The Change Dashboard

A Planning Tool for Successful Change

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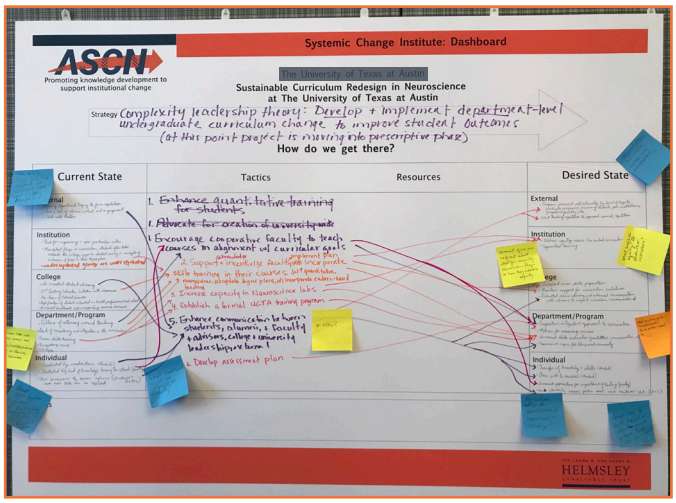

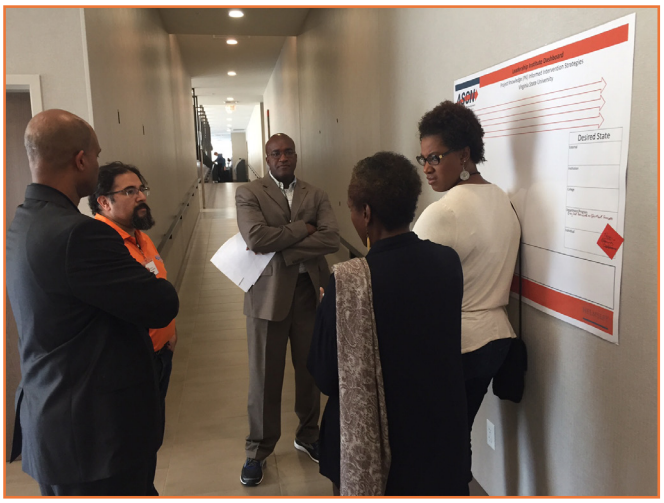

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INTRODUCTION

The Change Dashboard is a visual planning and communication tool for change agents working in higher education. The Dashboard articulates the key tactics of an action plan to get from the current state to the desired state. It visually scaffolds change agents to articulate gaps between a project's current and desired states and develop tactics that are aligned with the goals and with one-another. The Change Dashboard is thus similar to a logic model, but aligned with systemic change scholarship.

The Dashboard has four key parts:

- Current State
- Desired State
- Project Overview (Change Strategy, Mechanism for Change, and Goal)
- Change Tactics

In this document we will introduce each part and prepare you to use the Dashboard with your team. The Dashboard is free to use and share with attribution.* You can download the Dashboard and related materials from the ASCN web site: https://ascnhighered.org/ASCN/publications.html

Who is the Change Dashboard for?

The Change Dashboard was developed for use in the ASCN Systemic Change Institute. Its structure was developed to scaffold thinking about change based on the experience of Henderson and others working with change agents in a variety of settings. The Dashboard is intended for use by teams, which often include members from many levels within an institution, such as faculty, administrators and others across campus interested in the project. See the case study in Appendix C for an example of a team and project.

How to use the Change Dashboard

We recommend printing a large, laminated poster-sized dashboard for your team or group. This living document can be written on with dry erase markers and modified as your project develops over time. Printed versions of the Dashboard can also be used for individual planning, presenting ideas to others, or tracking progress during a change initiative.

In this document, we propose a systematic way of filling out the Dashboard, which is an iterative process. Because the main goal of the Dashboard is to understand and create alignment between the different aspects of the change initiative, completing the dashboard usually leads to better understanding of the project, which in turn results in changes to the Dashboard.

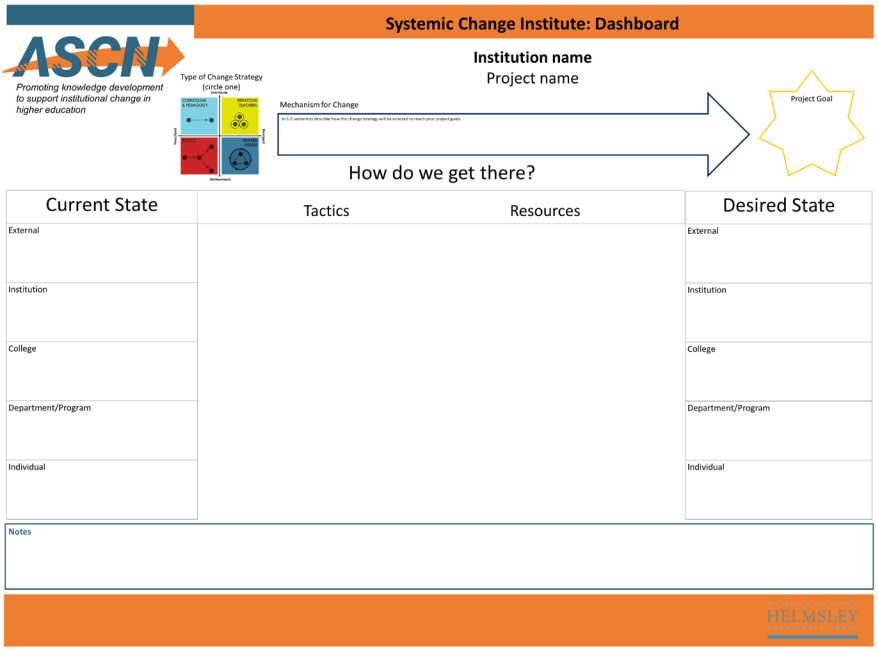
In the following sections we discuss the parts of the Dashboard in the order that we recommend it be completed. However, the order of completion is not so important. If you are not able to follow the recommended path towards completion or if it seems easier to follow an alternative path, feel free to do so. The most important thing is to get something written down in every section so that you can start to look for problems and iterate.

Figure 1: A team works on the Dashboard at the 2017 Systemic Change Institute.

PROJECT OVERVIEW

The Project Overview consists of three parts at the top of the Dashboard: **Change Strategy, Mechanism for Change,** and **Project Goal**.

We recommend that you start filling in the Dashboard with the **Project Goal**. The Goal is the big picture thing that you are trying to accomplish with your project. For example, you may be hoping to improve graduation rates for STEM majors, or create a new interdisciplinary major. It is important to start with a Goal because it helps you focus on the problem you want to solve and establish consensus about what your team wants to do with the project.



The Change Strategy and Mechanism for Change are not usually clear from the beginning. Thus, we recommend coming back to them after diagnosing the Desired and Current States.

TIP: Project Goals

Your project goal is what you want to accomplish. Project goals are outcomes – what will happen as a result of your project?

Examples:

- Increase the number and quality of STEM graduates
- Increase skills acquisition in biotechnology that is useful in the workforce
- Increase undergraduate participation in research and course-based research initiatives
- Improve faculty understanding of and response to issues of diversity, equity & inclusion
- Raise the quality of teaching as defined by student success

DESIRED & CURRENT STATES

Desired State

This section of the Dashboard encourages you to visualize what will need to change in order for you to reach your project Goal. What do you want your institution to look like as a result of your change project? How will your project impact your institution, college, department/unit, and individual faculty and students? Filling out these parts of the Dashboard will help you solidify your goal as a concrete vision and identify the gap between where you are and where you want to be.

The **Desired State** represents specific changes in conditions rather than project goals or outcomes. It requires specific descriptions of things that will be different. For example, a goal might be that students in introductory STEM courses feel that they are part of a community. A Desired State would be the concrete things that you will create with your project in this community, such as student cohorts in introductory STEM courses (institution level), welcoming study spaces within each STEM department (department level), and instructors of introductory STEM courses using collaborative group work (individual level).

Desired States can occur at different levels of the system. For the sake of simplicity, the Dashboard identifies five basic levels: External, Institution, College, Department/program, Individual. These basic levels are relevant to a wide variety of higher education institutions. There is nothing particularly special about these levels and they can be changed to match the levels that are relevant to your institution or change project. The important thing about explicitly showing a variety of levels is to understand the different elements of your particular system, and the important impacts of each level on your change project.

> Many change initiatives fail because they focus on a single level and do not account for the barriers imposed by other levels nor build on the affordances provided by other levels.

TIP: Desired State

A Desired State should reflect a change in conditions rather than an outcome. Useful desired states help you decide what to do. Not useful desired states simply restate aspects of your goal.

Useful:

- Physical space available for undergraduate research participation
- New faculty hire in target area
- Dedicated advising program for the major with advisors informed about new curriculum

Not useful:

- Student buy-in
- Increased enrollment in target courses
- Clear path to student success

These less useful statements represent goals more than conditions. What conditions will need to be in place to support increased enrollment? What will student buy-in actually look like?

DESIRED & CURRENT STATES

Current State

Once you have identified the Desired State for your project, it is now time to identify the **Current State**. What is the actual condition of each area you listed in the Desired State? What do those things look like right now? Answering this question will help you identify the gap between your Current and Desired States.

Also, when thinking about the Current State, it is important to identify aspects of the system that you don't expect to change during your project (that is, the Current and Desired States will be the same), but that will likely support or impede reaching the desired state. For example, your Desired States might align with your institutional strategic plan. On the other hand, your institution could be in a difficult financial situation with budget deficits and, thus, have little appetite for new programs. You cannot expect to change these things, but they will certainly impact your project.

> Failure to recognize the affordances offered by the current state can lead to missed opportunities. Failure to recognize the constraints imposed by the current state can lead to overoptimistic plans that do not reflect reality and are likely to fail.

The items to consider for the Current State are the same as those for the Desired State and are summarized in Table 1.

Levels of the system Consider desired conditions and current conditions at these levels	*Possible target issues* What specific things exist (current) or do you want to exist (desired) at each level of the Dashboard? (adapted from Eckel & Kezar, 2003)
External Institution College Department/program Individuals	*Structures:* • Curriculum (e.g., types of knowledge presented through the curriculum, organization of the curriculum) • Pedagogy (e.g., use of particular teaching methods or technologies) • Student learning practices • Student assessment practices • Policies (key institutional policies such as those regarding scheduling) • Budgets • Non-financial resources (e.g., allocation of space or equipment towards particular projects) • Departmental structures (e.g., organizational hierarchy, relevant centers) • Institutional structures • Decision-making structures (e.g., formal governance processes, ad hoc structures such as task forces) *Cultures:* • Language used at the institution (i.e., to talk about itself, etc.) and types of conversations (e.g., topics, priorities) • Stakeholder relationships • Norms of interaction between individuals and groups

Table 1: Target areas for the Desired and Current States

DESIRED & CURRENT STATES

TIP: Structures vs. Cultures

There are two basic types of Desired States that can occur at each system level: **structures and cultures**.

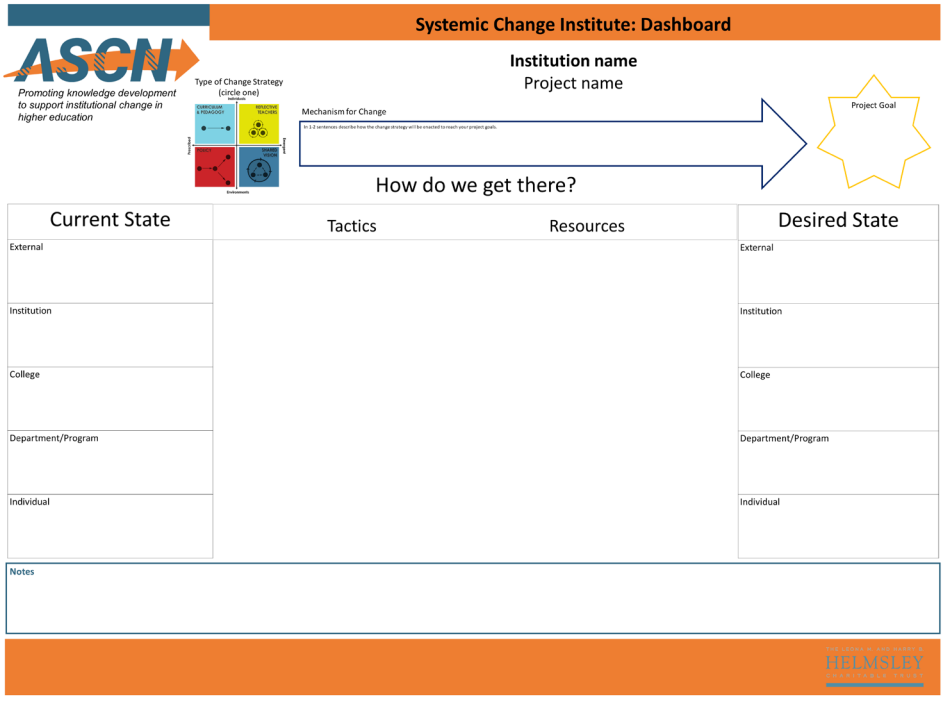
Structures are more concrete things that can be directly measured or observed.

- For example, you can directly observe whether an undergraduate lounge exists in a department where students are able to hang out, study, and interact with one-another.

Cultures can be more difficult to define. The literature contains careful definitions of culture (e.g., Burke, 1992; Burnes, 1996). However, for the purposes of the Dashboard, the careful definitions of culture are not particularly important. We simply think of culture as the more subtle aspects of the Desired and Current States that tend to be harder to directly measure or observe.

- For example, a department may have a culture where students in introductory courses do not feel welcome to enter the undergraduate lounge. This is different from a structural issue, such as a policy that restricts the lounge to upper-level students. Such a culture could even conflict with a formal policy that invites and encourages introductory students to use the lounge.

When structures and cultures conflict, it is usually the culture that dominates (Groysberg, Lee, Price, & Cheng, 2018). Table 1 identifies common aspects of structures and cultures in academic institutions based on the work of Eckel & Kezar (2003). This can be a useful place to start and trigger ideas relevant to your project.



CHANGE STRATEGIES

Once you have identified the Desired and Current States it is time to think about how to move the system from the Desired to the Current State. We recommend starting with the big picture (Change Strategy and Mechanism for Change) and then moving to the specific tactics.

Change Strategy

A **Change Strategy** represents your overall vision of how and why the desired changes will take place. A key purpose of a Change Strategy is to guide your development and alignment of change tactics (specific actions) that will take your institution from the Current State to your Desired State. You probably have a change strategy, whether you know it or not!

There are four basic types of change strategies Change strategies (adapted from Henderson, Beach, & Finkelstein, 2011). These four types represent the quadrants presented in Figure 2:

1. Prescribed-Individual (disseminating curriculum & pedagogy)
2. Emergent-Individual (developing reflecting teachers)
3. Prescribed-Environmental (developing policy)
4. Emergent-Environmental (developing shared vision)

For the purposes of the Dashboard, we are primarily interested in the type of change strategy. You simply need to circle the type of strategy you will be using. This requires determining which quadrant of the foursquare represents the overall goals of your change project by answering two questions:

1. Is the change more focused on directly changing individuals or environments/structures? (the vertical axis);
2. Is the desired outcome of the change largely known in advance (prescribed) or is it expected to be largely designed during the change process (emergent)? (the horizontal axis).

Vertical Axis: Individuals vs. Environments

If you are pursuing a change project that you want to have an ongoing sustained impact on your institution, it is likely that your change strategy will fall on the environment side. There will be aspects of the project that are aimed at individuals, but the overall strategy to reach the Desired State will require a focus on the environment. Changes that only involve individuals can sometimes be easier to implement, but these changes are also typically much less likely to be sustained.

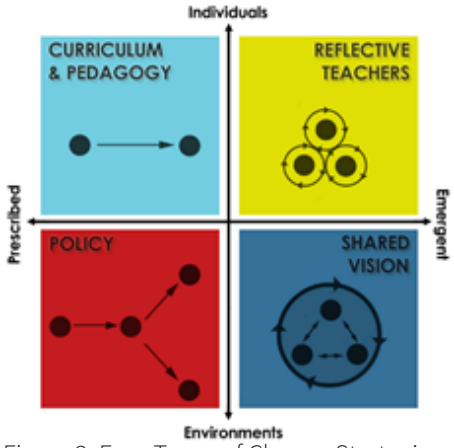


Figure 2: Four Types of Change Strategies

Horizontal Axis: Prescribed vs. Emergent

Whether your change strategy is prescribed or emergent depends on how pre-determined your final vision for the project is. Do you have a strong vision of what you want the want things to look like after the change initiative is successful, or do you expect important aspects of the project to be identified and shaped during implementation? Your vision will likely fall somewhere on the continuum shown in Figure 3. Adoption and adaptation are more prescribed. Reinvention and invention are more emergent.

CHANGE STRATEGIES

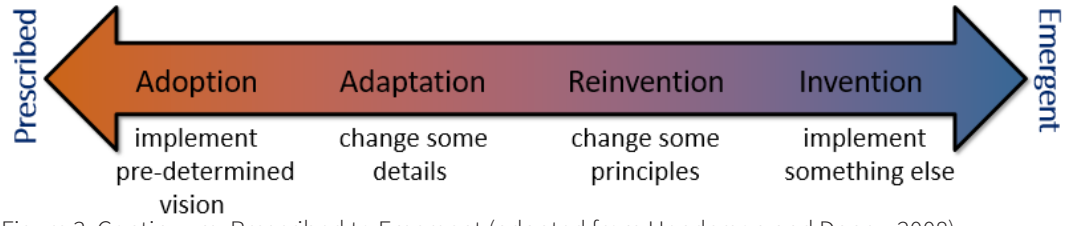


Figure 3: Continuum, Prescribed to Emergent (adapted from Henderson and Dancy, 2008)

Because a strong change strategy is likely environment focused, you likely have only two types of change strategies to pick from:

- Prescribed-Environmental Strategies: In this type of strategy you start out with a clear vision of what you want things to look like. Your project, then, must figure out ways to shape the environment in order to align structures and cultures with your vision. Although you often want individuals to behave differently, we do not consider this strategy as one that is focused on individuals because the levers used to create behavior change are designed to minimize individual autonomy. For example, an individual-focused prescribed strategy might be to tell instructors in the physics department about a new instructional strategy and hope that they like it enough to adopt it. An environmental-focused prescribed strategy might be to provide individual and departmental incentives for instructors to adopt the desired strategy.
- Emergent-Environmental Strategies: In this type of strategy you start with a problem or general area for improvement. Your project, then, must figure out ways to shape the environment in order to bring people together to develop important aspects of the new vision. Although this type of strategy often involves individuals working together and sharing ideas, we do not consider this strategy as one that is focused on individuals because, unlike strategies of the Emergent-Individual type, Emergent-Environmental strategies require the individuals to come to agreement on a vision. An environmental-focused emergent strategy might be to create an instructional development team to develop a new sequence of introductory courses in the department.

Advanced users may wish to identify a specific change strategy within the chosen quadrant. However, we have found that simply identifying the quadrant is sufficient as you begin to work with the Dashboard. Appendix A has more information about specific change strategies for those who are interested.

