Primer

United States Department of Labor's (USDOL) $2 billion-dollar investment Trade Adjustment Assistance Community College and Career Training (TAACCCT) in the nation's two-year colleges was intended to incentivize changes in the two-year college system, in response to growing needs for middle skill jobs. Two-year colleges were perceived to be particularly well positioned to train needed workers; however, nationwide these unique, open-access institutions have long endured low completion rates and sustained programs that have been unable to keep up with the rapid change of pace in the private sector. TAACCCT, therefore, aimed to encourage wide-spread transformational changes in how colleges designed and delivered training to 21st Century students.

Part 1: The Need for Transformational Change of this three-part report, provides the case for why transformational change is worth considering in Montana's 2-year system even after completion of two TAACCCT grants.

In light of these challenges, the second and third parts of this report focus on the conditions that are required to successfully undertake transformational initiatives. Most transformational efforts, particularly in complex systems, like postsecondary systems, fail. With the hope of helping identify how to successfully implement wide-spread change in the future, this report explores factors that promote and inhibit the adoption of innovations that can improve student/employer outcomes and/or systemic efficiency. **Part 2** of this series focuses on: the necessary state-level pre-conditions that must be present for transformational changes to succeed. Assuming those preconditions are present, **Part 3** focuses on the practices, approaches and coordination that can assist with large-scale transformative change initiatives at the project and institutional level.

This research-driven reports is intended to serve as a tool for practitioners hoping to catalyze systemic reform or implement large scale transformative projects.

An appendix has been created for Parts 2 and 3 of this report that reflect on each of the conditions present during RevUp Montana (2013-2017), a statewide collaborative transformation undertaking in the post-secondary environment, as a point of reference for future projects.

Part 1: The Case for Transformational Change

Background

Two-year colleges, with their tradition of open enrollment, have been assigned the toughest task in higher education. With a disproportionate share of the state's underrepresented and underprepared student populations and with limited resources to effectively support this demographic, these colleges have aggressively sought ways to help students be successful and meet the needs of local communities. Mounting evidence suggests that despite these substantial efforts, transformative shifts should be considered in order to effectively meet the needs of students and employers[1].

Education and Career Alignment

It's critical we find solutions to the challenges vexing sub-baccalaureate education in Montana. The Georgetown Center on Education and the Workforce suggests that by 201, 33.5% of all Montana jobs will require some postsecondary training, but less than a four-year degree (28.5% of jobs will require 4-year degrees or higher)[2]. Maximizing efficiency would require students to gain the amount of education required to fill available job openings without investing in unnecessary and costly educational experiences. In 2017, 81.7% of the state's postsecondary students were enrolled at 4-year institutions and only 18.3% in public two-year institutions.

Exacerbating the challenge, the state is expecting a worker shortage of at least 24,000 people (Montana Department of Labor, 2016) in the next decade, making it critical that all workers are working in their most financially productive capacity in order to mitigate what may be a troubling period for Montana's economy.

Return on Investment

The wage benefits of completing postsecondary are well documented. The costs, however, are less well understood and often ignore the opportunity costs of foregone wages and the costs of loan interest for students engaged in postsecondary studies. Further, there is rarely attention paid to the costs and benefits of postsecondary training for the *majority of students who do not graduate*.

RTI, Inc. a leading international research firm, recently completed a study[3] that took a more comprehensive view of the costs[4] and benefits of Montana's two-year colleges using actual student wage data from 2000-2015. That study indicates that it takes the average[5] two-year graduate 9+ years to earn back in wages the actual cost of their education. Similarly, the average non-graduate will take 15+ years to recuperate their costs.

The primary factors that drive this longer Return on Investment (ROI) are:

- Time: It takes the average graduate 6.3 terms (3.16 years) to complete a 2-year program; the average non-graduate completes 2.8 terms;
- Opportunity Costs: Wage data suggests that students forego significant earnings when they enter postsecondary. While the average foregone earnings are less impactful for "traditional" students (18-24 year olds) who forego an average of $10,114/year in earnings; $16,975/year for 25-34 year-olds; and $23,479/year for 35-49 year-olds. The National Center for Education statistics predicts that by 2020 42% of all college students will be 25+ (Horn, 2015).

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[1] While this document highlights factors that indicate transformational changes are needed in Montana, these challenges are ubiquitous across the nation and this document should not be taken as an indictment of the hard-working people in the Montana University System (MSU).

[2] https://cew.georgetown.edu/cew-reports/help-wanted/#full-report

[3] Results for the Return on Investment in 2-Year College Credentials (Draft)

[4] These calculations did not attempt to take room and board into account. While Montana's two-year college residencies add significant access opportunities for some students, from a ROI perspective, the cost of these opportunities would significantly extend the expected ROI for 2-year students.

[5] Returns vary significantly by program area. Undeclared and general studies students generally have the lowest ROI. Through the lens of return-on-investment, it is important to help students choose to understand which programs are likely to result in high-wage, high-demand career paths.

- The average cost to students that leave Montana's two-year system without a degree or a certificate is $18,756.
- Low Wages: Montana wages are approximately 76.8% of the national average (US Census Bureau).

Graduation Matters

There is an ongoing misconception that students exit their studies prior to graduation because they obtain good paying jobs. While this is certainly true for select students, Office of the Commission of Higher Education (OCHE) research indicates 2-year graduates wage increases are nearly three-times that of non-graduates[6]. Further, RTI's research indicates that the 5-year-average-wages of non-graduates after exiting college is below that of the average Montana worker with only a high-school degree and these students have been saddled with an additional $18,756 of college costs.

Student Outcomes

OCHE data indicates 62% of Montana's two-year students never obtain a certificate or degree and only 20% graduate within three years (150% of completion time). The data highlight that the two-year system is not serving the majority of its students effectively and those that are being served effectively are not being served efficiently. These trends are not unique to Montana, but other states have taken more aggressive approaches to resolving the issue, generally by incentivizing outcomes (e.g. completion rates) more than inputs (e.g. Full Time Employee (FTI). While 8-9% of Montana's institutional allocation is based on outcomes ("Performance Based Funding" or PBF), states like Tennessee and Ohio are using 75%+ PBF allocations with promising results for increasing certificates, degrees and awards obtainment rate.

Designing for the Population Served

The majority of Montana's two-year students are working full or part-time, have families, lack dependable social supports and have widely-varying learning capabilities. Yet most colleges still offer minimal academic and/or career advising, offer courses that occur mainly during the work day and teach the same content in the same amount of time to all students. That system ultimately does a better job of sorting students than helping them each be successful (Reigeluth, 1994), as it increasingly channels underserved student populations into programs with less academic and financial supports and much lower odds of completion (Christensen). Despite philosophical concerns, faculty members must embrace the fact that students are and will continue to prioritize direct labor market impacts of their studies (Christensen).

Changing Business Demand

Increasing use of integrated and adaptive technology is rapidly changing the work environment, generally requiring workers to gain a narrower set of specific skills (in addition to soft skills) and continue to build upon those competencies efficiently as technology continues to adapt. This increases the challenge for colleges and instructors who must try to maintain pace with the changes and meet the demands from a mushrooming list of small specialty areas – McKinsey analysts estimate the number of skillsets grew from 178 to 924 in the three-year period between 2009 and 2012 (Horn 2015). A recent Gallup poll found 96% of chief academic officers think their institutions are equipping their graduates with the skills and competencies for the workforce, but only 11% of employers strongly agree (Gallup/Lumina Business Leaders Poll, 2013).

Short-term Technical Training

One way to address the growing pace of change is increasing short-term technical training offerings that enable predictable skill advancement. Workforce Innovation and Opportunity Act (WIOA) incentivizes completion of short-term, credential-bearing training for the myriad community organizations and agencies that implement programs under its

[6] It is important to note that RTI's research indicates that obtaining a certificate also appears to be a significant benchmark with average annual wage increases double that of non-graduates

umbrella and analysis suggests considerable demand for such programs exists from Montana employers[7], yet few such training opportunities exist in Montana in high-wage career and technical fields.

[7] RevUp Montana: Comprehensive Feasibility Study. Thomas P. Miller and Associates. April, 2016

Part 2: Establishing the Conditions for Transformational Change

Background

Underpinning Kezar's (2011) finding that reform in higher education has a history of being difficult, painstaking and protracted, research suggests 66-70% of transformational change initiatives fail (8, 9). Assuming there is sufficient impetus to take on significant educational reforms, what conditions need to be in place to create the "soil" that will support such initiatives and improve the odds of wide-spread adoption and success?

Too often in higher education, reform is viewed as a technical problem that can be resolved by applying the existing expertise of internal stakeholders to address an isolated challenge. Senior administrators are pressed to minimize risk and incentives are tied to *maintaining* operations at their own institutions (1, Christensen). As such, educational leaders are discouraged from thinking systemically, often lack critical outcomes data, are reluctant to alter the fundamental way services are organized and, therefore, fail to address the contextual factors that inhibit the successful introduction of new large innovations (10, 26, 6).

Creating transformational shifts requires that leaders are supported in creating the conditions wherein the collaborative launch of new ideas can thrive. Fortunately, a significant amount of research exists on the subject. **Part 2** of this report aims to describe the conditions and actions that seem to create the environment required to support transformative reform.

For our purposes "transformative changes" are those that seek to <u>shift the paradigm</u> (17, 26) and shift it <u>at scale</u>, meaning with wide-spread adoption and adaptation. Within complex systems, like higher education (31, 16), such initiatives require comprehensively <u>engaging "external" stakeholders</u> (23, 21, 4, 31) as co-owners of the change initiative (e.g. Montana Department of Labor and Industry).

This report focuses on six major interrelated factors that are prevalent in the literature associated with transformational change and implementation and scaling of innovation.

1. Gaining Agreement about the Challenge:

Best Practice Conditions:

Expanded Engagement of Stakeholders: Large scale problems do not respect bureaucratic boundaries. To be successful implementing transformation at scale requires strong, motivated partnerships across institutions and systems, (33, 23, 22, 20, 31) that engage a broad spectrum of stakeholders. It is unusual to see this happening in meaningful ways (17) as leaders are compelled to try to solve issues independently or with the resources over which they have direct control. It is important that interaction and collaboration are ongoing and have endured long enough to build a history of activity that breeds trust and familiarity (18, 23, 37, 45). Further, that regular ongoing interactions are scheduled (specific to the initiative) to foster accountability and encourage the initiative to stay on the radar of all stakeholders (20). Avoid making use of existing meetings – while it reduces the administrative burden, it also reduces the clarity of purpose and allows the opposition to engage (20). Large scale workforce development challenges must engage senior stakeholders across postsecondary educational institutions, the state's Department of Labor and other community organizations that provide integral support services to job-seekers, employers and students (23).

Joint Fact-based Diagnosis of Problem: The literature contains broad consensus that transformative change efforts are most successful when they address a specific and globally recognized need (32, 23, 10) and further, that gaining agreement on the need for change is often the hardest hurdle (5). Seventy-five percent of major stakeholders, 75% must share the view that the status quo is totally unacceptable for systemic change to be adopted (1). A fact-based joint-diagnosis of the need for change that increase a collective and objective view of poor performance is crucial for moving forward (2, 26, 22, 33) for several reasons. It assists in overcoming the occasionally reluctance of leaders to trust or share information that may reflect poorly on their institutions (21, 38); is an effective way to mitigate criticism (5); helps mobilize commitment (10), understanding (23, 29), ownership (17, 20) and decision making (20).

Collaborative/Shared Leadership: Coburn (2003) captures the essence of the necessity of shared leadership well by pointing out that ownership makes external reform internal. Research clearly indicates the importance of shared leadership models in taking transformative change to scale (40, 26, 20, 30), indicating that top-down models can be effective initially but generally are not sustainable (2, 31, 8). Unless the change process is made personally meaningful to stakeholders they will not connect to it and take ownership of the initiative (42) at both the senior level and at the level where innovations are being actively implemented (39). Particularly when introducing innovation at the institutional level in 2-year colleges, where considerable value is put on teamwork in creating and implementing innovation (32), this shared leadership approach is critical.

Balancing Systems and Institutional Thinking: Transformative change efforts are more successful when individuals see themselves as part of a system (17, 23). Centralized control that underpins a systems culture often makes implementing reform somewhat easier (23); however, if stakeholders do not see how addressing the common challenge fits within strategic plan at their own institution they are unlikely to support efforts to the degree necessary (42, 23, 20, 26). It is necessary, therefore, to design transformational change initiatives that maintain the critical factors of the change initiative across all stakeholders while being adaptable to meet local needs and gain buy-in from local practitioners (30, 20, Dede, 2006a, 18, 10, 26, 31, 10). Fidelity to the technical innovation does not necessarily lead to improved outcomes (18) and oversimplifies the key interactions of factors that truly account for results (31, 16, 46).

2. Create a Sense of Urgency:

Gaining a common understanding of the need for reform is a key first step. In complex systems, where myriad operational demands cause persistent distractions, this reform is unlikely to take hold unless it is coupled with a sense of urgency (32, 1, 2, 30, 3, 34, 36). The sense that the ship is going to sink…unless. The status quo must seem more dangerous than launching into the unknown (1). In the absence of this threat, employees will keep doing what they've always done (2). Data should be used in making the case for urgency (33, 2, 1, 26, 31) which has the added benefit of silencing opposition (5) and providing benchmarks from which to gauge progress once the initiative is underway. Urgency is high enough when 75% of a company's management is honestly convinced that business as usual is totally unacceptable (1).

3. Consensus about What How To Address Challenge

Strategic Prioritization: Intimately coupled to acknowledgment of the problem, it is also necessary to gain agreement amongst stakeholders about viable solutions to the problem (23), how to organize for change (10,) and clarity about what the innovation will accomplish (47, 23, 12). Equally important is a willingness amongst major stakeholders to commit to limiting their focus to a few key strategic priorities (41, 20) over an extended period of time (30, 23, 10) and the willingness' to participate in data analysis (32) that leads to iterative waves and refinement (23, 31, 43, 44). Maintaining focus on a few select nodes concentrates current resources in areas most needing change (5) and helps avoid initiative fatigue (45, 22) which often derails stakeholder motivation during change initiatives when implementers see the focus of senior leader's commitments shift.

Shared leadership (i.e. ownership) is again a key component to gaining buy-in stakeholders, allowing leaders to find solutions that are personally meaningful (42) and relevant to the strategic priorities of their own institutions (42, 23, 20, 26).

From the beginning, it is important that the strategies developed are cognizant of the need to scale across the system, and incorporate a multi-faceted approach that include top down, bottom up and through-the-middle leadership and communication (23).

Factors that can limit the effectiveness of strategic prioritization:

- Public agencies are often defined by a conflict avoidant culture (6) in which substantive debate is sidelined. Discontent becomes latent because it occurs under cover, politics triumph over substance and meetings become an empty ritual (2);
- Many systems and institutions lack access to and/or the capacity to analyze: (a) student level and institutional performance data (23, 22), (b) state, systemic and institutional policies and their impact on student outcomes (22, 21); (c) innovations that are likely to be successful for the target population (22), and; (d) the likely costs involved with implementing those innovations (22).
- College and state leaders often do not consider downstream revenue – the idea that improved outcomes may be financially worth a higher up-front investment (23).

4. Strong Relationships and Trust at All Levels

Relationships and trust are a precondition for scale (23, 33, 10, 37). There is "no stick big enough" to compel and sustain a reform effort at scale (23). Positive norms for interaction (13), a history of collaboration, the capacity to share leadership (40, 26, 20, 30), a system view amongst participants (17, 23), and consistent interactions (37) are important to building the conditions for trust and future collaboration. Engaging key influencers, persuasive people with multiple connections (5, 9, 40), taking into account their level of personal enthusiasm (or lack thereof) may be a way to build momentum, gain buy-in from additional stakeholders (40) and sideline critics. Another key strategy to increasing collaboration and trust is to build the ability to work productively with internal/external partners as a key assessment of individual leader's performance (11).

5. Commitment of Leadership

Part 3 of this document also addresses how leaders can help organize implementation of reform efforts at their institutions. Therefore, the section below describes mainly the conditions leaders must establish with their peers at the systems level if those reforms are to be successful.

Not surprisingly, one of the most consistent findings is that when leaders: (a) support, (b) understands and (c) maintain an ongoing role in innovation (2, 34, 32, 9, 20, 22, 23, 33, 26, 26, 48, 41, 9) large scale initiatives are more likely to succeed. Leaders that question or act antithetically to the reform effort greatly undermine the motivation of their staff who will put their heads down, develop work-arounds, and attempt to wait out implementation efforts until they die (2). The key activities of senior leadership necessary to avoid this include:

- Understanding the financial impacts (22) and allocating resources appropriately (33).
- Convincingly and regularly communicating the importance of the reform effort (1, 2, 30,) through a vigorous and sustained communication campaign (26, 22). Indications are that senior leaders should employ three-times the level they think is necessary to effectively relay to managers that they are "backing" effort (9). Isolation is the enemy of systems change (31) and systems must continually remind stakeholders groups of the process and the decisions that have been made (22) by:
  - Pushing out communications consistently as part of standard talking points at meetings and through websites and other publications to target stakeholders that reach them in their own settings (28). Consistent messaging helps isolate naysayers (1, 5).
  - Holding bi-monthly (at least) formal meetings where key staff are assessed on all dimensions of success (9) related to the staff's role in implementing the initiative.
  - Ensuring regular communication from those implementing reform that allows consistent updates to vice presidents, senior administrators, and the periodically to trustees (26).
  - Create feedback mechanisms (2, 23) at all levels to help: (a) create greater connective tissue (relationship/trust) in complex systems (31), (b) mollify critics (2, 5, 26) and by that respond to concerns (22). Assign a critical "Keeper of the Assumptions" to challenge that progress is aligned to intended outcomes (14). People resist change because they don't have sufficient input into shaping these initiatives and often lack the tools or the forum to do so (9).
  - Use data to highlight the potential effectiveness of reforms to generate support for scaling (21, 48, 41). There is strong indication that innovation in postsecondary is largely evaluated by anecdotal evidence instead of institutional outcome data (32) and college leaders struggle to integrate data for evidence-based decision making (32). Research demonstrates that continuous improvement processes helps develop an appreciation for and the skill set to use evidence amongst practitioners (30). Independent evaluation feedback may be helpful in continuous improvement and breaking down resistance (26, 22, 39, 6, 41).
- Building broad stakeholder ownership through shared leadership (42, 41, 22) particularly with faculty who have are responsible for the majority of innovation in two-year systems (32):
  - Visibly support early champions (26).
  - Provide incentives for innovation (21).
  - Ensure new managers personify new culture (1) – reinforce behavior and avoid backslide (2).
- Preparing stakeholders to engage is a necessity highlighted in a wealth of research.
  a. Provide significant professional development and technical assistance to staff about how to adopt new policies and practices: "the how" and ideology "the why" the innovation will be adopted/ adapted, and the timeline for the initiative including the process of iterative change and constant improvement (21, 23, 26, 22, 29, 10, 18, 30).

6. A Culture of Innovation

Educational institutions often assume that the present health of their organizations will persist indefinitely, even with a decline in performance and without investment in innovation (16). It is not enough to merely survive (17) in the context of the rapidly changing demands of the private sector. Innovation does not occur in a vacuum but must be nurtured by the policies, practices and culture of organizations hoping to transform. This critical examination of current practices (17) helps avoid the misstep of only seeing that which confirms existing assumptions (6), which is challenging to overcome in bureaucratized organizations whose organizing principles obstruct the learning process (49, 50).

College leaders are often hired to manage their institutions, to minimize risk and keep the current system working as well as possible and are therefore disincentivized from innovation (1). In management of ongoing operations, the ratio of assumptions to knowledge is low, whereas innovation is undertaken under conditions that are exactly the opposite (14). College leaders are typically further challenged by: limited access to data that allows them to examine the status quo or its alternatives (23, 22) and a reluctance to share information that may reflect poorly on the institution (21).

Organizations characterized by innovation encourage creativity and risk taking (32, 34, 23, 17, 28) and are actively open to new ideas (Sternberg 2006). In complex organizations, where the interaction of interrelated variables is likely to create non-linear and unexpected impacts (both positive and negative) (31), this requires an ongoing iterative, experimental, and flexible approach where reform is treated as an ongoing learning experience (44).

Leaders can aid in achieving this by insisting on critical data-driven analysis of current practices, a culture that focuses on improving the lives of students rather than bulwarks of the status quo (23) and maintaining a positive view of the future coupled with consistent pressure (including some discomfort) to achieve it (18). There is evidence that individuals, institutions and systems must all become "learning institutions" that mutually support iterative practical inquiry in order to support reform (32, 34, 17, 28).

One idea for consistent cultivation of advancement is an "innovation pyramid" in which some of an institution's time and effort are spent implementing: (a) a few big bets (transformation shifts) that receive the lion's share of time and resources and represent the institution's future direction; (b) a portfolio of promising mid-range ideas that are piloted by dedicated teams, and; (c) a broad range of incremental ideas which encourage continuous improvement (13).

Action That Builds the Necessary Conditions for Transformative Change

The actions described in this section are ways to gain agreement and buy-in amongst a broad range of stakeholders undertaking transformative shifts across complex systems. While these actions must initially occur amongst senior leader at the systems level, the same actions will also need to be replicated on the institutional level.

Step 1:

- Identify a core group of 7-15 senior leaders from major agencies/organizations across the workforce development space that represent a diversity of perspectives and a history of working together. Rally this group in a neutral, off-site location where individuals feel secure.
- The convening transformative leader should be capable of painting a positive view of the future (6) that builds hope for the future while creating a tolerable level of discomfort with the status quo that effectively creates a sense of urgency (6, 18). Efforts to communicate state-level redesign are rarely executed well and create a considerable strain on state higher education agency's capacity (22) and the manner in which change is introduced is as much a critical factor as the change itself (47). Storytelling can help underline the need for reform.

- Engage in a facilitated strategic planning process. The goals of this session should include:
  - A discussion of the common top-level values held by stakeholders pertaining to their common work. Values are essential (28) to gaining emotional buy-in and injecting a balance of short, medium and long-term needs of various stakeholder (31, 3). Values help to provide a direction for change rather than a prescription (30) which can limit buy-in and successful implementation.
  - Gain agreement about the challenge and need for change. The benchmark is that a critical mass (75%) of key individuals understand the problem and the reason the reform is necessary. If agreement about the challenge cannot be reached, key managers can be made to experience (e.g. take a real walk in a student's shoes) the organizations problems face-to-face which makes it hard to avoid the reality of challenges (2).
  - Identify a communication strategy (33, 22, 29, 20, 23) that includes:
    - A plan to provide communication at multiple levels to different sets of stakeholders (22, 31, 23) while maintaining consistent messaging from state leadership down through faculty and staff (23). The goal of this communication campaign is to meaningfully engage a wider group of 20-50 influencers in recognizing the challenge and inspiring them to want to do something to change the status quo.
    - A well-crafted compelling description of the desired future (1, 13, 34)
    - Which data sources are considered reliable and most compelling
  - Identify conflicts and obstacles that are likely to arise within the initiative and strategize ways to mitigate them (1, 11)
  - Identify a member(s) of the group to evaluate potential strategies (based in empirical evidence) that could be implemented to address the challenge.

Step 2

Step 2 involves repeating Step 1 with the larger group of 20-50 stakeholders. Once agreement has been obtained about the challenge and the need for transformative shift (75% of stakeholders agree), the goals of this second session will deviate from the structure of this first meeting with the goal of (a) identifying an initial proposed course of action to address the challenge and (b) creating a plan to adapt and scale the proposed strategy across all stakeholders and stakeholder institutions. Specific goals should include:

- Evaluating the strategy options for addressing the challenge. Clayton Christensen, considered by many to be the nation's leading expert on disruptive change, suggests that the extent to which there is consensus on what is wanted and the extent to which there is consensus on the activities that will obtain the needed results determine what kind of leadership can be effectively employed. With little consensus on either front leaders can only use "power tools" (e.g. control, threats, coercion) which have limited promise for sustained change. Leaders need to push beyond this stage gaining moderate agreement on both the desired future and the ways to get there for strategies like strategic planning to work (50).
- Agree to implement a few key strategies (or nodes) that: (a) align with stakeholder priorities; (b) are financially feasible; (c) have a likelihood of generating a few a short-term wins, and; (d) are trackable with accessible data.
- Identify an implementation and communication strategy (33, 22, 29, 20, 23) with a primary goal of gaining a critical mass of leaders to share ownership of the initiative at the institutional level. This plan should include:

- A plan to provide communication at multiple levels to different sets of stakeholders (22, 31, 23) while maintaining consistent messaging from senior leadership down through faculty and staff (23). The goal of this communication campaign is to meaningfully engage a wider group of influencers at the institutional level in recognizing the challenge and inspiring them to want to do something to change the status quo.
- A single compelling description of the desired future (1, 13, 34)
- Provide clarity around what will be accomplished (47, 23), and
- Discuss fair accountability structures (5, 20) and clear measurable outcomes (21, 28)

To this point, the main focus of the activities described above is to encourage development of conditions at the systems and senior-leadership level that enable the successful implementation of transformative change efforts. Without taking the time to gain buy-in and build trust among stakeholders and thoughtfully evaluate options for addressing systemic issues – change efforts at this scale are likely to be unsuccessful.

Part 3 of this document discusses how to design a central transformational change team and encourage successful implementation of transformative change initiatives at the institutional level.

Part 3: Undertaking Transformational Change at the Institutional Level

Background

As discussed in Part 2 of this document, transformative changes in postsecondary education are most likely to succeed when specific conditions exist. Those conditions include shared leadership in the initiative amongst a broad range of cross-sector stakeholder, a conducive policy environment and consensus amongst senior-leaders about the problem and how to address it.

Part 3 of this document describes best practices in (1) structuring a team to lead a reform initiative, (2) effective communications with a diverse set of stakeholders, and (3) management of a reform initiative at the institutional level. **Part 3** is intended as a play-book for institutional leaders and the directors of large-scale change initiatives in implementing effective reform.

1. Structuring a Reform Team

<u>It is important to develop this step at the systems and institutional level.</u>

There is strong evidence that transformational reforms, particularly in complex bureaucracies, require development of an ad-hoc leadership arrangement that exists outside of the existing hierarchy specifically dedicated to implementation of the reform initiative at both the systems and institutional level (2, 10, 13, 11). "Insiders" are less able to challenge assumptions and are almost guaranteed to replicate existing structure and processes (1, 11); however, this ad-hoc reform group also needs insiders to be ambassadors of implementing the necessary change within the existing hierarchy.

- Research points to the creation of a "dedicated innovation team", essentially a leadership group formed specifically to oversee the implementation of the reform initiative, as a means of addressing this issue. It is important that the following is taken into account when selecting this group:
  - The collective group is powerful in titles, information, expertise, reputations and relationships and includes a number of key influencers (5), including a mixture of current employees and new hires that bring new skills (13) and who have exceptional interpersonal skills (13) that include –
    - A history of successful teamwork (1), problem solving capacity, results orientation (willing to accept responsibility), a balance between being methodical and tolerance of ambiguity, and a disdain for the limelight (9).
  - The portfolio of individuals includes a diverse range of perspectives (22) and opinions about the initiative (9) – though the team's overall enthusiasm and perseverance are cited as the top factor in integrating innovations successfully at 2-year colleges (9);
  - That existing staff workloads do not increase by more than 10% as a result of this assignment (9) and assure that staff have sufficient time/resources to succeed. "Lack of time" is cited as biggest barrier to success of implementing reform at 2-year colleges (9).
  - This group has the authority, support, access and resources to take action and make decisions that will transform the institution and/or system in a timely fashion.
  - This group, if different that the original group of senior leaders engaged in identifying the need for transformative change (Part 2), should participate in the following steps:
    - Engage in a facilitated strategic planning process. The activities of this session should include:

        - A discussion of the common top-level values held by stakeholders pertaining to their common work. Values are essential (28) to gaining emotional buy-in and help balance the needs of short, medium and long-term stakeholder (31, 3). Values help to provide a direction for change rather than a prescription (30) which can limit buy-in and successful implementation.
        - Gain agreement about the challenge and need for change. The benchmark is that a critical mass (75%) of key individuals understand the problem and the reason the reform is necessary. If agreement about the challenge cannot be reached, key managers can be made to experience (e.g. take a real walk in a student's shoes) the organizations problems face-to-face which makes it hard to avoid the reality of the experience (2).
        - Identify a communication strategy (33, 22, 29, 20, 23) that includes:
            - A plan to provide communication at multiple levels to different sets of stakeholders (22, 31, 23) while maintaining consistent messaging from state leadership down through faculty and staff (23). The goal of this communication campaign is to meaningfully engage a wider group of 20-50 influencers in recognizing the challenge and inspiring them to want to do something to change the status quo. Tap into both local and national experts (22) particularly to deliver bad news (1).
            - A single description of a compelling vision of the desired future (1, 13, 34) that can be easily communicated in 5 minutes or less and get a reaction that signifies both understanding and interest (not necessarily agreement). If messaging isn't achieving that, the dedicated group needs to keep working on its messaging.
            - A clear explanation of what the strategies to address the challenge will be, what those strategies will accomplish and how they will be measured (21). This should include messaging about the flexibility of implementation at the local level, the implementation timeline (years).
            - Which data sources are considered reliable and most compelling.
        - Identify conflicts and obstacles that are likely to arise within the initiative and strategize ways to mitigate them (1, 11).
        - Identify how the state-level direction aligns with each institution's strategic plans and priorities.
    - It is suggested that the dedicated innovation team meet at least every other month and that meetings include specific reports on progress towards measurable outcomes from key stakeholders. While there is a tendency to want to use existing meetings to discuss the initiative to reduce the administrative burden on participants – it reduces clarity and undermines the importance of the initiative.
    - The creation of a dedicated innovation team that includes "outsiders" that will help drive significant changes for existing employees (a.k.a. the "performance engine") is likely to lead to conflict. Conflict may be about the suggested changes themselves or viewpoints about how the change should be carried out (6).

- "To dismiss innovation leaders as reckless rebels intent on undermining discipline in the pursuit of an esoteric dream is to write off the company's future…. however, antagonizing the performance engine is a really bad idea" (11)
- Senior executives at the system and institutional levels must forge better communications between innovators and the mainstream by consistently reinforcing a culture of mutual respect. This can be achieved by:
  - Clearly defining the roles and responsibilities of each group and creating multiple mechanisms to provide feedback and engage in the initiative's planning and implementation
  - Provide 3-times more communication about the initiative than the senior executives thinks is necessary. This is the "enough" threshold that will isolate dissenters and highlight the importance of the initiative.
  - Include "ability to work productively w/ internal partners a key assessment of individual performance (11, 13)

The Initiatives Primary Leader(s):

There are multiple tiers of systemic and institutional leadership necessary for successful implementation of transformational shift, but typically there is one primary champion or change agent charged with oversight of the entire operation (at both institutional and systems level).

- It is important that the lead is a transformative leader with significant skills in persuasion (2), problem solving, accountability and a demeanor that is methodical but with a tolerance for ambiguity, who has the ability to land a vision across myriad stakeholders and a history of successfully building teams to address complex challenges (1). It is helpful if they are not a person who seeks the limelight (9) and has an excess of emotional resilience.
- Leaders of change initiatives will be targeted (6). Change means taking away a number of things that existing workers (particularly in hierarchical bureaucracies) hold dear, such as daily habits, loyalties and ways of thinking - each requiring a level of sacrifice traded against the promise of a better future (6). As such, senior executives need to offer these leaders extraordinary levels of support that encourage regular processing of intellectual, physical and emotional challenges (6).

2. Key Leadership Services

Support Strategic Planning

This document is not intended to inform leaders about the comprehensive process of strategic planning within coalitions, but highlight a few key elements that research indicates is of particular importance to scale transformative change initiatives.

- Plan for and obtain specific early wins (within the 12-24 months). Communicating these successes will provide compelling evidence of the initiative's promise; help keep the urgency up (1); and force analytical thinking and engagement (1).
- Anticipate obstacles and mitigate their impact (1). If the obstacle is a person or agency, work to isolate their opinions. If necessary – remove them.

- Set and monitor measurable benchmarks and celebrate milestones (10, 22, 9, 23, Dede 2006a). Establishing the outcome data that will be used to measure success is very important (23), but too much reliance on data alone can overestimate the impact of the innovation (28) – utilize a wide variety of evidence. Help establish data-based decision-making processes by establishing a continuous improvement processes which has been demonstrated to build an appreciation for evidence, collecting and analyzing (30) and overcome the over-reliance on anecdotal instead of institutional outcome data (23, 32).

Provide Technical Assistance & Professional Development

- An initiative's centralized technical assistance services should include: assistance with convening stakeholders, providing access to experts, developing tools and templates for new processes and necessary monitoring activities.
- Professional Development is another major factor that is often overlooked (26, 22, 31, 28, 22) resulting in many stakeholders lacking the tools, knowledge and a forum to participate effectively in the change initiative. Ideally in a peer-to-peer forum (23) it is important that this professional development includes explanation of:
  - How and why the transformative reform effort is being undertaken (23, 18)
  - The process of change management (long-term, iterative, ongoing and focused)
  - New policies and practices that will be adopted (and adapted) including the new attitudes and behaviors that will move employees into the new paradigm (10)
  - Tools, and forums for providing concerns about the design and implementation of change projects

Ongoing Communications

Communication is the cornerstone of maintaining engagement (33, 22, 29, 20, 23), a sense of urgency and collective ownership of the initiative that builds connective tissue between stakeholders that might otherwise be siloed from one another, particularly in complex systems (31).

- Vigorous and sustained inter and inner agency communication campaigns are rarely executed well in the postsecondary environment (22), in part because they put considerable strain on most institutions communications capacity.
- Research suggests that senior leaders (28) must communicate consistently, using every available channel (5) to target specific audiences, at a level three-times what those leaders believe is necessary in order to engage stakeholders. Further, that the deeds of senior leaders need to back up their communications (1).
- The most effective communication structure cannot be predicted from the beginning of the initiative but must grow and the program expands (31).

<u>How to Communicate</u>

- Provide extraordinary clarity and consistency from state leadership down through faculty. Even subtle differences in messaging can lead to misunderstanding (9).
- Groups must be able to present the radical so it can be understood in familiar terms in 5 minutes or less and get a reaction that signifies both understanding and interest (1, 13, 34). If messaging isn't achieving that, the dedicated group needs to continue working keep working communication at multiple levels to different sets of stakeholders is necessary (26, 22, 31, 23, 47)
- The manner in which the change is introduced continues to be important and should include the invitation (tone and content) for shared leadership and the availability of feedback mechanisms.

<u>What to Communicate</u>

- The reason change is necessary.
- How the proposed reform will address the challenges and how stakeholder roles fit into the bigger vision (20) what those strategies will accomplish and how they will be measured (21).
- Reminders to stakeholder groups about the process, decisions that have already been made (31), and the short and long-term implementation timeline (years).
- Provide assurances that the disruption will be manageable (23).
- Feedback: communication is a two-way street and a research consistently highlights the importance of establishing various means of feedback inclusive of all stakeholders (28, 31) helping: gauge the reaction of different groups (26), break down resistance (28), address complaints of those not yet engaged in decisions making process (22), and reinforce behaviors to avoid backslide (2).
- Barriers should also be documented, aggregated and shared (23, 22).

3. Institution Level

Many of the systemic characteristics necessary to enable transformative shifts are also relevant at the institutional level. A quick summary of those characteristics and cultural norms is provided below:

Key Characteristics of Organizations

- Institutions that have the characteristics of “learning organizations” are more likely to be successful in implementing large scale reforms (17). These characteristics include:
    - Formal data-driven processes that examine current practices (18, 34, 22) and encourage adoption of new approaches (13) in an effort towards continuous improvement (44). Reform is treated as an ongoing iterative process (4, 17, 26)
    - A culture of risk taking that supports creativity and unconventional thinking (32, 34) and one in which failure is accepted as a part of the learning process.
- Institutions that have “systems thinking” approach, that see themselves as a part of a larger whole and align their priorities, in part, in service to the holistic approach (31).
- Institutions that focus their efforts on a few key initiatives for a long period of time (31) which may include data analysis (48, 26) capacity an emphasis of specific key performance indicators (22) that allows them to sort the most important issues from the extraneous (31).
- Institutions that have a “culture of collaboration”, where values are aligned, information is shared, and positive norms of group interaction exist (13, 23, 44). This includes avoiding practices where the most meaningful discussions are non-inclusive (2).

