Transforming in an Age of Disruptive Change

Part 2: Getting Started, Getting it Done

by Donald Norris, Robert Brodnick, Paul Lefrere, Joseph Gilmour, and Linda Baer

REINVENTING STRATEGIES, BUSINESS MODELS, AND EMERGING PRACTICES

The good news is that there is ample opportunity for institutions, even as they face the challenges that 2013 presents, to respond to—and even embrace—disruptive forces. The two-track model allows an institution to focus effectively on the two major types of change efforts at one time. However, the two tracks should be led and operated separately, allowing each the focus and leeway necessary to carry out the transformation that has been assigned. Gilbert, Eyring, and Foster (2012) maintain that the challenges and skills needed for the transformation of core programs (legacy business) are very different from those needed for the development of a new, disruptive model. Moreover, the new offerings may reduce demand for the old offerings, even if they are adapted to disruptive forces.

These two approaches also require the expression of two different types of leadership:

- The leader of Track A (Reshape/Reinvent the Core Model) initiatives needs to be someone who not only can cut costs and improve value, but also who has the capability to take a broader view and rapidly find the strongest competitive advantage the legacy programs can sustain in the disrupted marketplace.

  For example, a traditional liberal arts program may "double down" on its belief in the value of a challenging liberal arts education, but infuse the experience with digital scholarship, international experiences, experiential and service learning, internships, and entrepreneurship opportunities that would ground the learner's critical thinking skills in real-world experiences.

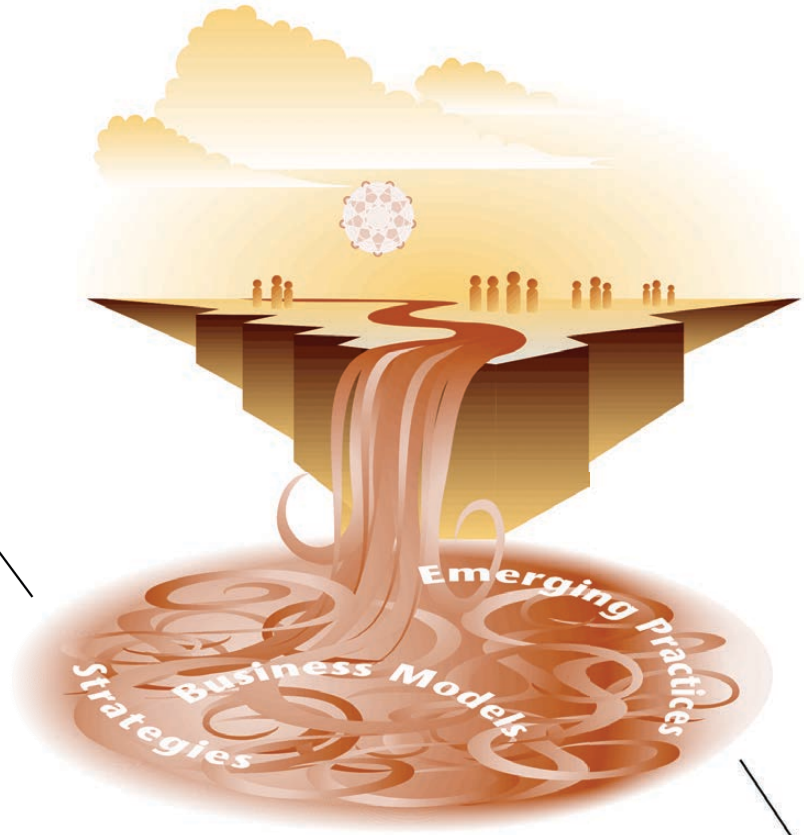
- The leader of Track B (Discover Future Business Model), on the other hand, needs to identify unmet needs in the current or emergent marketplace, develop new programs that will fulfill those needs cost effectively, and then carefully implement and evolve those programs. The idea is to organize a group that is unencumbered by the past and the contents of core programs and that has the moving room to create a truly disruptive model that assures the institution's future in the face of the next wave of disruptive opportunities.

The good news is that there is ample opportunity for institutions to respond to —and even embrace—disruptive forces.

Institutions have three significant levers for responding to the opportunities presented by an Age of Disruption: *strategies*, *business models*, and *emerging practices*, as portrayed in Figure 4.

Figure 4 **Reinvention Strategies, Business Models, and Emerging Practices**

Reinventing Strategies, Business Models, and Emerging Practices



Strategies

- *Focus on and promote the **real value** of the college education and developmental experiences, enabling learners to make choices that manage the total cost of completion of developmental objectives.*
- *Develop organizational capacity for analytics-enabled personalized learning, performance measurement and improvement, and optimization of learner success.*
- *Build flexibility into completion and certification of learning and developmental objectives, including certification for prior learning, seamless articulation and transfer, open and DIY learning, and competence-based certification*
- *Double down on what the legacy programs and experiences at traditional institutions do best – provide social and business networks for life, learner/faculty relationships, personal development including leadership and co-curricular experiences, filtering and identifying of talent.*

Business Models

- *Reinvent the business models for education and developmental experiences in the face of disruptive activities. Not just learning, but human development, research, commercialization, public service and economic development.*
- *In Track A, consciously reinvent legacy programs and experiences to maintain competitive position in the face of disruption of existing value propositions – provide real value and discover new revenue streams.*
- *In Track B, create separate disruptive businesses to develop innovations that will become the sources of future growth. Discover offerings that address new or unmet value propositions that have not been possible in the past but are now possible.*

Emerging Practices

- *Seamlessly link learning with real-world experiences, globalism, entrepreneurship, and innovation.*
- *Achieve excellence in supporting personalized learning, performance enhancement, and optimizing student success.*
- *Liberate the innovative, entrepreneurial, and problem-solving capacities of college and university communities.*
- *Communities of practice become the epicenters of knowledge stewardship and perpetual learning.*

Strategies enable institutions to deploy adaptive, focused efforts over time in order to realign to the changing needs of learners, parents, and American society in the 21st century. Four particular strategies appear promising for institutions facing disruptions over the next decade:

- Focus on and promote the real value of a college education and associated developmental experiences, enabling learners to make choices that personalize their experience and manage the total cost of completion of developmental objectives.

- Develop organizational capacity for analytics-enabled personalized learning, performance measurement and improvement, and optimization of learner success.

- Build flexibility into the completion and certification of learning and developmental objectives, including certification for prior learning, seamless articulation and transfer, acceptance of open and DIY learning, and competence-based certification.

- Double down on what the legacy programs and experiences at traditional institutions do best—provide social and business networks for life, forge learner/faculty relationships, facilitate personal development including leadership and co-curricular experiences, and filter and identify talent.

Business models use insights into human motivation to translate strategies into actions that will appeal to learners, their families, and other stakeholders. The four strategies above inform the generation of new business models necessary to establish sustainable bases for strategies and emerging practices. Three are shared here:

- Reinvent the business models for education and developmental experiences in the face of disruptive activities —not just learning, but human development, research, commercialization, public service, and economic development.

- To reposition existing core activities, consciously reinvent legacy programs and experiences to maintain competitive position in the face of the disruption of existing value propositions to provide real value and discover new revenue streams (Track A: Reshape/Reinvent the Core Model).

- To create separate disruptive businesses and develop innovations that will become the sources of future growth. Discover offerings that address new or unmet value propositions that have not been viable in the past but are now (Track B: Discover Future Business Model).

Emerging practices appropriate to the Age of Disruption will result from fresh strategies and reinvented business models. Institutions that will thrive in the Age of Disruption will learn to capitalize on emerging practices and hone them to sharp, differentiating points. Here are four promising areas where emerging practices will arise that connect to the strategies and business models already described:

- Seamlessly link learning with real-world experiences, globalism, entrepreneurship, and innovation.

- Achieve excellence in supporting and achieving personalized learning, enhancing performance, and optimizing student success.

- Liberate the innovative, entrepreneurial, and problem-solving capacities of college and university communities.

- Make peer-to-peer learning and communities of practice the epicenters of knowledge stewardship and perpetual learning.