> Selecting an emergent change strategy when the project goals are really prescribed is a common failure mode. This type of misalignment can occur because change leaders feel (often correctly) that people in their institution will be resentful of a prescribed change strategy. In these situations, the change initiative is rolled out as if participants have significant autonomy in determining the outcome. However, participants eventually figure out that the outcome has been predetermined and that they have wasted their time thinking of possible alternatives that will never be seriously considered. This leads to significant resentment and a failed change initiative. If the goals of a change initiative are actually prescribed – and this is quite common – it is best for the change agents to acknowledge this and follow recommendations for rolling out a successful prescribed change initiative. Kotter's (1996) 8-stage change model is a great place to start.

CHANGE TACTICS AND MECHANISM FOR CHANGE

Mechanism for Change

The **Mechanism for Change** is a simple sentence or two that provides, in very high level terms, how the type of strategy you have chosen will be used to reach your goals. It is often appropriate to identify the mechanism for change before identifying specific tactics, however it may also be necessary to start identifying tactics before you gain clarity on the mechanism for change.

A Mechanism for Change is essentially an elevator pitch for your change project. This is helpful because it starts to focus the project activities. For example:

- This project will improve the retention rate at this institution by implementing a program to identify students at risk of leaving and providing intrusive mentoring and support (a prescribed strategy).
- This project will improve the retention rate at this institution by developing a task force of stakeholders from across the institution to come together and identify the top three barriers to retention and identify solutions that can be feasibly implemented within the existing institutional structures (an emergent strategy).

Change Tactics

Change Tactics are the specific activities that change agents use to promote instructional change (e.g., dissemination of textbooks or other materials, or the specific nature, duration, and content of workshops, etc.). In developing tactics, it can be useful to think about each condition in the Desired State and then identify:

- The gap between the desired and current states
- Resources available
- Tactics that can reduce the gap and are consistent with the resources

Note that it is typically the case that tactics will exist at multiple levels. There are primary tactics that should almost certainly be written on the dashboard. But for each primary tactic there are also likely sub-tactics and even sub-sub tactics. It is not always feasible to put all of the more detailed sub- and sub-sub-tactics on the dashboard. Remember that the purpose of the dashboard is to visually articulate and align the high level structure of your change initiative. You should put just enough detail on the dashboard that it is clear what is involved in each tactic. The details will need to be kept track of elsewhere. It is often the case that, once tactics are agreed on, each tactic can be assigned to an individual who will lead and monitor the implementation.

Change tactics should align with the overall change strategy that you chose for your project. What does it mean to have a well-aligned change plan? Even though your overall strategy fits into one quadrant on the foursquare, it is still important to have tactics that fit into multiple quadrants. Balance across the foursquare is important (see Figure 4), as all change initiatives (especially large ones) have emergent and prescribed aspects as well as individual and environmental aspects. The key is that your tactics are aligned with the overall strategy.

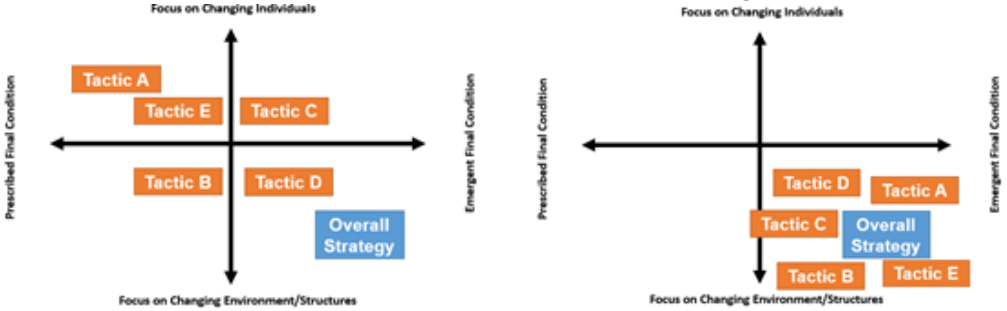


Figure 4: A balanced change project (left) vs. an unbalanced change project (right)

The foursquare can help you identify change tactics that may not have been previously considered. For example, you should ask yourself whether you have the best set of tactics if you have a preponderance of change tactics in a single quadrant, or if you have a quadrant with no tactics. Such a situation might be optimized, but it is more likely that something is missing.

CHANGE TACTICS

TIP: Change Tactics

A set of change tactics should align with your change strategy and fit into multiple quadrants on the foursquare (Figure 3). They should also help you close the gap between your current and desired states.