Key Elements of Implementation at the Institutional Level

- Senior leadership is actively involved (32, 34, 9, 30, 20, 2):
    - Senior leadership gains buy-in by adopting a shared leadership approach (26, 20, 23, 6, 30, 40, 20, 17, 32). Top down approaches to transformative change are not sustainable (31, 8), but top-down approaches can be used to successfully launch initiatives while senior-leaders idenitfy effective ways to gain buy-in.
        - The collective vision includes cross-agency partners (31) that are involved in the shared leadership equation.

    - The collective vision includes a focus on shared values which help balance the tension between long-term and short-term outcomes (3, 28).
  - An objective view of problem has been created (5) and at least 75% of key managers want change (2).
  - The urgency of the circumstance is accepted (2, 3, 30, 6).
  - The need for change and the strategies to address the challenges are visibly aligned (or changed) with the institutions policies and strategic plan (23, 26).
  - Senior leaders commit to reform over the long-term (10, 23) with a recognition that iteration and adaption are a key part of the process (28).
- A dedicated innovation team (described above) is created and given sufficient authorities to enact change. This groups initial activities should include:
  - Identifying set of preliminary strategies that might address the challenges. In analyzing options the group should consider:
    - If reforms will be financially feasible in the long-term at scale without ongoing philanthropy.
    - How best practices need to be adapted to meet the local context without losing fidelity to the factors that will create the desired impacts (26, Dede 2006a, 30, 23, 46).
  - Create a clear, consistent and concise message about expectations of what preliminary strategies might accomplish. While preliminary strategies should include those factors considered imperative to the success of the overall reform effort (20, 18, 43), the opportunity to include more stakeholders (particularly those that will implement the changes) in developing response should not be missed.
  - Indisputable facts can be used proactively to silence critics (5).
  - Identifying ways to share leadership and ownership across divisions (26, 20, 32):
    - Initial institutional engagement strategies should highlight the need for change – framing it as necessary to “improving student learning” which has been demonstrated as the strongest driver of innovation at 2-year colleges (32, 48, 20).
    - Messaging should focus on a positive view of the future (6) while stressing the urgency required for success (2, 3, 30). Greater transparency may be needed to help diverse constituencies make evidence-based decisions that give students the best opportunity for success (22).
    - Staff should be asked what would make a difference for students (26, 22)
  - Taking formal feedback from a broad range of stakeholders, the innovation team should adapt the reform strategy to reflect local needs and respond to concerns (26, 30, 23, 16, 46).
- A comprehensive communications campaign (described above) is enacted.
  - Multi-tiered communication is important for managing the institutional mood (2, 26, 32, 39, 26) and should initially include:
    - Clarity of the vison (32, 30) and what the final strategies will accomplish (2), a timeline for implementation.
    - Key factors necessary to changing outcomes (22) across all departments (17).
    - Create a culture of performance by establishing clear performance expectations and accountability related to innovation (20, 21, 23, 2, 28) to get beyond the “this too shall pass” mind frame (2) and reinforce that complacency will not be accepted (2).
    - The changes should impose new roles, responsibilities and relationship forging new attitudes and behavior to move employees out of the old paradigm (10).

    - Communication is maintained by senior leaders (3 times more than leader believes is necessary (9)), highlighting champions, successes and the overall importance of the initiative – utilizing myriad communication mechanisms to reach target stakeholders – to maintain buy-in (28).
- Professional Development is provided to all institutional stakeholders (described above in the "Key Leadership Services" section.
- It is critical to create mechanism for feedback from institutional constituents (28, 31) to help: gauge the reaction of different groups (28), break down resistance (28) and address complaints of those not yet engaged in decisions making process (22) reinforce behaviors and avoid backslide (2). Feedback will also enable adjustments to practices (i.e. iterative continuous improvement (44) that lead to desired impacts and improved performance (1).

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Appendix 2: Systems Conditions in RevUp Montana

	Necessary Condition for Transformational Change at the Systems Level	Perspective of Circumstance During RevUp Montana (2013 -2017)
1	**Gaining Agreement about Challenge** *Inclusion of Expanded Stakeholder Set*	If the primary limitations of the current value proposition are (1) low return-on-investment for students, and (2) low valuation of graduates by the state's employers; there will need to agreement amongst two-year system stakeholders to move forward. A greater recognition seems to be arising from other stakeholder groups (e.g. workforce is the first primary initiative in the Governor's Main Street Montana Project and the Montana State Chamber's Envision 2026) toward the trend of change. Another major challenge is the state's significant worker shortage (projected 24,000-person gap during the next decade) that is likely to have serious economic ramifications. This issue needs meaningful cross-agency attention. It is a common to hear discussions that focus on the undervaluing of two-year education in Montana and the need for more marketing to help the public understand the true value proposition of these institutions. The lack of future orientation may not be serving the public well. Having said that, there does seem to be an acknowledgement that there are common challenges that simply haven't received enough collective attention. In a December 2016, RevUp Sustainability Survey, 66% of Deans/CEOs/Presidents indicated that there were critical issues in two-year education that needed to be addressed collaboratively[8]. Seventy-seven percent indicated that more needed to be done to create communal goals. Amongst higher-education stakeholders, there is much more consensus about addressing incremental shifts[9]. For instance, there are frequent discussions about how to improve advising, orientations, curriculum, etc. While institutions share best practices with one another, differing institutional direction tend to lead to irregular adoption. At the systems level, there has been much more interaction between two-year colleges and the Montana Department of Labor and Industry (MT DLI) in the last few years as evidenced by the hiring of a joint position of the two agencies. At the local level, some colleges hired Workforce Navigators to bridge MT DLI Job Service centers with their local two-year college. While these positions seemed to dramatically increase effective recruitment of Job service clients into two-year programs (with associated average revenue increases of $140K/year for the colleges) where this was a focus (Bozeman, Flathead

[8] RevUp senior-leader sustainability survey
[9] RevUp senior-leader sustainability survey

Appendix 2: Systems Conditions in RevUp Montana

		Valley, Great Falls, Hamilton, Helena, Great Falls, and Missoula); one college took steps to sustain a strong relationship with Job Service when RevUp ended. Federal WIOA legislation incentivizes collaboration between social service agencies and colleges; however, this funding is best suited to short-term, credential-bearing programs which are limited within the state's current two-year system offerings.
	Fact-based Diagnosis of the Problem	While data is often a part of discussion, MT's two-year institutions are limited by two main factors: (1) data collecting capacity, and; (2) the integration of available data into the decision-making processes of senior-level executives. It is common to see a piece of data scrutinized until its relevancy has been called into question. This results in closure for discussion to change. Eighty-eight percent of Deans/CEOs/Presidents indicated that marrying wage data to college student outcomes was very valuable, but this capacity has only been available for the last year. At the systems-level data seems much more likely to be utilized in decision making; however, at the local level (e.g. individual Job Service locations) there seems to be little or irregular consideration of the performance measures that govern their outcome measurement (e.g. Workforce Innovation and Opportunity Act (WIOA) Performance Measures).
	Collaborative/Shared Leadership	The Glossary of Education Reform describes "shared leadership" as an expanding number of people making decision about the school's organization, operation, and academics. As an alternative to more traditional forms of school governance in which Dean/CEO/President or Executive Teams make most governance decisions, shared leadership includes creating decision-making opportunities for instructors, staff members, students, trustees, and community members. While there are some exceptions, there appears to be minimal shared decisions within Montana's two-year system or at the institutional level. While many colleges offer "academic freedom" to instructors, most colleges operate hierarchically with most decisions made by Executive Teams. In regard to RevUp in particular, it is clear that many institutions felt pressured into participating in the TAACCCT initiative, stating "Campuses should not feel "forced" to participate."." Sixty-six percent of Deans/CEOs/Presidents suggested that establishing processes that allowed for consensus-based decision making would be helpful. Similarly, there is a strong history of local control. Further, federal regulations seem to encourage silos within local Job Service locations by isolating experts within specific programs/funding streams. These realities tend to mitigate initiatives that scale reforms at the state-wide level. At the college level in Montana, many embedded institutions feel unengaged in leadership of their own organizations as decisions are imposed on them. For instance, despite substantial return-on-investment for the colleges and waiting lists that demonstrated strong demand from the community, some RevUp courses were effectively cancelled when the university's budgeting process failed to allocate funds for these programs. Another trend that hints at lack of a systems approach is the