Reinvention of strategies and business models is never easy, although it is easier for some organizations than others. A fundamental principal of organizational development describes the inertia imposed by organizational complexity and its supporting bureaucracies. Clay Shirky's blog posting, "The Collapse of Complex Business Models" (Shirky 2010), referenced Joseph Tainter's book *The Collapse of Complex Societies* (Tainter 1990) in questioning whether complex organizations could become sufficiently flexible and adaptive to respond to tectonic changes in their societies and marketplaces. There are many examples of those that did not—the Romans, Lowland Mayans, Digital Equipment Corporation (DEC), and others. Today's large and complex universities are precisely the sort of complex, bundled, interconnected, and distributed enterprises that cannot turn on a dime in response to disruptions in their environments—or from within. Can they find a way to thrive in the Age of Disruption?

The challenge of transformation in an Age of Disruption is for each college and university to craft a new set of strategies that nurtures greater flexibility, enables enhancement in performance, and spawns fresh business models and emerging practices that appeal to stakeholders. The following section describes how to get started on that path and get it done.

GETTING STARTED AND GETTING IT DONE

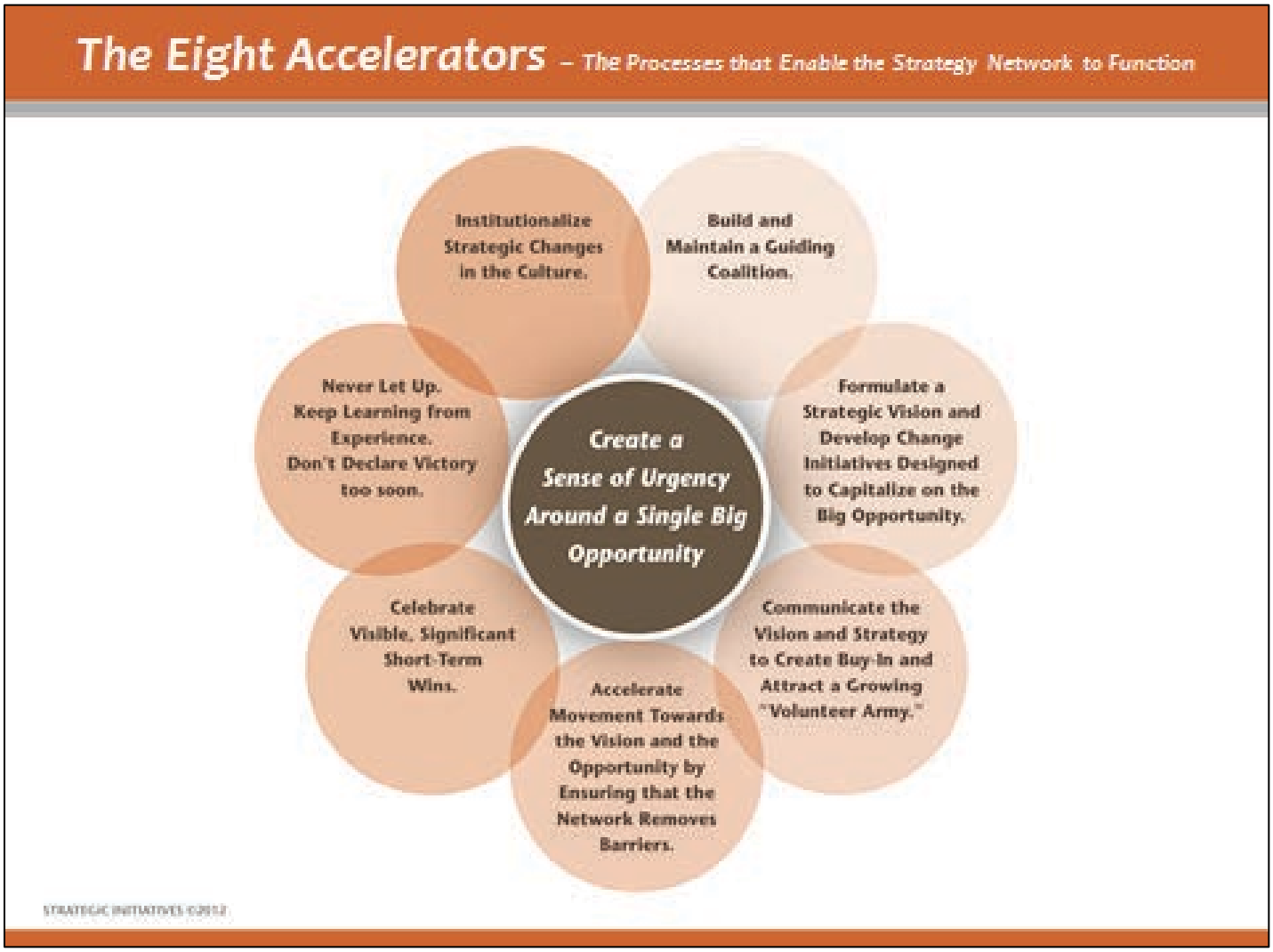
Since *Transforming Higher Education* (1995) we have learned a great deal about how to accelerate strategic transformation. We have developed new tools and practices for reinventing and leveraging the institutional processes of planning, resource allocation, program review and accreditation, and assessment. Taken together, these can enhance institutional effectiveness. We have also learned the importance of comprehending uncertainty and risk in the face of the Age of Disruption and the need to consciously build *strategic resiliency*.

In our judgment, every U.S. institution needs to reposition itself to play its part in national success in the Age of Disruption. We must pay attention to the risk of incremental tinkering in the face of disruptive change. Institutions need to redirect and reinvent existing visions, processes, and practices as part of strategic campaigns of planning, execution, and organizational development. And we must find ways to continuously resource, refine, and rescale innovations in the face of scarce resources. Successful strategies will differ dramatically among different types of institutions. Here are some approaches that we suggest:

CREATE A SENSE OF URGENCY, BUILD A WINNING COALITION

The first two steps in Kotter's (2012) process for accelerating change are to create a sense of urgency and then build a winning coalition. These steps can be applied both to particular initiatives and to the overarching initiative of positioning the institution for success.

Figure 5 **The Eight Accelerators for Institutional Strategies and Initiatives**



Source: Kotter 2012, p. 10.

In most institutions, the development of a sense of urgency and strategic direction will start with the board in collaboration with the president, provost or chief academic officer, and chief financial officer. When an institution needs to move beyond its comfort zone, committed leadership from these players is key. Then the sense of urgency should widen to include the entire executive team, including the critically important deans, and from there spread to the entire institution.

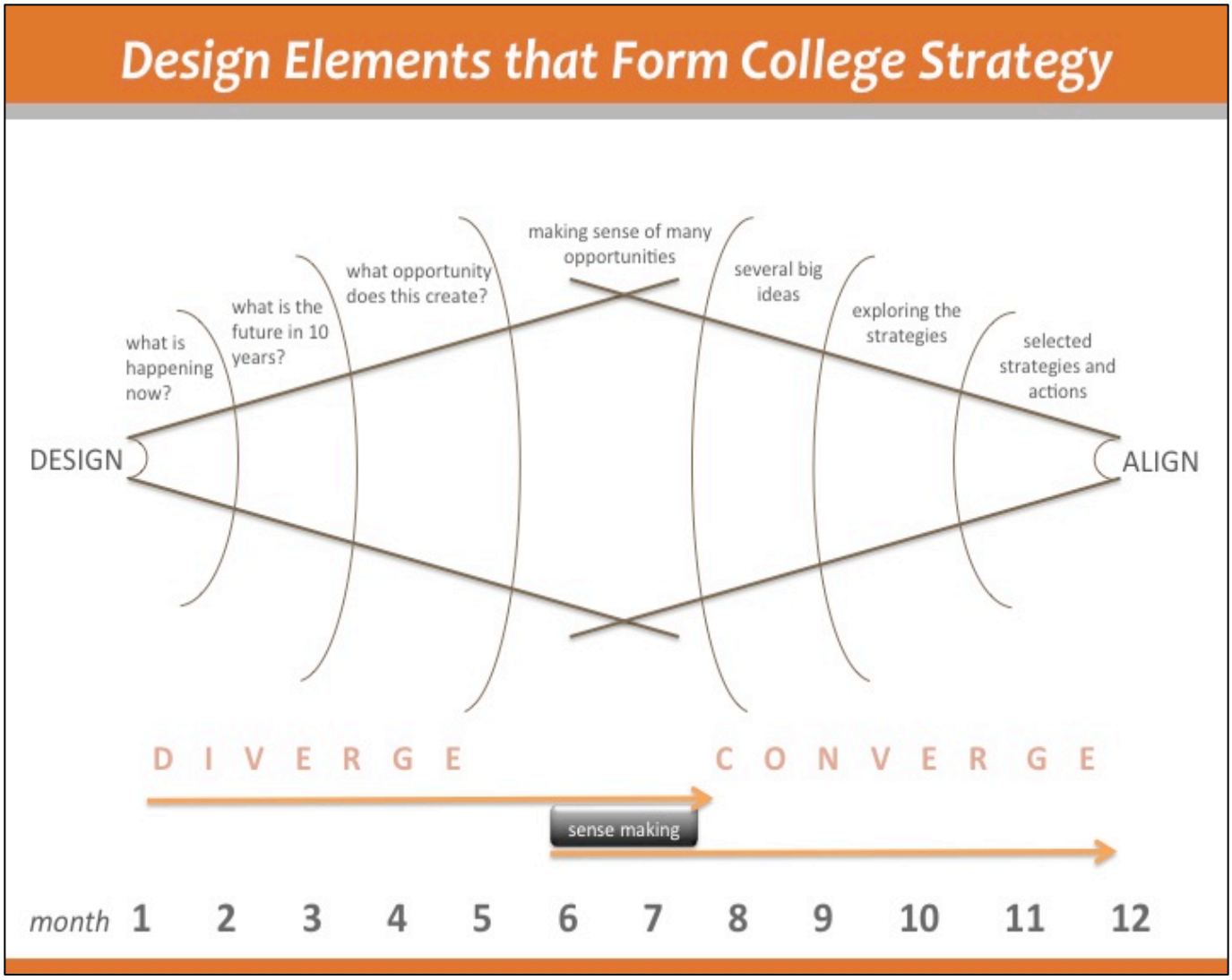
New kinds of participatory processes are needed to engage campus participants in symposia, forums, and continuing conversations about the emerging future and the urgent nature of the challenges we face and then to follow through with the execution of strategy and building of capacity. Institutions as different as University of the Pacific (Brodnick, Luu, and Norris 2012), George Mason University (George Mason University Office of the Provost n.d.; Probst and Rich n.d.), and Valencia Community College have created participatory engagement events to support their strategic thinking and planning. These cascading events often involve several hundred participants at a time, meeting at facilitated conversations around tables of rounds of six to ten participants. One approach to ensure participation is to include board members in such conversations and extend invitations to the campus that communicate that. In executing Kotter's framework, a wide variety of engaging processes will be required to create vision, discover change initiatives, and win immediate victories. These processes will build an understanding of the imperatives of the times, their implications, and the appropriate pathways to reinvention. Continuous engagement is also needed progressively to change the culture and demonstrate the effectiveness of new behaviors, strategies, business models, and emerging practices.

Redirect existing planning processes toward strategic transformation. Existing organizational planning and resource allocation processes should be redirected and reshaped to serve as the instruments for building commitment to Track A (Reshape/Reinvent the Core Model) and B (Leap Into the Future) type reinvention. All of these processes must be aligned to the strategic intent of reinventing legacy offerings to maintain competitiveness and discovering fresh offerings that meet previously unobtainable needs.

In the coming Age of Disruption, institutions must develop their capacity to deal with a greater number of challenges and opportunities at the same time. Kotter's framework illustrates the importance of continuous, persistent, interwoven attention to capacity building and the processes of planning, resource allocation, accreditation and program review, and assessment.

Reinvent strategic planning to deploy design thinking. Today's planning processes apply design thinking to ensure that emerging strategies meet the realignment and redesign needs of strategic transformation. The following is a typical design thinking shell for a year-long strategic planning process that can be tailored to meet the needs of a particular college or the entire institution. Design thinking plays a critical role in the "planning from the future backward" methodology described below.

Figure 6 **Design Elements That Form College Strategy**

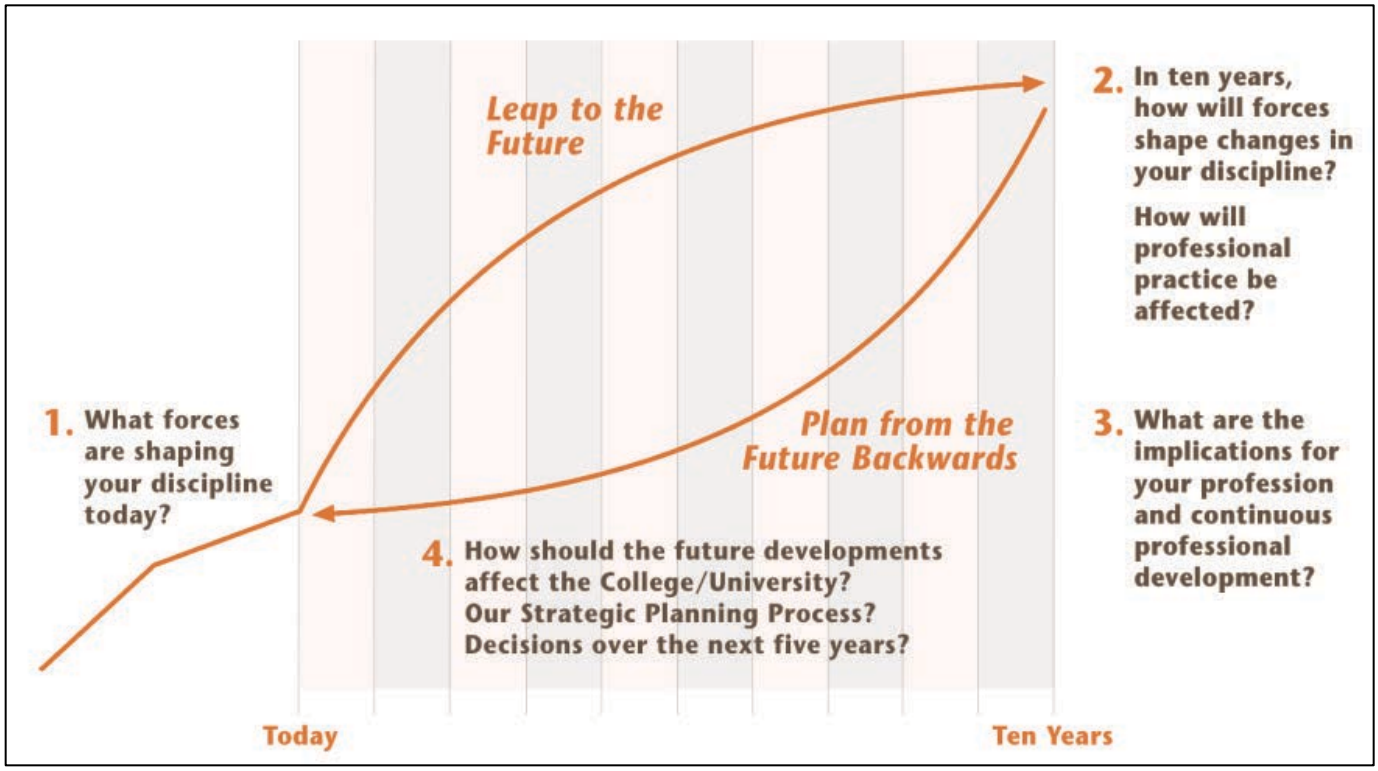


PRACTICE PLANNING FROM THE FUTURE BACKWARD

In "The Timeless Strategic Value of Unrealistic Goals," Vijay Govindarajan notes that "strategic intent takes the long view: the act of such intent is to operate from the future backward, disregarding the resource scarcity of the present. … Realistic goals promote incremental moves; only unrealistic goals provoke breakthrough thinking" (Govindarajan 2012, ¶1, 4). In some cases these are called "stretch goals."