Strategy: Environmental-Prescribed *Goal:* Enhance and improve coursework in biotech and skills acquisition in biotech for students (more useful to local workforce)	*Useful tactics:* • Environmental-Prescribed: Create a staff position to support project • Environmental-Emergent: Evaluate other successful biotech programs regionally and locally for successful practices • Environmental-Emergent: Schedule regular meetings with local employers, advocacy groups and transfer institutions • Individual-Emergent: Set up a design team to work on shared vision. *Less useful tactics:* • Environmental-Prescribed: Support from deans. (This describes a changed condition – how will this support be secured?) • Environmental-Prescribed: Secure financial support for sabbatical and release time for faculty and team. (No indication about how to secure this support.)
Strategy: Environmental-Emergent *Goal:* Create a culture that rewards and provides support for teaching as a scholarly practice	*Useful tactics:* • Individual-Prescribed: train instructors in observation process and formative assessment • Individual-Emergent: form peer observation networks in STEM & reflect on teaching using formative assessment • Environmental-Prescribed: change self-evaluation questions and review process to codify teaching excellence • Environmental-Emergent: support departments to create department change action plans *Less useful tactics:* • Environmental-Emergent: Create vision networks, empower our leadership with our vision. (This tactic is not only vague, but it is more like a goal than an activity. It does not provide guidance about what the project team should do to reach the goal.) • Individual-Prescribed: Support for courses and research. (This is also vague, and it describes a condition rather than an action.) • Environmental-Prescribed: Funding for pedagogy (This also describes a goal rather than how or from where such funding will be secured.)

Addressing Resistance to Change

We often assume that people and systems always resist change. However, resistance is usually a symptom of problems. Common problems include: 1) a lack of alignment between strategies and tactic, 2) an inappropriate change strategy, or 3) attempting to bridge too large of a gap between Current and Desired States. Thus, when you experience resistance during implementation of your change initiative it is important to identify the underlying cause of the resistance and modify your plans appropriately.

It is also important to proactively analyze your dashboard to identify whether resistance is likely to occur. If so, of course, this suggests that you should consider ways to modify your change plans to reduce this likelihood. For example, it is common for change initiatives to expect environmental level changes to occur via individual-focused tactics (inappropriate change strategy). In this type of scenario the change initiative will often focus on providing training to individuals who will be expected to implement a new practice. Yet, the change tactics do not provide any systematic monitoring or incentives to use the new practice.

Similarly, change initiatives often set up groups or task forces to develop new ideas. But, in reality, the change agent already has a solution in mind and expects the group to come up with this solution. (Lack of alignment between strategy and tactics.) In this type of situation, it would be much better for the change agent to set constraints on the group by articulating required components, identify metrics to track compliance, and set up incentives for compliance. Finally, there are times when the desired change is simply not possible (attempting to bridge too large a gap). It could be that the necessary resources are not in place, or that the institution is currently focused on other priorities. It is important to realize that the desired change is not feasible at this time and determine what is actually feasible. It may be that a more modest project could be successful. It may also be that it is preferable to wait and embark on the project at a later time.

Summary

The Dashboard was designed to help change teams plan for successful and sustained change. Each part of the Dashboard focuses on an important aspect of the system or change process that must be considered in a successful change initiative. The Dashboard makes these considerations explicit so that they can be considered together and inconsistencies can be identified. The Dashboard is best created jointly by a change team. It will likely take several iterations before a final Dashboard can be agreed upon.

Although we recommend a specific order for completing the dashboard and identify some failure modes that we have observed, we think that the most important part of using the Dashboard is to promote conversation and convergence for the project team. Thus, please do consider our recommendations. But, do not feel bound by them if they do not seem to work for your project or your situation.

We wish you great success in your change initiative!

For more information about the Dashboard, the Systemic Change Institute or ASCN, visit ascnhighered.org.

Appendix A: Some Specific Change Strategies

Diffusion (Prescribed-Individual)	Innovations created in one location are then adopted or adapted by others in a multi-stage adoption process. Change agent role: Develop a quality innovation and spread the word.
Implementation (Prescribed-Individual)	A set of purposeful activities are designed to put proven innovations into practice in a new setting. Change agent role: Develop a training program that involves performance evaluation and feedback.
Scholarly teaching (Emergent-Individual)	Individual faculty reflect critically on their teaching in an effort to improve. Change agent role: Encourage faculty to reflect on and collect data related to their teaching.
Faculty learning communities (Emergent-Individual)	A group of faculty supports each other to improving teaching. Change agent role: Bring faculty together and scaffold community development.
Organizational development (Prescribed-Environmental)	Measurable target outcomes are identified and progress towards them is assessed and tracked. Change agent role: Develop new vision. Analyze alignment of parts of the organization with the new vision and identify strategy for creating alignment.
Quality assurance (Prescribed-Environmental)	Leader develops new vision and plans a strategy for aligning employee attitudes and behaviors with this vision. Change agent role: Develop measurable outcomes, define success, collect evidence.
Kotter's 8-Stage Model (Prescribed-Environmental)	Leadership team develops vision and plan for building buy-in and implementing vision. Change agent role: 1. Establish a sense of urgency, 2. Create the guiding coalition, 3. Develop a vision and strategy, 4. Communicate the change vision, 5. Empower broad-based action, 6. Generate short-term wins, 7. Consolidate gains and produce still more change, 8. Anchor new approaches in the culture
Learning organizations (Emergent-Environmental)	Leader works to develop an organizational culture that supports knowledge creation. Change agent role: Move decision-making further from the top. Invest in developing employees personal mastery, mental models, shared vision, team learning.
Complexity leadership (Shared Vision)	In a complex system, results are not easily predicted. Change agents can create conditions that increase the likelihood of productive change. Change agent role: Disrupt existing patterns, encourage novelty, and act as sensemakers.

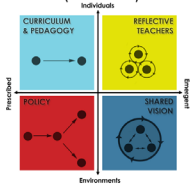
Adapted fromBorrego and Henderson (2014).

Appendix B: The Change Dashboard

Systemic Change Institute: Dashboard

Promoting knowledge development to support institutional change in higher education

Type of Change Strategy (circle one)



Institution name

Project name

Mechanism for Change

In 1-2 sentences describe how the change strategy will be enacted to reach your project goals.

Project Goal

How do we get there?

Current State	Tactics	Resources	Desired State
External			External
Institution			Institution
College			College
Department/Program			Department/Program
Individual			Individual

Notes

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Appendix C: Case Study

Here we present an example of a Change Dashboard. This Dashboard was created by a change team from a community college who participated in the ASCN Systemic Change Institute in 2017. Their goal was to expand the availability of course-based undergraduate student research experiences at their institution in the natural and social sciences.

Background

Members of this project team had been involved in the pilot for a large grant, which introduced this project in 2012. In 2014 they entered a partnership with a local state university, which led the Dean of Science, Technology, Engineering and Mathematics (STEM) and a biology professor to create the project team. In 2016, these faculty attended workshops on the Course-Based Undergraduate Research Experience (CURE). As of 2017 they had established four CURE courses, which the administration supported as examples of real-world learning that will help persistence.

The team was made up of faculty and administrators with varied backgrounds and levels of influence at the institution. Members included the Dean of STEM, the head of the Chemistry Department (and liaison for the partnership with the local state university), an English professor (and assessment liaison), the Dean of Social Sciences and Fine Arts, and five professors (in biology, chemistry, psychology, and anthropology) with connections to the state university partnership and the CURE courses.

The project is part of the larger academic master plan at the institution (2016-2021) to address the current situation that graduates do not demonstrate all of the skills expected of them upon degree completion. For this team, they were concerned that only 33% of their graduates in the natural sciences could demonstrate the outcome, “apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world.”

The team reported that the administration was supportive of the project in general, but provided little institutional funding. Challenges included the lack of institutional funding and research infrastructure (e.g., no Institutional Review Board).

Creating the Dashboard

Five team members attended the Systemic Change Institute in 2017: the Dean of STEM, the head of the Chemistry Department, the English professor, the Dean of Social Sciences and Fine Arts, and a biology professor. They also returned for the 2018 institute.

Their goal was to develop policies and procedures to expand awareness about and interest in CUREs, as well as motivation for instructors to use CUREs. In their application they stated that their institution was in the midst of big changes, and they had an opportunity to lead this change from the sciences, with a model (CUREs) that other academic disciplines could use.

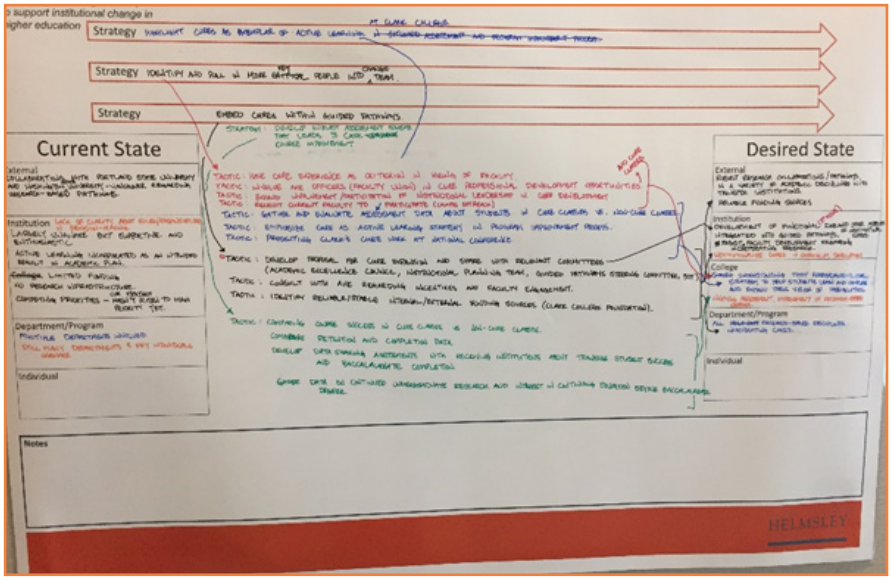

Figure 5: Case Study Team Dashboard

Appendix C: Case Study

During the 2017 institute the team identified the Current and Desired States shown in Tables 2-4. For the Desired and Current States, note that they did not address the individual level. Their project required buy-in from more faculty as they encouraged adoption of the CURE model, and this remains unaddressed on their Dashboard. However, while their Desired State items are closer to goals than outcomes in many instances, they do cover a wide range of issues at their institution. For example, they address the lack of a research culture and the issue of shared vision, but without a clear description of what conditions will have changed to reach these goals.

Because the team wanted to spread the use of a specific (prescribed) course model involving CUREs, they chose a change strategy in the policy quadrant (specifically Kotter's 8 stage model). They identified many tactics, as can be seen in Figure 5 and in Table 4. Some of these tactics could also have been listed as outcomes under Desired State (e.g., "have CURE experience as criterion in hiring of faculty"). Overall, their tactics address many of the gaps between their Current and Desired States, as they organized them according to different aspects of their overall strategy. This allowed them to also address different quadrants in the foursquare, though they did not list them according to the quadrants explicitly (examples taken from Table 4):

- Prescribed-Individual
  - Recruit current faculty to participate
  - Develop proposal for CURE expansion and share with relevant committees
  - Involve faculty union representatives in CURE professional development opportunities
- Prescribed-Environmental:
  - Compare student success in CURE classes vs. non-CURE classes
  - Have CURE experience as criterion in hiring faculty
  - Consult with faculty union regarding incentives and faculty engagement
  - Emphasize CURE as active learning strategy in program improvement process
- Emergent-Environmental:
  - Expand involvement/participation of instructional leadership in CURE development

Table 2: Case Study Desired State

External	• Robust research collaborations/pathways with a variety of academic disciplines with collaborating transfer institutions • Reliable funding sources
Institution	• Development of functional IRB and other aspects of institutional support integrated into guided pathways • Robust faculty development resources incorporating research
College	• Shared understanding that research is a core strategy to help students learn and complete and expand their vision of possibilities • Ongoing assessment, improvement of research-based courses
Department/Program	All relevant research-based disciplines incorporating CUREs (Course-based Undergraduate Research Experience)
Individual	

Appendix C: Case Study

Table 3: Case Study Current State

External	• Collaborating with Nearby State University and Nearby Local State University regarding research-based pathways
Institution	• Lack of clarity about rules/responsibilities • Largely unaware but supportive and enthusiastic administration • Active learning incorporated as an intended result in academic plan
College	• Limited funding • No research infrastructure • Competing priorities – our project has not risen to high priority yet
Department/Program	Multiple departments involved Still many departments and key individuals unaware
Individual	

Table 4: Case Study Strategy, Mechanism, and Tactics

Strategy and Mechanism for Change	Prescribed-Environmental: Develop policies and procedures to expand awareness about and interest in CUREs as well as motivation for instructors to use CUREs
Tactic 1 and subtactics	1. Highlight CURES as exemplar of active learning at institution 1.1. Gather and evaluate assessment data about students in CURE vs. non-CURE classes 1.2. Emphasize CURE as active learning strategy in program improvement process 1.3. Present Institution's CURE work at national conference
Tactic 2 and subtactics	2. Identify and pull more key people into project activities 2.1. Have CURE experience as criterion in hiring of faculty 2.2. Involve AHE officers (faculty union) in CURE professional development opportunities and CURE classes 2.3. Expand involvement/participation of instructional leadership in CURE development 2.4. Recruit current faculty to participate (campus outreach)
Tactic 3 and subtactics	3. Embed CURES within guided pathways 3.1. Develop proposal for CURE expansion and share with relevant committees (Academic Excellence Council, Instructional Planning Team, Guided Pathways Steering Committee) 3.2. Consult with AHE regarding incentives and faculty engagement 3.3. Identify reliable/stable internal/external funding sources 3.4. Encourage faculty/chairs to contact/communicate with faculty at K-12, baccalaureate institutions (to develop more communication regarding entry/exit components of pathways)
Tactic 4 and subtactics	4. Develop robust assessment scheme that leads to CURE course improvement 4.1. Comparing course success in CURE classes vs. non-CURE classes 4.2. Compare retention and completion data 4.3. Develop data sharing agreements with receiving institutions about transfer student success and baccalaureate completion 4.4. Gather data on continued undergraduate research and interest in continuing education beyond baccalaureate degree

Appendix C: Case Study

After the Institute

We interviewed two of the team members after their participation in the 2018 Institute. They have grown their team to about 15 faculty and administrators who are involved in the CURE courses. They have also begun to look into expanding their CURE model statewide, through their state board of community colleges and possible grant funding.

These two team members reported that the institute allowed them to "coalesce and focus" their collaboration within the college and expand the program on the campus more quickly. They attributed this to the support of their mentor, which is part of the Institute, and the time they spent working on their vision statement and the Dashboard, which provided the framework they needed to move forward. In fact, one member stated that he kept the elements of the Dashboard in mind as they developed and grew the project on their campus. While they did not return to the Dashboard to revise it, their project used the Dashboard as the foundation for their activities.

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