Executive Summary

**Innovation and Impact: Renewing the Promise of the Public Research University**

I. **Context and Vision**

**Innovation and Impact: An Enduring Mission**

UMass Amherst is a great public research university, with a vision that is rooted in our founding and that still resonates with our many stakeholders. Through the generations, creating public impact through innovation has been our guiding vision. It remains so today. This is our enduring vision. But what is required to keep that vision fresh as we open another chapter in our development?

**Renewing the Vision: Forging a New Model for Success**

We recognize that our university, like society at large, faces economic, demographic, and technological imperatives that demand innovative solutions. One of the greatest challenges we face is that our basic organizing model — the convergence of immersive, residential undergraduate and graduate education in a rich research environment — may not be sustainable if it cannot adapt. We have now reached a juncture — long in the making — at which a new approach is needed, one that will call on us to change in two ways:

1. First, we must become more effective at demonstrating value to those who hold a stake in our success.
2. Second, we must learn to operate effectively in a new and more challenging resource environment.

**Demonstrating Value.** To us, the value of what we do may seem self-evident. But as we make plans for the future we need to refine, reassert, and reinforce our value as a university in the public interest. If we are to become more effective at building support for our institution then we must continue to make sure that the public understands and believes in our impact. Traditional indicators of quality — research funding, doctoral production, and faculty recognition by national organizations — obviously remain relevant, but increasingly are incomplete. Considerations of undergraduate success and broader societal impact have now also become essential to attracting investment to public research universities.

**Marshaling resources.** The business model for the flagship research university has frayed. Growth in federal research dollars has stalled. State appropriations for higher education have declined in real terms. This in turn has resulted in significant increases in tuition and fees, yet universities are under increasing pressure to control costs. Many public universities have turned to enrollment — especially of non-resident students — as a replacement source of revenue. This can pay off, especially in the short term, but we cannot indefinitely add to the student burden. Expanding our revenue base remains important, but will not by itself set us on a sustainable path. We must also change our cost structure through innovations in pedagogy and the effective use of technology, and through other efforts to focus resources and control costs.

**Guiding principles.** Our value to society is ultimately rooted in the beliefs and guiding principles that define what we stand for and make us worthy of support: excellence; leadership, innovation, discovery and impact; engagement; diversity, equity and inclusiveness; opportunity; openness and integrity; and integration and collaboration.

**Doing things differently.** This plan is organized around a simple idea: our circumstances have changed, so the way we do things needs to change, too. The nature of our challenge suggests changes of four kinds:

- **Take a longer perspective.** The external environment tends to motivate short-term, reactive thinking. What is needed is a longer perspective.
- **Think more broadly.** Circumstances can elicit a "watertight compartment" reaction, but acting in isolation too often results in lost opportunities and crossed purposes. We must demonstrate that a more strategic approach will produce a better outcome.
- **Be more intentional.** Individuals and individual units do the best they can in the moment – often heroically – but are necessarily limited to a narrowed range of options. Together, we need to be more intentional in setting goals, mobilizing resources, and evaluating progress.
- **Think big.** All of the above can cause us to think small and take few risks. But from time to time, a fundamental rethinking is needed. This is one of those times.

**Creating a Culture of Evidence**

Our strategy will be stronger if we can promote a culture of evidence throughout the institution.

- **Demonstrate meaningful accountability.** If we are to maintain public confidence we need to find meaningful ways to talk about our performance. We must embrace accountability and also work to improve it.
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- **Build institutional information resources.** We are awash in data, but we need to focus on converting that data into usable information.
- **Embrace student outcomes assessment.** Effective institutions establish clear learning objectives, communicate them to students, express them in the curriculum, gather evidence of success, and use that evidence for improvement.
- **Promote evidence-based, intentional resource allocation.** Resource allocation largely reflects past practice. We must extend a culture of evidence to develop analytic tools and support practices that reinforce the link between evidence and decisions.

This first phase of planning sets a context by applying these goals and principles to the core mission of the campus. Section II discusses how we can be the “destination of choice” for talented and highly motivated students. Section III describes how our research excellence and community engagement can position us the “investment of choice” in a state that relies on innovation for its success. Section IV considers the steps needed for the campus to mobilize in support of its mission-based strategies. Subsequent planning at the campus and unit levels will result in priorities and specific actions to bring planning to life.

II. Establish UMass Amherst as the destination of choice for the next generation of the Commonwealth's high school graduates.

The delivery system for higher education is undergoing a revolution of sorts, and our traditional classroom-based approach is severely challenged. It is also true, however, that our highly immersive residential educational experience makes us a destination, not just an educational delivery systems. Families make financial sacrifices to secure the best experience, and UMass Amherst is positioned to be a clear choice by being a more responsive, interesting, and distinctive institution. Being the “destination of choice” does not mean that UMass Amherst will be the right choice for every student. Our mission is to serve the many talented, highly motivated students who can benefit from a world-class research university, not just an exceptional few. We can become more competitive in several dimensions.

The Complete Educational Experience

We should give special attention to what defines a UMass Amherst education: the values, traditions, and aspirations that guide expectations and demonstrate why choosing UMass Amherst matters. Five foci help frame our distinctive undergraduate educational experience.

**Curricular Coherence.** The broad array of choices we offer also imposes a need for structures and cues that can guide student decisions. Impact results when students experience what we intend, so we must strike the right balance between enterprise and intentionality, and between disciplinary perspectives and broad institutional objectives, in conveying the character of a “UMass Amherst education.” Specific opportunities include taking a broad perspective in all curriculum reviews; continuing the discussion of campus-wide learning objectives, and examining curricular “pillars” and pathways.

**Active and Applied Learning.** Active learning encourages students to take responsibility for their own learning; applied learning recognizes that learners improve their skills through practice and experience. Active and applied learning underpin many “high-impact” educational practices, and with proper support should be featured in efforts to make our educational experience more effective and attractive.

**A Rich Choice of Opportunities.** The wealth of choices we offer has advantages in terms of active and applied learning, and also represents real value to students who hope to emerge from college with useful credentials and experiences. We can support departmental initiative and creativity by simplifying approval processes, providing clear incentives, and better connecting credentials with learning goals.

**The Research Advantage.** Research universities introduce undergraduates directly to new knowledge and insights, and this quality can be important in attracting highly motivated students and in demonstrating impact to society. We can expand and better integrate undergraduate research opportunities, engage students early and often during their time at UMass, and provide support to both students and faculty.

**Career Development and Preparation.** Research universities have career preparation as only one element of their mission, but it is an important one. We can improve effectiveness by aligning curricula with learning outcomes and
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“high impact” educational practices important to employers, and by forging stronger ties between academic units and formal career support services.

Creating Capacity for Educational Effectiveness

The best educational design still relies on effective implementation. Planning must ensure that we have the capacity to deliver on the goals we have set.

Supporting curricular innovation. At a time of enormous changes in educational design and delivery, promoting effective curricular innovation requires putting in place high-level leadership, nurturing innovation and providing appropriate incentives and other support, and creating assessment methods that can drive improvement.

Effective paths to success. Education is effective when students align with the opportunities that are right for them. Creating effective paths to success relies on mobilizing resources to meet instructional demand, providing alternative models for degree completion for students who do not fit well with traditional offerings, and providing more intentional advising and guidance. An important goal is forging a unified student success strategy across campus units.

Comprehensive student outcomes assessment. Demonstrating value means proving reliably that the educational experience works as intended. We can strengthen our student outcomes assessment program by integrating curricular assessment and improvement into the cyclical program review process, expanding our focus on campus-wide learning outcomes, and providing necessary support to faculty and departments.

Focusing on Value

Promoting a more intentional, more coherent undergraduate program will be a long-term effort, but an ongoing focus on explicit goals and demonstrated impact can help align our decisions and make our work more rewarding and effective. Our goal is that UMass Amherst graduates will be known as individuals who have excelled in a challenging environment, participated in rewarding and diverse intellectual and applied experiences, and succeeded in setting and achieving high expectations. They will be known as innovative thinkers and problem solvers, effective communicators, valued team members, and socially aware and responsible citizens.

III. Establish UMass Amherst as the investment of choice in the next generation of the Commonwealth’s progress.

Through long investment in intellectual capital, Massachusetts has become a global center of innovation and higher learning. The state’s innovation economy sustained it through economic contraction, and now positions it for leadership in the next generation of expansion and investment. UMass Amherst’s excellence in research and scholarship helps secure the state’s position of leadership.

The Commonwealth is blessed with two of the world’s great private research universities; their impact demonstrates the power of research universities in the 21st century economy. Over the decades, the research profiles of the state’s major public research universities have grown considerably. The UMass Medical Center in Worcester has taken a leading role in biomedical research. Within its research domain, funding for UMass Amherst is next only to Harvard and MIT. Through excellence in critical research areas and growing collaboration, UMass Amherst intends to be one of the primary destinations for investment in research and development, complementing the other world-class universities in the Commonwealth.

Our goal is that UMass Amherst will be known as an innovative, responsive and rewarding partner for investment with clear areas of national and international research strength, and the capacity to work collaboratively in creating knowledge and putting ideas to work.

Research and Graduate Education

Our research strength and programs in graduate education are core drivers of our impact, but we face many challenges. The climate for research funding is rapidly changing. Effective graduate education today includes professional development and workforce preparation, and partnerships with businesses and others to provide a combination of education and experience. We can also serve as a national leader in the creation of knowledge about and best practices for diversity and community engagement through innovative scholarship, teaching, policy development, programs and services.
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**Excellence in Research.** No institution can be all things to all people, so our strategy focuses on high potential impact and a high level of quality. The Doctoral Program Review (DPR) is a comprehensive, data-driven study of our research doctoral programs that recommends maintaining and investing in highly ranked programs, assessing the prospects of underperforming programs, and encouraging others to identify niches in which they will demonstrate excellence. Research excellence also relies on high-quality faculty, and policies supporting effective recruitment should be augmented with attention to retention and anticipated retirement. To tap into the broadest possible pool of talent we need to expand the pipeline into the professoriate for underrepresented groups.

**Aligning Research Priorities.** As a public research university our orientation to society’s needs should always be evident. Alignment with investors’ priorities is reflected in competitive success. At the federal and state levels, we can engage faculty and others with insights into funding interests and trends, and form partnerships with state agencies and other universities. Federal Center-scale proposals and expanded interactions with business and industry — especially through UMII — represent important opportunities. Greater international partnerships should also be explored.

**Building Bridges: Interdisciplinarity.** Many of the most important research challenges occur at the boundaries between disciplines. Research centers and institutes are important mechanisms for supporting cross-disciplinary collaboration, and we should focus efforts on long-lived, robust collaborations. In addition, flexible and nimble mechanisms to help incubate interdisciplinary research should be developed. Encouraging interdisciplinary teaching and broadening faculty hiring efforts to build interdisciplinary clusters can build capacity over time.

**Effective and Efficient Support for the Research Enterprise.** Continued progress is needed in supporting faculty innovation. Physical facilities for research, including IT infrastructure, should be better integrated with faculty hiring and research priorities. A recent external review of research administration resulted in improvements, and remaining recommendations should be implemented. The Libraries can fill a need for support in data management to support research.

**Increasing awareness of campus research and scholarly activities.** Existing resources to publicize faculty research should be utilized more effectively, and faculty should receive greater support in media training and outreach. A more systematic mechanism to gather news on faculty achievements can help increase awareness and reach a broader audience.

**Increase Impact through Excellence in Graduate Education.** The Doctoral Program Review calls for action in terms of improving funding offers, shortening time to degree, and linking enrollment levels to realistic PhD employment prospects. The Graduate School should organize better professional and career development services. Graduate program innovation can be promoted by streamlining processes and improving branding and marketing, and by improving financial incentives for innovation.

**Outreach and Community Impact**

Effective engagement begins by finding an effective match between our mission and broader community needs. Building and maintaining effective relationships relies on long-term commitment and mutual benefit. Students are important ambassadors, and our impact can be increased through better career preparation and greater emphasis on internships, co-ops, service learning, and applied research.

Outreach activities lack organized support. The current decentralized model makes it difficult to collect and disseminate evidence of our outreach impact. The campus reward structure does not always recognize the impact of outreach, and faculty may not receive encouragement at the departmental level.

**IV. Mobilizing for Success**

The mission of the public research university comes with a high cost. It was long sustained from state appropriations and expanding federal support. But the model that carried us to this point cannot carry us into the future. Success will rely on mobilizing the campus around a financial model adapted to new realities.

**Financial Strategies**

**Expanding Revenues.** Increases in undergraduate fees, while only partially offsetting losses in state tax support, erode affordability. Renewed investment from the state — in line with the principles of the “50-50” plan — will be
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necessary to avoid further increases in the undergraduate cost of attendance. The campus has seen both the potential and the limitations of enrollment-based revenue strategies. