engage and work through resistance
- Use data to build urgency and understanding

Connectedness: People, Not ideas, Make Change

- Nurture champions
- People need authentic engagement, honesty, support, clarity, evidence, and purpose
- Relationships matter
- Make space for grieving, anxiety, and fear

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Action Planning to Support the Work



Implementation: A broad framework

Getting Started: Commitment and leadership

Planning: Collect and review data to define problem, establish goals, and create a plan.

Implementing: Carry out the plan.

Continuous Improvement: Evaluate and improve.

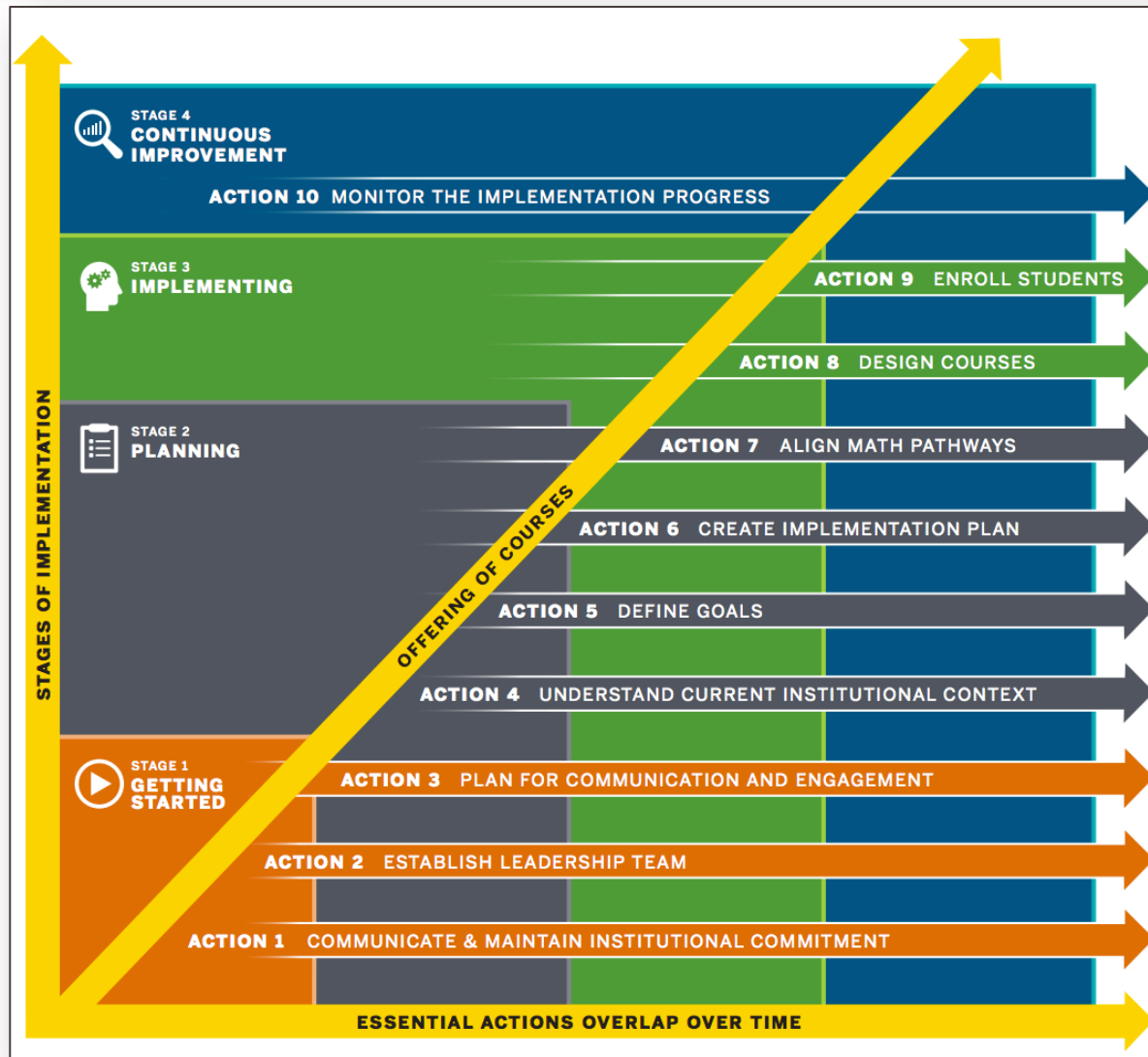
Implementation: Getting to details

- Essential Actions – the “must-dos”
- Institutions determine what else is needed or important to their situation or students.

Implementation process, page 1

Stage of Implementation	Essential Actions
Getting Started: Leaders identify need, make commitment, and prepare to engage stakeholders through a leadership team.	Action 1: Communicate and maintain a strong and clearly defined institutional commitment. *
	Action 2: Establish and convene a leadership team.
	Action 3: Plan for communication and engagement over time. *
Planning: Cross-functional leadership group collects and reviews data to define problem and establish goals.	Action 4: Gather and review information on the current institutional context.
	Action 5: Define goals.
	Action 6: Create the implementation plan.
	Action 7: Align mathematics pathways to programs of study so that one clear and appropriate pathway is defined for each program.
Implementing: Working groups and individuals follow implementation plan under oversight of leadership team	Action 8: Design, staff, and schedule courses.
	Action 9: Establish processes and structures for student enrollment.
Continuous Improvement: Working groups and individuals follow evaluation and communication plans under oversight of leadership team.	Action 10: Monitor the implementation progress through scheduled check-ins with different stakeholders and departments to ensure improvement over time. *

Implementation process, page 2



Assessing progress: Getting started

Purpose: Assess current status on first two activities.

- Read the description of a “5”.
- Rate your institutional progress from 1 to 5.
- Document accomplishments and strengths.
- Document next steps.

Example from Southeast Missouri State University

Created by Tamela D. Randolph, Southeast Missouri State University

Page 5

Campus Outreach	
Questions	Notes
<ul style="list-style-type: none">• How do institutional leaders plan to support the redesign?	
<ul style="list-style-type: none">• Have you received support and input from other departments on campus for this redesign?	
<ul style="list-style-type: none">• How will IT be impacted by the redesign?	
<ul style="list-style-type: none">• Has the Registrar's Office been notified of the redesign and have they given input into how student records will be impacted?	

Action Plan

- Purpose: Create a plan for immediate follow-up after this workshop.
- Structure: Record action steps in a table.
- Process: After each planning discussion, we will give you some time to document the action steps.
- At least one person should open the action plan.

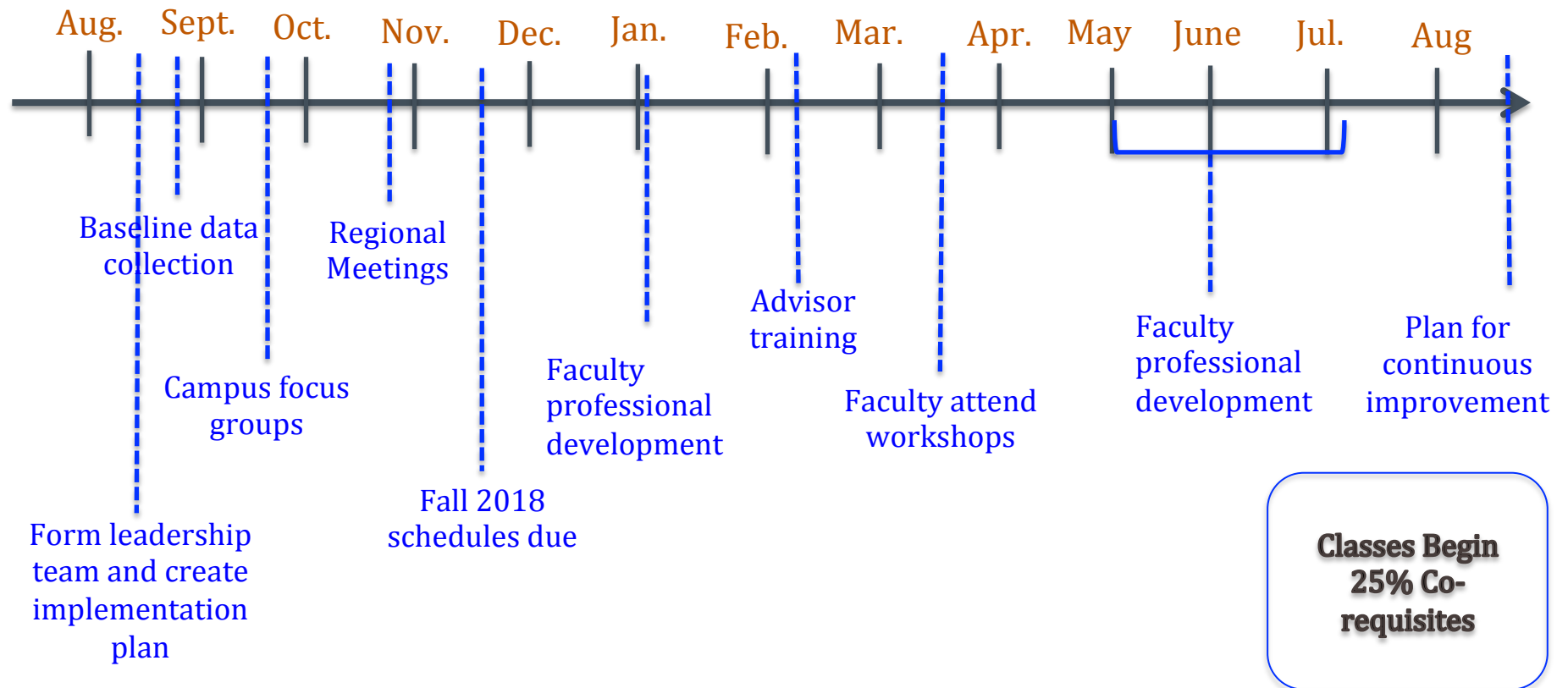
Action Plan

Action Items Implementing Co-Requisite Mathematics

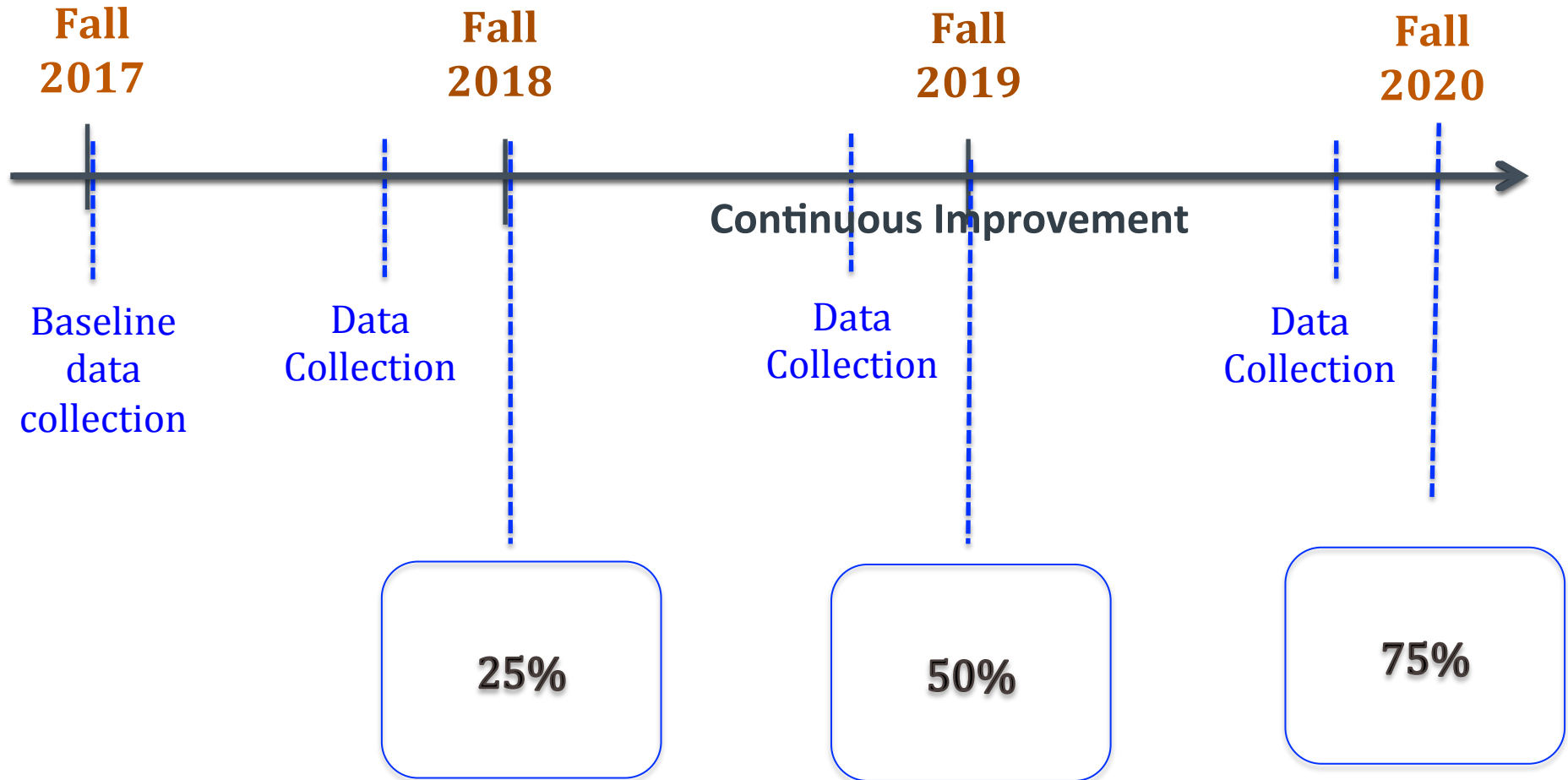
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Action Item	Who is responsible?	Who else needs to know?	Target Date

Sample Timeline of Activities



Sample Timeline of Activities



Timeline of activities

Create your own timeline of activities.

Timeline of Activities: Wrap-up discussion

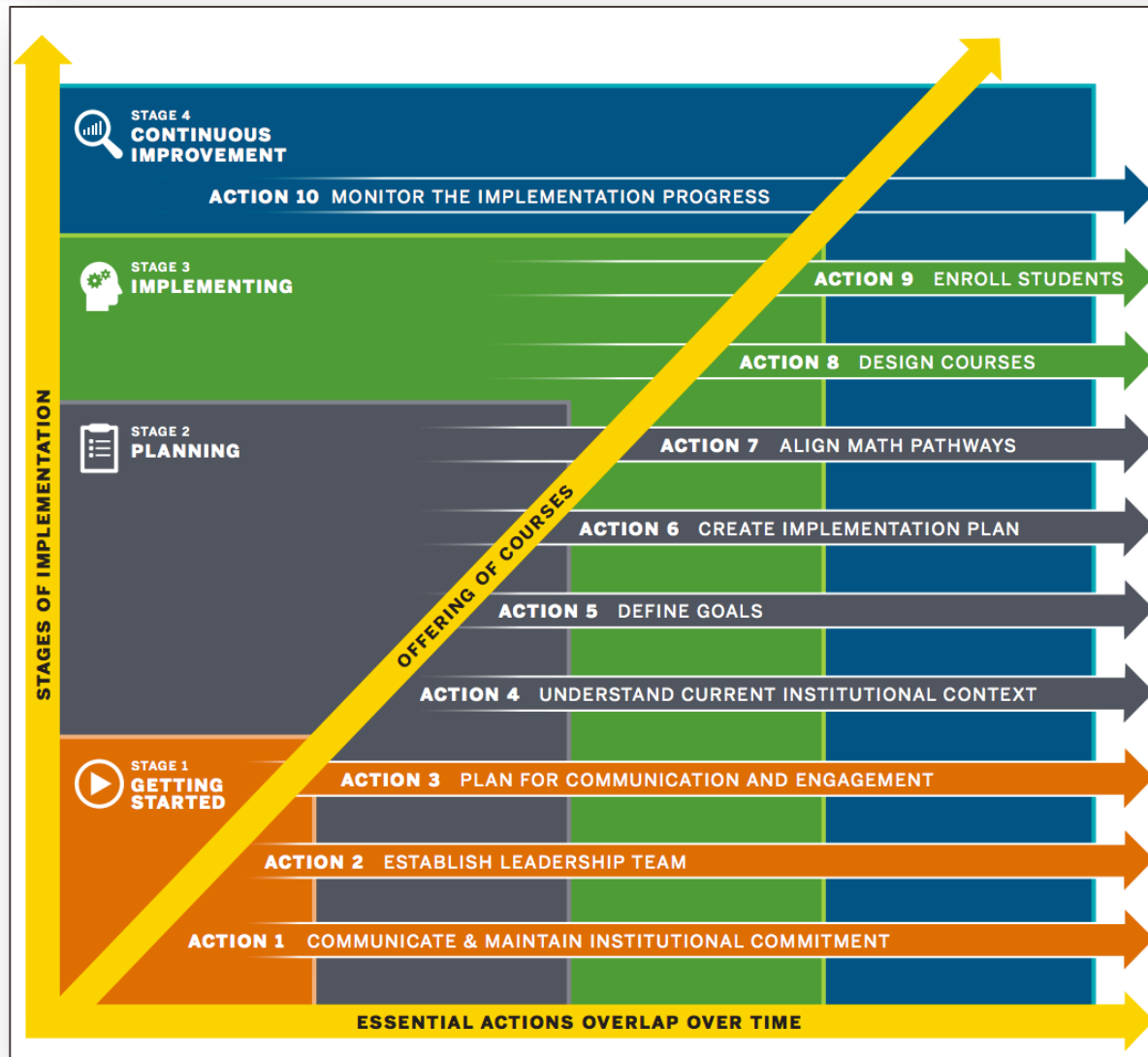
How will you continue to evolve this timeline of activities?

Add at least one step to action plan.

Communication and engagement

- This work will require communication and engagement across the institution.
- Communication disseminates information; it builds awareness.
- Engagement encourages people to process and act upon information; it builds ownership.

Implementation process, page 2



Communication and engagement

PERSPECTIVES

LIKE WAVES
IN A TARPIT

Academia's Internal Communications Problem

BY RICARDO AZZIZ

Creating a communication plan

1. Define broad goals.
2. Consider the needs of different audiences.
3. Define the strategies.

Communication goals evolve

How might the goals change during different stages of work?

- Ramp-up (getting started, establishing a process, collecting data, defining the problem)
- Decision-making (identifying challenges, formulating solutions, finalizing recommendations)
- Transition to implementation (preparing for action, providing supports for local action)

Basics of planning communications

- Who needs to know?
- What do they need to know?
- When do they need to know it?
- Who should the information come from?
- What are the best ways to get the information to them?

**Get the right information to the right people
at the right time.**

Engaging people with information

Different types of engagement lead to different outcomes.

Do you want people to . . .

- Process information?
- Give input?
 - Only gather input if you intend to and are able to use it.
 - Always respond.
- Take action?

Communication and engagement plan

Use the template to draft a communications and engagement plan for the next 2 to 3 months.

- Select a time period that is natural to the work flow.
- Start with the goals you discussed earlier. Refine and revise as necessary.
- Define the audiences.
- Plan activities.

Communications wrap-up

Record the major steps from your communications plan to your action plan

Sample Action Plan

Missouri Completion Action Plan

Gateway Course Success: Scaling Corequisite MATH			
What	How	Who	When
Develop research and data to support a redesign of math courses. Develop research questions and identify what is “success”	IR request and identify benchmark comparisons – Develop research questions and identify what is “success”	EMSS/DoS, IR, and Math – IR complete research	September 2013
Get Math faculty, executive staff, and Chairs buy in	Dean shares with math faculty, executive staff, and chairs – Invite Loretta to campus to help share concepts	Dean COSTA	November 2013
Research other courses that could be in place of college algebra	Search peer (website) institutions for examples of other courses, possible follow up via phone as needed	Dean COSTA & Math Chair	October 2013
Define and explain concept to stakeholders (internal vs. external), academic departments, advisers,	Conversation with Deans and Executive Staff,	Dean COSTA VP EMSS/DoS	October 2013

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Learning from One Another



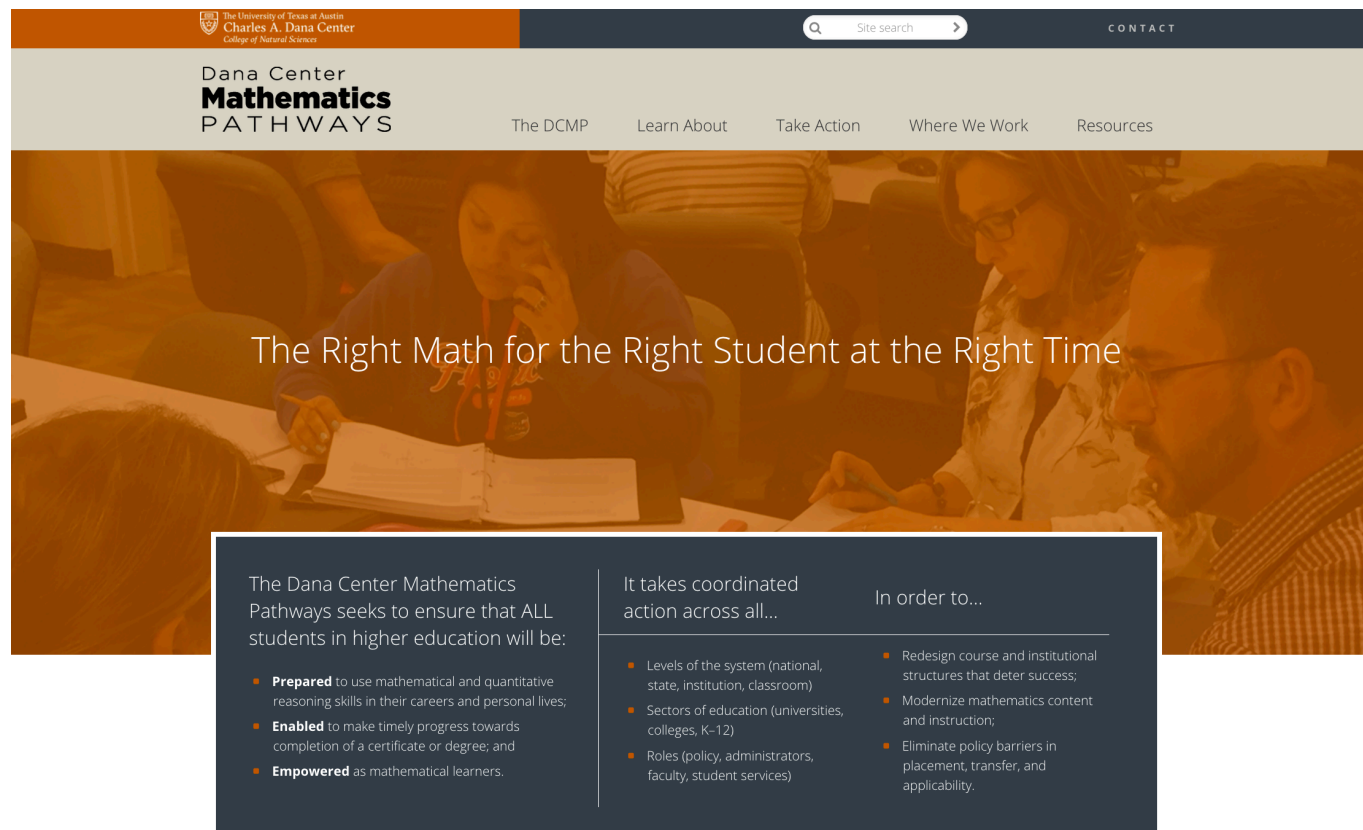
Essential actions

Stage of Implementation	Essential Actions
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Support your work

Dana Center Mathematics Pathways Resource Site:

<http://www.dcmathpathways.org/>



The University of Texas at Austin
Charles A. Dana Center
College of Natural Sciences

Site search

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The DCM P Learn About Take Action Where We Work Resources

The Right Math for the Right Student at the Right Time

The Dana Center Mathematics Pathways seeks to ensure that ALL students in higher education will be:

- **Prepared** to use mathematical and quantitative reasoning skills in their careers and personal lives;
- **Enabled** to make timely progress towards completion of a certificate or degree; and
- **Empowered** as mathematical learners.

It takes coordinated action across all...

- Levels of the system (national, state, institution, classroom)
- Sectors of education (universities, colleges, K-12)
- Roles (policy, administrators, faculty, student services)

In order to...

- Redesign course and institutional structures that deter success;
- Modernize mathematics content and instruction;
- Eliminate policy barriers in placement, transfer, and applicability.