Appendix 2: Systems Conditions in RevUp Montana

	Balancing Systems and Institutional Thinking	reluctance of institutions to refer prospective students to other colleges that might be better positioned to serve their particular needs. This characteristic is hard to quantify. With each postsecondary institution having a unique relationship to the state system, it is also hard to generalize across the state; however, it seems reasonable to suggest that, in general, colleges are more competitive with one another than collaborative. Forty-five percent of Deans/CEOs/Presidents responding to a RevUp Sustainability Survey indicated they felt that Full Time Employee (FTE)-based funding disincentivizes collaboration.
2	**A Sense of Urgency**	Without an agreement about, or discussion of, common systemic challenges, the level of urgency to address them remained low. The most compelling force seemed to be the threat of punitive action from the United States Department of Labor for lack of compliance (fear).
3	**Consensus @ Strategies to Address Challenges**	Until there is agreement that a common challenge exists, it will be difficult to identify common strategies to address those challenges. Therefore, institutions are encouraged to develop strategies that they believe will address the needs of their own institutions. In RevUp, schools were given the opportunity to pick which sub-initiative they wanted to participate in, most colleges chose to focus on enhancing specific occupational areas. The system-wide initiatives that required collaboration between institutions; however, were more contentious. One of the major obstacles to the implementation of course sharing was the lack of consensus of Presidents/Deans/CEOs[10]. Similarly, there was a range of responses to introducing the one-semester Certificate of Technical Studies (CTS) degree which some felt was useful and some felt would be an undesirable off-ramp for students. Formalization of industry partnerships, in collaboration with the State Workforce Innovation Board and the Governor's Office Main Street Montana Project, who felt they needed more time to assess options.
4	**Enacted Networks (Strong relationships and trust at all levels)**	There is concern that there is a lack of trust and collaboration in the Montana University System. In a survey of Presidents/Deans/CEOs during RevUp, leaders were asked if they expected one another to act with "transparency of intention". Senior executives indicated this was not an expectation they had of their peers in a "select all that apply" answer category.

[10] RevUp senior-leader sustainability survey

Appendix 2: Systems Conditions in RevUp Montana

		Further, there appears to be a trend of avoiding meaningful conflict and debate in meetings. Literature points to this type of communication as particularly destructive as "politics triumph over substance, staff meetings become empty rituals and meddling becomes the norm" and the trend is hard to spot as it occurs under cover[11]. Exacerbating this condition of mistrust is the unique relationships that each public two-year institution shares with its flagship university. With little varying degrees of administrative, budgeting, and decision-making authority, senior executives often describe an inability to chart a predictable course for their own institutions. "We would like to be able to move in the CTS direction, however without greater academic authority… direction is difficult," in thei response to a December 2016 RevUp Sustainability Survey. Forty-five percent of Deans/CEOs/Presidents indicated they felt that FTE-based funding disincentivizes collaboration.
5	**Commitment of Leadership** *Communication* *Gaining Buy-in @ Institutional Level/Co-ownership*	The described feeling is that the system continued to bounce from initiative to initiative with two commonly expressed outcomes: (1) not enough time was spent evaluating if any initiatives innovations had been successful or not, and (2) institutions were under consistent pressure to take on new initiatives, and sacrifice staff time/morale to do so, without a clear understanding of the broader intention and direction of the system as a whole. Systems-level initiatives that were underway simultaneous to RevUp included: Common Course Numbering; College!Now; Two-year mission expansion/update; Prior Learning Assessment; Dual Enrollment Expansion; TAACCCT IV; Apprenticeship expansion; Math Pathways; Corequisite Remediation; Rural Educator Recruitment and Retention; Career Pathway redesign; Main Street Montana; Financial Literacy Outreach; GEAR UP projects - college app week, ACT for juniors; MReady, and; integration of Performance Based Funding. Literature suggests that these feelings arise from lack of joint-identification of the problems and lack of shared leadership in designing initiatives. Having witnessed leaders proclaim crisis without catalyzing substantive change – employees get jaded believing the safest course is to ignore the new initiatives, work around them and wait things out (2) – the "This too shall pass" phenomenon (2). While the skepticism/lack of enthusiasm about the project was palpable from many institutions, it is mainly the lack of time and attention spent on the project that provides evidence. Only four institutions had regular TAACCCT-specific meetings that consistently involved all staff for decision-making.staff. Without buy-in, gaining buy-in/ownership at the institutional level is unlikely. One state-wide meeting was held to introduce consortium members and their staff to the project. , Project initiation meetings were inadequately prepared to introduce the expansive project and its various initiatives adequately to their peers.

[11] Harvard Business Review (2)

Appendix 2: Systems Conditions in RevUp Montana

	Professional Development at th institution	RevUp's staff did make an initial round of visits to orient individual institutions to the project, but that too was woefully insufficient to garner understanding, gain feedback and inspire buy-in. Once individual initiatives had become more solidified (once the necessary role of various stakeholders on each campus were understood) – another round of visits likely would have helped. RevUp updates to CEOs, CAOs, grant coordinators and workforce navigators were provided on a regular basis. Discussion and or other forms of engagement (e.g. feedback) was very limited. meetings. Grant coordinators frequently shared comments like: "I will share this with our staff, but I don't have any authority to make anyone do anything." The only other known avenue for alerting staff to expectations, gain feedback or activate the activities of the grant were the irregular institution-based meetings described above.
6	**Culture of Innovation**	Creating this culture is particularly complicated in the postsecondary environment where institutions are accountable to effectively serving the public and risk taking is therefore generally seen as an unjustifiable danger. Senior executives are generally rewarded for optimizing the current structure, and bureaucratic processes that afford myriad opportunities for someone to say "no" - make initiation of innovation particularly challenging. In some ways, the culture is heavily stick driven. Further it is hard to quantify an institution's innovativeness. However, there are some key factors whose presence would indicate that an institution was conscientiously battling these difficulties. These factors would include: (a) the presence of a formal process for challenging existing assumptions, including access to appropriate data, (b) a formal process for exploring and implementing innovation, (c) a history of implementing these changes (with the caveat that transformational shifts typically require the engagement of a wide coalition of partners capable of catalyzing shift in multiple levels of the organization's ecosystem, including at the policy level). Some institutions seem more "forward thinking" and have a higher tolerance for risk, though in all cases significant factors also arose that limited the implementation of transformative innovations. For instance, colleges were actively pursuing the idea of competency-based education but seemed to lack the institutional follow-through to take sustained action in this direction; or adopted CTS degrees despite resistance from its parent-institution; or sought approval to offer myriad CTS offerings, but the requests were not even reviewed , and; several colleges eagerly wanted to pursue course sharing but there was not an appetite to pilot the effort with more than a handful of institutions at the system level.

	Structure and Processes Needed to Scale a Transformative Project	Perspective of Circumstance During RevUp Montana
1	**Structuring a Specific Reform Team** *Diverse* *Internal and External* *Shared Leadership* *Addressing Conflict Proactively*	@ Systems Level: A specific reform team as suggested in literature in the context of TAACCCT, would manifest as an organization with the following qualities: • A mixed team of outsiders (those not previously in the system) and insiders (at least one existing high-level staff person from each institution – dedicated to implementing the initiative) with exceptional interpersonal skills; • The team is diverse in knowledge, information, expertise, reputations and relationships, and powerful in title, and includes a number of key influencers from various institutions; • This group has the authority, support, access and resources to take action and make decisions that will transform the institution and/or system in a timely fashion; • The group has communication and feedback mechanisms that connect it to other project stakeholders, and • Has developed a shared-ownership model with institutions and other stakeholders. • Further this group has the support of system and institutional senior executives who help address conflict with the "performance engines" at their own institutions and work actively to create conditions of mutual respect. RevUp had a small centralized team charged with implementing the project and "grant coordinators" at each institution that were partially funded by grant-funds. While positions and influence varied amongst institutions, in general, grant coordinators held positions of nominal authority at their institutions and struggled to understand how they could lead change within their institutions. At the Institutional Level: Few colleges created diverse project-specific teams to aid in inner-institutional implementation or communication of transformative initiatives. Regular project team meetings were held that aided in institutional communication, but efforts focused largely on incremental changes being made within the college.
2	**Communications** *Sense of Urgency* *Robust*	A specific communications campaign consistent with best practices findings with the literature in the context of TAACCCT, would: • Highlight senior leadership. • Convey a sense of urgency – "launching into the unknown is preferable to maintaining the status quo."

	Multi-level *Feedback Mechanisms*	• Be consistent, robust and ongoing. • Target multiple stakeholder's groups (faculty, senior executives, mid-level managers, etc.) within the institution and use a variety of communication platforms, reinforcing the priority nature of the reform and framing it within the institution's overall direction. • Provide multiple mechanisms and opportunities for stakeholders to provide feedback and reflection to the reform team. Without consistent agreement about the systemic challenges that RevUp hoped to help the consortium address, urgency remained low. With a few exceptions, engagement in RevUp and implementing RevUp transformative initiatives was limited. As stated earlier only a few campuses created project-specific teams that focused on implementation of transformational changes.
3	**Leadership Services** *Early Wins* *Technical Assistance* *Professional Development* *Anticipate Obstacles* *Monitor Feedback*	The specific set of services provided by centralized project team consistent with best practices findings with the literature in the context of TAACCCT would include: • Planned-for and executed wins within 12-24 months of the project's initiation. • Provision of technical assistance (defined as activities that help by reducing the administrative burden on individual institutions) like creation of templates for reporting. • Provision of professional development of staff about the change initiative, its expected impacts and the roles of various staff. • Anticipation and mitigation of expected obstacles to implementation. • Monitoring of feedback. There were no benchmarks specifically planned to demonstrate success and momentum of the project. The central project team did supply technical assistance, creating a central repository (BaseCamp) on which to share marketing and administrative templates. While some professional development was provided to campuses early on in the project, in retrospect these outreach attempts were too limited (and early) to effectively communicate to multiple levels of staff at the institutional level. While feedback mechanisms existed between the central project team and grant coordinators at each institution, reliance on this relationship for feedback with the host of stakeholders at each consortium institution was seemingly inadequate. There was very little feedback received throughout the project that allowed for improved delivery or adaptation of services.
4	**Cultural Conditions at Organizational Level**	As discussed elsewhere in this document, organizations that have formal, iterative and data-driven processes that examine current practices, encourage adoption of new approaches and proactively embrace continuous improvement are more likely to undertake successful transformation change initiatives. Further, institutions that view themselves as a part

	Learning Organization *Systems Thinking*	of a larger whole and align their priorities, in part, in service to the holistic approach are all more likely to succeed in developing the partnerships needed to undertake substantive reform efforts. By and large, most Montana two-year colleges have a strong culture of adopting incremental shifts to improve their services, based upon the existing educational paradigm. Each institution has a unique relationship to its parent university and to the system in general with differing levels of authority and autonomy over their own operations. In general, there is a stronger sense of competition than collaboration – though that may be changing.

Consistently Highlighted Transformational Best Practices in 2-year Education

Largely taken from *Framing the Opportunity* and *Policy Meets Pathway*

- **Strategic use of data:** Utilizing data to identify to prioritize the industry and career pathways with the greatest potential to bolster local and state economies, allows leaders to dedicate limited resources to the fields with the greatest potential.
- **Paid work-based learning (e.g. apprenticeships, internships, etc.):** Simultaneously (a) reduces student cost by drastically reducing the opportunity costs of training and (b) decreases the skills gap by training workers in the field. Newer degree-bearing models of apprenticeship allow colleges to play an expanded role (and the associated revenue) in the implementation of apprenticeships, on-the-job training and paid internships.
- **Stackable credentials:** Enable students to come and go from their educational experience (as they do) with demonstrable labor market returns at each tier.
- **Flexible learning:** – Technology and thoughtful scheduling can greatly increase access and opportunities for students. Increased use of online/hybrid programs/courses, flipped-classroom models, evening and weekend courses (21).
- **Intentional on-ramps:** Creating a common understanding of college-readiness enable colleges to create on-ramps for potential students out of an array of complimentary programming like adult education, vocational rehabilitation.
- **Integration of industry-recognized credentials (IRC):** Benchmarking students using industry association standards helps ensure learning outcomes remain relevant and transferrable while also provide a useful third-party assessment of students learning outcomes. IRCs can also provide the framework of benchmarks for stackable credentials and competency-based education.
- **Competency-based education (CBE) & PLA:** Moving away from seat-time-based, on-size-fits-all instructions, CBE allows students to move through their education at a pace that recognizes their ability to demonstrate proficient mastery of a subject or learning outcome. This same (or similar) assessment process allows colleges to recognize competencies that students may have already obtained though work or life experience and award an appropriate amount of credit that enables a student to progress more quickly through their training.
- **Guided Pathways** – moving beyond alignment of curriculum, guided pathways prescribe a particular sequence of course and educational experiences for students often holding spots to ensure students the most efficient route to obtain their certificates/credentials. Pathway program are often designed to include dual enrollment opportunities with other institutions (e.g. K-12, adult education, etc.).
- **Up-front, ongoing and wraparound advising** – Starting at the beginning of their educational experience students are provided intrusive/proactive academic and career advising that often includes a comprehensive intake, connections to outside support resources (e.g. braided funding), ongoing assessment of progress and job placement services.
- **Braided funding –** By collaborating with other workforce development agencies and programs students can be provided an array of financial supports generally not available from colleges, including assistance with transportation, child care and the costs of training. Similarly, clients from these partner programs gain access Pell grants and other financial aid opportunities to support their training.