Experienced planners have found that a planning team can be stymied by the prospect of truly substantial, multi-threaded change and by organizational obstacles that have halted breakthrough thinking in the past. Inertia and perceived barriers can freeze participation and thought processes, leading to the lament, "We cannot get there from here!" (so we will not try). Another familiar refrain: "We tried that 10 years ago and it failed." One approach that unfreezes participants is to leap into the future, describe the necessary future states, and then plan from the future backward. This can be used to liberate thinking and focus on fulfilling the future value propositions that will be demanded by stakeholders and the marketplace.

Figure 7 **Planning from the Future Backward**



Remember: Attempting to predict disruptive futures with precision is a losing proposition. The goal should be to position the institution for competitive success in a range of future conditions.

COMBINE STRATEGY, ORGANIZATIONAL DEVELOPMENT, INNOVATION, ANALYTICS AND PERFORMANCE

In the past, strategic plans were typically five-year extrapolations of current programs, adjusted for relatively minor environmental changes. The reinvention of today's strategic planning processes places greater emphasis on four components:

- Strategy—focused behavior maintained and adapted over time (five to seven years) and reshaped in the face of emerging conditions;
- Organizational development—building the organizational vision and capacity to practice Track A (Reshape/Reinvent the Core Model) and B reinvention and thereby thrive in the Age of Disruption;
- Innovation—nurturing and then scaling innovation to make a difference, department-, college-, and enterprise-wide; and
- Leveraging analytics and performance excellence to levels never achieved before.

Strategy execution and organizational development must be key elements of strategic plans in an Age of Disruption. A major challenge involves how to nurture and resource the innovations and reinventions under Tracks A and B, refining them in the face of new insights and changing conditions. In particular, the challenge of resourcing innovations that have the potential to generate fresh revenues may require new investment pools and practices.

Figure 8 **Making it All Work**

MEASUREMENT, ANALYTICS, AND PERFORMANCE EXCELLENCE

Higher education is on the threshold of a leap in our capacity to support and assess personalized learning and optimize student success. These tools and capacities will enhance our ability to understand and improve learner performance. Over the next three to five years, next-generation systems and tools will enable institutions to reinvent their approaches to personalized learning and whole-person development. Reinvented strategies and business models will incorporate these insights.

Higher education is on the threshold of a leap in our capacity to support and assess personalized learning and optimize student success.

These performance leaps will be facilitated by a substantial investment of capital and talent by external solution providers, and by a migration of many analytics solutions to the cloud. Today, the major ERP and LMS providers are investing in performance management, retention, and student success solutions. Moreover, a whole new constellation of providers of learner relationship management and personalized learning network solutions are being created, deployed and refined. Big Data and data mining solutions are on offer and will grow. Analytics illuminating the linkages between K–20 education and employment will be facilitated by public and private sources. Many of these analytics solutions are being

offered as hosted services in the cloud. Progressively, institutions will turn to these solutions, and the talent provided by these vendors, as extensions of their organizational capacity for analytics. Within three to five years, these constellations of vendor solutions, federated solutions and consortia of institutions, and public analytics utilities for students, parents and employees will greatly facilitate analytics and the achievement of a culture of performance measurement and improvement.

DEPLOY THE POWER OF "RADICAL INCREMENTALISM."

In discussing "the big shift" in practices being experienced by all societies, industries, and enterprises in their book *The Only Sustainable Edge,* Hagel and Brown (2005) use the term "radical incrementalism" to describe a new breed of incremental, expeditionary initiatives guided by radical, transformative intent.

We are still in a discovery mode regarding the gestating strategies, new business models, and emerging practices that will be successful in the Age of Disruption. Even with a transformative vision of the future, most institutions will need to build their organizational capacity through a successive series of expeditionary initiatives that achieve Track A (Reshape/ Reinvent the Core Model) reinvention. As they build capacity, the dimensions of future strategies, business models, and practices will emerge in sharper relief. *Radical incrementalism,* embedded in reinvention and deployed over strategy horizons of five to seven years, is a sound prescription for these times. The time to get started and get it done is now.

ACHIEVE NEW LEVELS OF COLLABORATION, SHARING, AND PARTNERSHIP

To achieve the levels of reinvention necessary to thrive in the Age of Disruption, new levels of collaboration, sharing, and partnership will be critical. In the past, colleges and universities have used relationships with technology solution providers, public/private partnerships, federations and consortia, shared services, and institutional collaborations to create innovative offerings and experiences. These collaborations have provided individual institutions with technology solutions and services, scarce talent, innovation know-how, and diminished risk.

In their study of emerging analytics applications in American higher education, Norris and Baer (forthcoming) describe a substantial "analytics talent gap" that can only be filled by collaboration, turning to technology-based solution providers who can afford the scarce and expensive talent needed today for advanced analytics. Even now, companies such as e-College, Blackboard, Ellucian, Workday, and others are providing in-the-cloud solutions to hundreds of client institutions, enabling comparative analytics among them. As more cloud-based, personalized learning and learning-analytics solutions emerge over the next few years, the importance of these constellations of solution provider communities will increase dramatically.

Another instructive example is the predictive analytics reporting (PAR) undertaken by the Western Interstate Commission for Higher Education (WICHE), which is creating a federated data set for six institutions and almost 800,000 student records that will enable cross-institutional data mining. The project is deconstructing the problems of retention, progress, and completion to find solutions for decreasing loss and increasing momentum and success. The PAR partner institutions (American Public University System, Colorado Community College System, Rio Salado College, University of Hawaii System, University of Illinois–Springfield, and the University of Phoenix) are federating and aggregating de-identified online student records and will apply descriptive, inferential, and predictive analytical tests to the resulting single pool of

records to look for key variables that seem to have an effect on student achievement (Smith 2012). Look for more of these partnerships.

Consider also the example of the emergence and evolution of MOOCs. The efforts of early MOOC pioneers like George Siemens and Stephen Downes and breakthrough demonstrations like Sebastian Thrun's 100,000-plus student MOOC at Stanford presaged the formation of solution-provider partnerships between enterprises like Coursera, Udacity, and MITx and groups of leading universities. Over time, these universities will place their content on MOOCs, which will evolve in an expeditionary way to create a cloud-based utility that can be accessed by independent learners and colleges and universities across the globe. Individual institutions will find themselves participants in many overlapping collaborations of this sort as they open up to more flexibly incorporate other learning options.

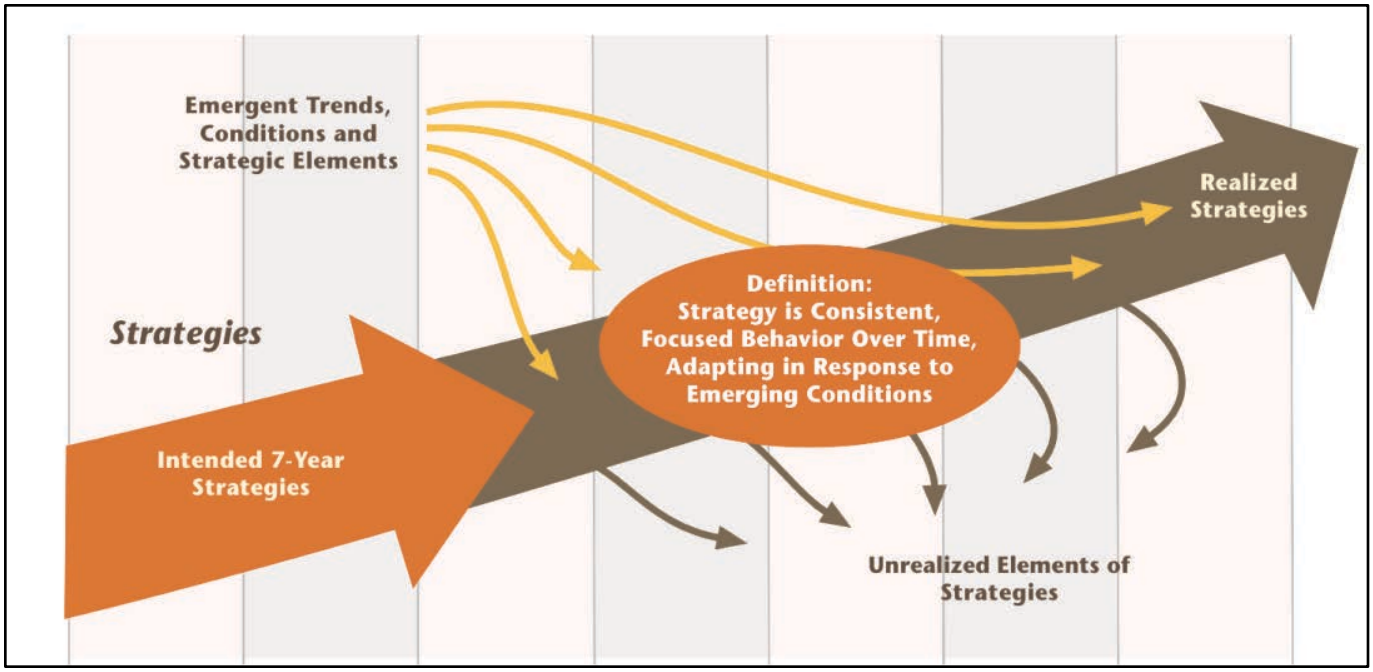
Rio Salado College recently hosted a gathering to encourage the incubation of creative ideas for optimizing student success. The participants explored the use of technology to enable these ideas and practices and shared fresh reconceptualizations that can be used to alter the way higher education views the landscape. Examples included partnerships to serve oversubscribed institutions; course and credit exchange in an SOC-like (servicemembers opportunity colleges) network; research, analytics, and metrics for student loss and momentum; and competency-based design of courses, programs, and degrees (Smith 2012).

As institutions grapple with fresh strategies for the Age of Disruption, greater collaborations and partnerships will open new possibilities and stretch institutional resources.

EXECUTE STRATEGIES TO ENGAGE THE DISRUPTIVE FUTURE

A strategy is a consistent, focused pattern of behavior that unfolds over time. Emergent trends, conditions, and strategic elements require a strategy to be continuously adjusted. The realized strategies that emerge can best be understood by looking backward at how the strategy has been executed over time. Our description of the emergent, realized developments between 1995 and 2013, observed from our current vantage point, illustrates this principle. What will observers in 2020 conclude about higher education strategies between 2013 and 2020?

Figure 9 **7-Year Strategies for an Age of Disruption**



Confronting the Age of Disruption will require enhanced strategic skills and know-how. The board and the core leadership triad of president, chief academic officer, and chief financial officer will need to lead and energize initiatives to develop institutional capacity through doing and engage the campus community in new ways. Collaborations, shared resources, and partnerships will attain even greater importance. Getting started needs to begin immediately. Getting it done will unfold over time—especially the next seven years.

A strategy is a consistent, focused pattern of behavior that unfolds over time.

Resilience as a Conscious Long-Term Strategy. In order to reinvent an institution's legacy offerings (Track A: Reshape/Reinvent the Core Model) and/or discover breakthrough business models (Track B: Discover Future Business Model), institutional leadership must prepare for continuing disruption through building the capacity for resilience. As was discussed earlier, our institutions currently do not possess the resilience, the agility, nor the investment resources to pursue reinvention, alone. But they can achieve resilience in partnership with external partners, and by consciously making resilience their long-term strategy. The following steps are necessary to establish resilience as a conscious strategy:

- **Establish a sense of urgency, mobilizing a guiding coalition and champions.** Follow Kotter's principles to raise the consciousness of the campus to the need for reinvention and make it a major strategic initiative, aligned with other strategies.

- **Craft a conscious reinvention strategy, including the resourcing of new initiatives and the reinvention of processes and practices.** Clearly state the strategic intent of reinventing processes and

legacy offerings to maintain competitive positioning in the face of disruptive innovations. Identify the need for investment capital.

- **Utilize multiple methods to raise reinvention capital from institutional-based sources:** levy a tax on existing programs, institute cost savings and continuous improvement, make reinvention a part of capital campaigns or launch a special campaign, practice reallocation.

- **Partner with external enterprises/solution providers to achieve the capital, culture, and capacity (talent and know-how) needed to create breakthrough innovations and deployments.** External partners are proving critical to the next generation of solutions, both for reinvention of legacy programs (Track A: Reshape/Reinvent the Core Model) and truly new business models (Track B: Discover Future Business Model).

- **Make certain that investment flows to the innovations and pilot programs that have the greatest potential to establish defensible value propositions, scale to institution-wide application, enable growth, and unleash new revenue streams.** Many of these investments, especially Track B innovations, will be driven by external venture funders and the institution will be more like a customer.

Institutional leadership should be preparing for conscious resilience strategies and the vision, innovations, and capacity building necessary to make them happen.

Understanding the Constellation of Track A (Reshape/Reinvent the Core Model) and Track B (Discover Future Business Model) Innovations. Many of the first green shoots of Track A and Track B reinventions are visible today, to the trained and curious eye. Appendix A contains a six-part matrix that portrays the array of Track A and B reinventions that are possible. These innovations are organized based on their capacity to address the six major challenges facing American higher education (Gilmour, Norris, and Speziale, forthcoming 2013).

1. Students and their families can no longer afford a college degree.

2. American higher education institutions are facing a sea ofd red ink—declining state support, burdensome institutional debt, unrealistic instructional costs, plateauing tuition revenues, and intense competition for adult learners.

3. American higher education has failed to assess student learning and performance.

4. Most institutions lack the organizational agility to meet rapidly changing student learning needs and the needs of the US economy.

5. Higher education has been unable to leverage technology to truly transform learning and competence building to be more accessible, relevant challenging, and aligned with workforce needs.

6. Higher education has failed to learn from the disruptive innovations pioneered by the for-profit institutions.

This arsenal of possible reinventions are the arrows that higher education could use to confront disruptive innovations. But what is the bow that institutions can use to fire these arrows into the future? Put simply, a conscious strategy of resilience building and performance excellence (Gilmour, Norris, and Speziale, forthcoming 2013), focusing on fulfilling the value propositions that student, their families, employers, and public policy makers find compelling to meet the needs of the nation in the 21st century.

Understand and Focus on Your Value Propositions. A rising chorus of voices is questioning the value provided by higher education. Recent articles in the trade press echoed signal the importance of this issue:

- "Push to Gauge Bang for Buck for Colleges Gains Steam," *U.S. News,* Feb 11, 2013;
- "New Purdue President Outlines Critique of Higher education," *Inside Higher Ed,* January 21, 2013;
- "Higher Ed's Biggest Problem: What's It For?" *The Chronicle of Higher Education,* January 24, 2013;
- "A Call for Drastic Changes in Educating New Lawyers," *The New York Times,* Feb 10, 2013.

Institutional leaders must be more reflective in considering how their value propositions are seem by learners, their families, employers, and makers of public policy. This requires honesty, insights, and the willingness to consider difficult trade-offs in positioning the institution for success in the face of withering competition. Reinvented/reshaped strategies should be grounded on compelling value propositions, utilizing some combination of:

- Doubling down on existing legacy value propositions,
- Increasing the emphasis on other value propositions made more attractive by disruptive conditions, or
- Introducing new value propositions to the equation.

No institution can be good at all value propositions that appeal to stakeholders. Indeed, accepted wisdom is that institutions succeed by focusing on a core identity. Let's consider the following value propositions:

- **Affordability.** Learners and their families are concerned about price and net cost. They will become increasingly sophisticated about all elements of cost and accumulated debt upon completion. Progressively they will demand to know the total net cost of completion and debt burden for desired certificates of educational attainment.

- **Talent Filter for Employers.** Institutions serve as talent selectors and filters. Employers of all kinds rely on the selectivity of institutions and the proof of certificate and degree completion to cluster talent. More selective institutions score higher on this value proposition, but many institutions are relatively more selective in particular disciplines.

- **Immersive Educational/Developmental Experiences.** A full-time, residential campus experience provides the valuable opportunity for 18–22 year olds to immerse themselves in developmental experiences—

educational, social, leadership, co-curricular and such like—that have lifelong impacts. These can lead to social and employment networks for life.

- **Social/Employment Network for Life.** These networks may be as valuable, from an economic point of view, as the educational value add at many selective institutions, and savvy students and their families recognize this.

- **Convenience for Adult Learners.** Adult learners who juggle work, learning and family commitments are looking for convenience—shorter courses (accelerated learning), online learning and services, learning linked to employer needs, and support services. Over the past 30 years, even traditional institutions have increased their enrollment of adult student, so the capacity to offer convenient, accelerated learning for adults must be understood by all institutional leaders.

- **Creation of New Knowledge.** Many learners in the STEM fields and professions want to be part of dynamic research and discovery activities that are discovering new knowledge and preparing learners for the accelerating pace of knowledge change that characterizes today's world.

- **Access to Specialized Fields (Professions, STEM).** Many learners desire an institution which offers access to a wide range of disciplines and specialisms such as in the professions and STEM fields.

- **Real-World Developmental Experiences.** Increasingly, learners want to enrich and broaden their personal development by engaging in learning experiences that are linked to the real world. This includes experiential learning, service learning, and participation in innovation/entrepreneurship. It can also include internships and cooperative education programs. Study abroad programs and exposure to a global perspective are other facets of this value proposition.

- **Deep Faculty/Student Relationships.** One of the benefits of immersive experiences is the capacity to forge strong faculty/learner relationships. This can be reflected in undergraduate research and problem solving experiences, design competitions, and co-curricular programs that contribute to the relationships/ networks for life values.

- **Critical Thinking Skills.** Everyone from CEOs to philosophers agrees on the importance of critical thinking skills for learners who aspire to lives of thoughtful development and leadership. The issue is how to measure critical thinking capacity and which developmental environments are best at adding to learners critical thinking skills. In addition to critical thinking, today's graduates should also possess so-called 21st century skills of teamwork, inclusiveness, global perspective, and capacity to perpetually learn.

- **Certification of Competence.** This is valuable to learners and employers. Graduating students demonstrate their capacity to complete a course of study. Certain fields and institutions tie completion to demonstration of measurable competences and skills.

- **Innovation and Entrepreneurship.** Increasingly, learners and their families and employers want institutions to provide more experiences that develop innovation and entrepreneurial skills. This includes commercialization of new ideas.

Increasingly, traditional institutions will need to clearly articulate their value propositions and demonstrate the favorable outcomes they produce. These comparisons will be necessary to differentiate themselves from competing institutions and from disruptive alternatives such as MOOCs, especially those that evolve to feature personalized and adaptive learning, training that is tightly linked to employment, practically-focused experiences, and new, truly disruptive experiences yet to be invented.

Moreover, most successful institutions in the future will double down on the most compelling of their current value propositions—such as immersive learning, developmental, and leadership experiences. But they will enrich them with external opportunities, new approaches to personalized development, and success making skills that are offered by partnering enterprises and embedded in the institutions fabric, both physical and virtual. External solution providers will provide the innovation needed for institutions to reinvent their legacy programs and experiences.

NEXT STEPS FOR THIS PAPER

This paper is a work in progress. Our writing team will continue to expand it through the period of the SCUP Planning for Higher Ed *Change-Disruption* Mojo. Our next planned addition, part three, is a set of scenarios describing the lives of learners of all ages in the future world of transformed learning, competence building, and success making. Look for it in March 2013.

APPENDIX: ADDRESSING THE CHALLENGES FACING AMERICAN HIGHER EDUCATION

These matrices are an exercise in grounded theory. Many of the first green shoots of Track A (Reshape/Reinvent the Core Model) and Track B (Discover Future Business Model) reinventions are visible today, to the trained and curious eye. The following six-part matrix that portrays the array of Track A and B reinventions that are possible. These innovations are organized based on their capacity to address the six major challenges facing American higher education (Gilmour, Norris, and Speziale, forthcoming 2013).

Challenge #1: Students and their families can no longer afford a college degree.

Challenge #2: American higher education institutions are facing a sea of red ink—declining state support, burdensome institutional debt, unrealistic instructional costs, plateauing tuition revenues, and intense competition for adult learners.

Challenge #3: American higher education has failed to assess student learning and performance.

Challenge #4: Most institutions lack the organizational agility to meet rapidly changing student learning needs and the needs of the US economy.

Challenge #5: Higher education has been unable to leverage technology to truly transform learning and competence building to be more accessible, relevant challenging, and aligned with workforce needs.

Challenge #6: Higher education has failed to learn from the disruptive innovations pioneered by the for-profit institutions.

This arsenal of possible reinventions are the arrows that higher education could use to confront disruptive innovations. But what is the bow that institutions can use to fire these arrows into the future? Put simply, a conscious strategy of resilience building and performance excellence (Gilmour, Norris, and Speziale, forthcoming 2013), focusing on fulfilling the value propositions that student, their families, employers, and public policy makers find compelling to meet the needs of the nation in the 21st century.

Challenge #1: Students and their families can no longer afford a traditional college degree.

Track A: Reshape/Reinvent the Core Model	Track B: Discover Future Business Model
• **Many institutions should reduce the total cost of completion in traditional degree programs and institutions.** - Expand bridge programs with K–12, improve transfer and articulation at all levels, encourage/achieve accelerated completion. - Expand three-year baccalaureate degree options. - Streamline articulation/transfer, acceptance of credit for prior learning, open learning, and MOOCs of many kinds. - Expand post-baccalaureate certificates as a substitute for masters degrees. - For traditional PhD track, reduce time to degree to four/five years. - Refine completion agenda to include sub-degree certificates, roads to rapid employment, and completion of baccalaureates while employed. • **Create and refine low-cost, accelerated, competence-based models for baccalaureate degrees (Selected institutions).** - Western Governors University ($15,000 degree, 2.5 years) - $10,000 Degree program institutions (Texas, Florida, Wisconsin) - Southern New Hampshire University (competence-based, $2,500/year, accelerated, 120 competences in a degree not 120 credit hours) - University of Wisconsin (competency-based programs for working adults, no time required on campus) • **Reinvent student financial assistance and state support.** - Reinvent financial aid to be primarily need based and simpler. - Emphasize the importance of class-based diversity in medallion institutions, and provide financial assistance to enable it. - Redirect state support to pay for successful completion and performance, not enrollment.	• **Dramatically increase the focus on shortened and surer routes to gainful employment.** - In K–12 education, introduce a clear linkage between learning, creativity and innovation, practical and work-based experiences, and life success. - Support vibrant apprenticeship programs starting in high school that lead to technical certificates and ultimately degrees. - Partner with industry and trade groups to certify competences recommended in various industries (e.g., high-tech manufacturing). - For initial technical placement, enable students to complete a few targeted courses leading to employment, then finish associate- baccalaureate-level learning while employed. - Increase participation in cooperative education (co-op) programs at the undergraduate level. • **Reorient learning and competence building to a Community of Practice model.** - At the undergraduate level, use peer-to-peer (P2P) learning through Communities of Practice (CoP). - At the post-baccalaureate level, use CoP to provide alternatives to the masters/PhD progression, e.g., reflective practitioner, master practitioner, mentor, and sage. - Dramatically reduce the cost and increase the connection of Continuing Professional Development to current practice. - Use the CoP model for all Continuing Professional Development.

Challenge #2: American higher education Institutions are facing a sea of red ink—declining state support, burdensome institutional debt, unrealistic instructional costs, plateauing tuition revenues, intense competition for adult learners.

Track A: Reshape/Reinvent the Core Model	Track B: Discover Future Business Model
• **Most institutions should reduce the cost of instruction.** - Improve the efficiency of operations and pass savings on to learners. - For some institutions, reduce non-learning amenities and/or charge flexible tuition based on services chosen (a la carte model). • **Consciously reduce the level of institutional indebtedness.** - Reduce bonded indebtedness load as % of total budget. - Off-load financial risk of university-related ventures, that are funded by partners who can help mitigate the risk. - Use public/private partnerships to develop shared facilities: libraries, learning resource centers, innovation center, research labs, sports facilities, entertainment destinations. • **Aggressively reduce the cost of operations and support services.** - Deliver annual performance enhancements and cost reductions. - Aggressively deploy shared services, process reinvention, self-service, a la carte services and other means of improving efficiency and productivity. - Examine and achieve physical space efficiencies. - Consistently deploy green, sustainable, "smart" buildings and operations. • **Seek new revenue streams for existing facilities and programs.** - Promote campus-based experiences, promote the campus as destination for cultural and developmental experiences. - Attract more entrepreneurs and practitioners to campus and increase research-, innovation- and entrepreneurship-based revenue. - Attract alumni and other funders to invest/participate in ventures and continuing education; dramatically increase alumni engagement.	• **Right-size physical facilities for the 21st Century university.** - Consciously reduce campus footprints; sell-off surplus assets. - Reorient physical facilities to take into account increasing levels of online engagement of students. - Retrofit facilities and support services for more personalized, active, and open learning. - Reprogram campuses to achieve greater public use and interaction, using public/private partnerships. - Increase amount of collaboration, innovation, and entrepreneurship space. - Share facilities with higher education and non-profit partners. • **For high demand institutions, consciously plan to use current campus footprint to serve substantially more students.** - Utilize online experiences to change the patterns of class attendance, enabling current physical classrooms to serve a larger total learner population. - Utilize MOOCs and other such arrangements to serve needs when possible. - Rotate students off campus to internships, co-op assignments, entrepreneurship projects, and at-home, online learning to enable a larger total enrollment. - Explore continuing engagement of graduates through Communities of Practice.

Challenge #3: American higher education has failed to assess student learning and performance.

Track A: Reshape/Reinvent the Core Model	Track B: Discover Future Business Model
• **Make continuous performance measurement and improvement for learning and development a core part of the institutional culture.** - Raise expectation and training of senior leadership and the expectations of their Boards. - Elevate performance expectations for middle management, faculty, staff, and students. - Develop, deploy and continuously improve frameworks for Performance Excellence. • **Invest in personalized learning systems, learning analytics and professional development in their use.** - Use personalized learning to reinvent remedial learning, improving performance and accelerating completion. - Embed learning analytics and performance measurement in learning processes and use portfolios to demonstrate accomplishment. - Create teaching and learning degree tracks at research universities. • **Focus on optimizing student performance and success.** - Embed dynamic predictive analytics in academic processes. - Use "Big Data" techniques to understand "what works" in learning and leverage that knowledge. - Reinvent courses, enterprise-wide, using National Center for Academic Transformation course development practices. - Extend student success to include career and workplace success.	• **Leverage personalized, adaptive learning and performance measurement to dramatically transform both institutional learning and free-range learning.** - Open up learning resources and practices, and the acceptance of learning/competence achieved elsewhere. - Unbundle learning, teaching, mentoring, evaluation and certification/accreditation within and between institutions. - Shift the learning focus from meeting minimum standards to achieving personal best. - Enable greater degrees of flexibility so learners can create their own, self-paced "personalized disciplines of one." - Create lifelong personalized portfolios of achievement, possibly linked to national competence/employment banks. - Enable employers to easily confirm the demonstrated competences of potential hires, aligned with both general and specialized industry needs. - Aggressively pursue concurrent performance improvement and reduction in cost to improve value. - Utilize Big Data/analytics in personalized, adaptive learning environments to revolutionize of understanding of student success. • **Encourage substantial investment by external solution providers in hosted, personalized, adaptive learning solutions.** - Embedded in digital text platforms, Next Gen learning management systems/analytics, Next Gen personalized learning networks. - External parties provide capital, culture and capacity. - Create expeditionary platforms/solutions capable of continuous adaptation.

Challenge #4: Most institutions lack the organizational agility to meet rapidly changing student learning needs and the needs of the US economy.

Track A: Reshape/Reinvent the Core Model	Track B: Discover Future Business Model
• **Focus on organizational development to enhance institutional agility.** - Develop Board and executive leadership, commitment to reinvention, and preparation to take the heat and survive. - Reinvent shared governance model, accreditation, and curricular flexibility; address collective bargaining issues head on. - Invest significantly more in faculty and staff development that is directed at keeping skills current and developing new ones needed to be effective in today's disruptive environment. - Leverage adjunct and fixed-term faculty to achieve agility. - Enable specialization of faculty and learner development roles. - Develop skunk works and alternative competence pathways to foster innovation. - Accept credit for competence achieved through other reputable sources and weave into the institutional value proposition. • **Achieve resilience through reinvention of the institution's core of existing services and business model in the face of disruption from new providers and the changing expectations of learners.** - Establish a sense of urgency; mobilize champions. - Craft a conscious reinvention strategy, including resourcing of new initiatives and reinvention of processes and practices. - Utilize multiple methods to raise reinvention capital: tax on existing programs, cost savings, reinvention campaign, reallocation. - Partner with external enterprises/solution providers to achieve the capital, culture, and talent necessary to create breakthrough innovations and deployments.	• **Achieve resilience through discovery and pursuit of future business models. Create a separate organization to develop next generation practices that will meet the learning needs of the future.** - Partner with external enterprises to achieve the capital, culture and talent necessary to create and sustain breakthrough innovations. - Do not retreat from offerings that may cannibalize Track A reinventions over time. - Be receptive to open and free-range learning-based innovations to originate new solutions, services, and value propositions that institutions cannot create alone. • **Address niche markets with distinctive value proposition requirements.** - Create degree- and certificate-completion programs for working adults that include embedded mentorship. • **Create CoP-based models to deal with economy-focused skills in entrepreneurship and innovation.** - Turn competences in innovation, entrepreneurship, and problem solving into skills that can be achieved by every learner, regardless of curriculum. - Expand experiential-, service- and problem-focused learning experiences. - Also use CoP to serve post-baccalaureate/professional degree practice areas—engineering, law, medicine and health science. • **Form consortia to serve academic disciplines in an online, global and distributed manner.** - Form global networks/CoPs and serve global needs through Next Generation MOOCs and community-based engagement. Use for low-demand disciplines (geography, rare languages), plus emerging ones.

Challenge #5: Higher education has been unable to leverage technology to truly transform learning and competence building to be more accessible, relevant, challenging, and aligned with workforce needs.

Track A: Reshape/Reinvent the Core Model	Track B: Discover Future Business Model
• **Decisively commit to Information Communications Technology (ICT) as a "game changer."** - Use ICT to align efforts to create greater value for higher education's stakeholders—learners, their families, faculty and researchers, alumni, staff, policy makers, the public at large. - Use technology-enhanced learning and competence building to reinvent existing practices and create accountability. - Leverage technology to optimize student success and enhance institutional productivity/effectiveness. - Use shared services (libraries, administrative functions, low-demand disciplines) to lower costs and improve services. - Replace the textbook model with eBook and open eResources models. • **Over time, turn to cloud-based, Next Generation ERP, LMS, and Analytics platforms and solutions.** - Overcome talent gaps (in ICT, performance measurement and enhancement, analytics and Big Data). - Reduce costs, improve service continuously/aggressively. - Create multi-institution communities of learning practice.	• **Create new, competence- and experience-based learning experiences that form new knowledge pathways and fill knowledge gaps.** - Example: Rather than 120 Semester credit hours, 120 competencies. - Deconstruct courses into competence-building experiences. - Develop badges/certificates, especially in high demand areas like entrepreneurship and innovation. - Deploy to support continuous learning, using MOOCs to feed Communities of Practice. - Target programs on a large scale to improve the educational attainment of post-traditional learners in working age population (25–64)—mentoring, and "success making" embedded in program in a CoP environment. • **Use technology and "Big Data" to empower students to take control of their learning and competence development and "open up" higher education.** - Actively involve students in reinvention. - Develop students into free agents, job makers, and success makers. • **Use technology to open up the intellectual property, research and venture resources of colleges and universities.** - Couple this with crowd-sourcing-and-funding of ventures to create a tidal wave of 21st century entrepreneurship and innovation. - Prepare learners/graduates to be free lancers, entrepreneurs, and job makers.

Challenge #6: Higher education has failed to learn from the disruptive innovations pioneered by for-profit institutions, and not-for-profits acting like for-profits (University of Maryland University College (UMUC), Regis University, etc.)

Track A: Reshape/Reinvent the Core Model	Track B: Discover Future Business Model
• **Every institution should focus on providing distinctive, cost-effective value for their stakeholders.** - Institutions must understand and leverage the services they deliver that are most enduring and create the most appealing value propositions. - Traditional institutions should double down on immersive experiences that advance the overall development and maturing experience, social and employment networks for life, research and innovation, entrepreneurship, deep faculty/student relationships. - Traditional institutions should support the parts of the immersive campus experience—educational, social, leadership, co-curricular—that offer abiding value. - Overcome and de-emphasize commodification (courses, bundled offerings). • **Deploy the techniques utilized by for-profits—re-engineered delivery and business models.** - Design learning experiences to suit the needs of accelerated, adult learners. - Place a greater focus on meeting employer needs. - Deploy team-based design of learning resources, consistent application in all instances of courses. - Unbundle learning, teaching, assessment, and certification. - Modify faculty roles to increase productivity significantly. - Rely more on P2P learning. - Embed predictive analytics and interventions in courses and academic support services.	• **Reshape employer expectations and the means for meeting them and deal with the entire preK–20 through employment spectrum.** - Meet employer needs through a combination of institutional and free-range, open learning, plus certification of competence. - Learning and competence building span organization boundaries. - Adaptive, personalized learning solutions begin in preK–6 and continue through the rest of one's life. • **Expand the definition of "Success"** - Change preK-20 focus to become "success makers," providing counseling, advice, mentoring, and follow-up on all aspects of academic, career and life success. - Engage more in competence certification, a growth industry. - Focus on success making for particular niches, tailoring the experience to their needs. - Working adults, degree completion - Professional training - Traditional Arts and Sciences disciplines, enriched with real world experiences - Continuing development of practitioners in different fields (CoP) • **Change the focus of career and life expectations.** - Prepare learners for lives as free lancers, free agents, and success makers. - Provide habits of mind, body and spirit for life-long learning and personal reinvention.

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AUTHOR BIOGRAPHIES

Donald Norris is president and founder of Strategic Initiatives, a management consulting firm that specializes in leading and navigating change, crafting and executing strategy, and enhancing enterprise performance. He is recognized as a thought leader and expert practitioner whose clients have included a blue-chip roster of corporations, colleges and universities, and associations and other non-profit organizations. Norris is currently directing consulting projects exploring breakthrough approaches to optimizing student success, improving performance through shared and managed services, and accelerating entrepreneurship, innovation and the commercializing of ideas from universities. He is a provocative author and practitioner in transformative change, organizational development, and analytics. Before becoming a consultant he was a researcher and administrator at the University of Houston, the University of Texas at Austin, the University of Michigan, and Virginia Tech. These experiences culminated in his serving for six years in the position of director of planning and policy analysis at the University of Houston. Later, he became a senior fellow at the Institute for Educational Transformation at George Mason University and a senior fellow at the La Jolla Institute. Norris has co-authored a series of books and monographs for SCUP that have dramatically influenced the field of Strategic Planning over the past thirty years: *A Guide for New Planners* (1984), *Transforming Higher Education: A Vision for Learning in the 21st Century* (1995), *Unleashing the Power of Perpetual Learning* (1997), *Transforming e-Knowledge: A Revolution in Knowledge Sharing* (2001), and *A Guide to Planning for Change* (2008.) Don was awarded the the Society for College and University Planning's 1994 Distinguished Service Award.

Robert Brodnick is vice president for strategy and innovation at Strategic Initiatives. He has worked in the fields of planning, strategy, research, and organizational change and development for over twenty years. He holds specials skills in strategy, innovation, and organizational development, design, and intervention. He has worked in the areas of eLearning and technology-supported learning in several institutional settings. Rob is an expert facilitator of human process from dyads, to small groups, to large scale retreats and has notable experience with leadership groups, boards, planning bodies and with strategic and creative solutions. He has managed technological implementation of business intelligence, data warehousing, security, learning systems, and analytics. He has served three universities over the past twenty years and his work has focused on building institutional capacity and effectiveness through strategy, planning, and innovation. He has direct experience with institutional effectiveness, assessment and program review, institutional accreditation, enrollment management to include retention, admissions, financial aid and registrar functions, and sustainability. Brodnick and Norris are currently collaborating on a variety of strategic planning processes that involve preparing institutions for personalized, adaptive learning. Brodnick has been active in the Association for Managers of Innovation, (where he currently serves as a member of the board of directors), the Society for College and University Planning (where he serves as a faculty member in the SCUP Planning Institute), the International Association of Applied Psychology, the Association for Institutional Research, and others. He was a member of the Board of Directors of the Higher Education Data Sharing consortium and president of the Pennsylvania State System of Higher Education Directors group. Rob was honored by the Society for College and University Planning with its 2009 SCUP Award for Institutional Innovation and Integration.

Paul Lefrere is a principal with Strategic Initiatives. He is a recognized expert in innovation and sense making of the future. He has shaped many European Union-funded projects using the open technologies of the future. He is senior counselor with the firm Images (UK). He is a professor at Finland's Centre for Vocational Education at the University of Tampere and has been an e-learning thought leader for over 30 years. He is also widely recognized for his insights and consulting skills on knowledge creation and management, knowledge services, reusable knowledge objects, and web-based learning services. Lefrere completed a distinguished career with the British Open University and Microsoft (where he had

senior roles). He has participated in a range of strategic planning projects for Strategic Initiatives. Norris and Lefrere jointly founded Strategic Initiative's practice areas in competence building and Strategy Maps/Balanced Scorecards. Norris have co-authored several monographs and articles, including *Transforming e-Knowledge: A Revolution in Knowledge Sharing*, "Action Analytics: Measuring and Improving Performance that Matters in Higher Education," and "Transforming Online Learning and Competence Building."

Joseph E. (Tim) Gilmour is president emeritus of Wilkes University, in which role he served for 11 years. Under his leadership, Wilkes grew in enrollment (+nearly 50%), reputation, and financial health. Gilmour is known as an innovative leader who has championed transformation and a strong performance excellence culture throughout his career. His over 40 years of experience also include serving as provost at Northwest Missouri State University, vice president for strategic planning at Georgia Tech and executive assistant to the president of the University of Maryland College Park. He has served on numerous boards including the National Total Quality Forum, Association of Independent Colleges and Universities in Pennsylvania, and the National Association of Independent Colleges and Universities. He is a nationally recognized leader in the performance and quality movement in higher education. He and Norris are currently co-authoring a monograph, *Thriving in an Age of Disruptive Change*.

Linda Baer is a principal at i4SOLUTIONS and Strategic Initiatives. She has provided thirty years of leadership in higher education. She is currently the acting president of Minnesota State University, Mankato where she is working on building analytics capacities to optimize student success. Together with Ann Hill Duin, she established i4SOLUTIONS focusing on inspiring leaders to new levels of innovation, integration, and implementation of solutions that improve student success and transform institutions for the future. Baer was a senior program officer for the Bill & Melinda Gates Foundation in Postsecondary Success, working on improving student engagement and success and establishing a national platform for analytics in higher education. She presents nationally in academic innovations, educational transformation, the development of alliances and partnerships, the campus of the future, shared leadership and most recently on action analytics. Book chapters she has co-authored include: "Building the Capacity for Change" in *Innovations in Higher Education* and "From Metrics to Analytics, Reporting to Action: Analytic's Role in Changing the Learning Environment" in *The Game Changers: Education and Information Technology*. She and Norris are co-authoring *A Toolkit on Building Organizational Capacity for Analytics* with support from The Bill & Melinda Gates Foundation. Norris and Baer have co-authored a number of seminal publication in analytics: "Action Analytics: Measuring and Improving Performance that Matters in Higher Education" in *EDUCAUSE Review*; "What Every Campus Leader Needs to Know About Analytics," and A Toolkit for Building Organizational Capacity in Analytics." She has also served on the Society for College and University Planning's Board of Directors.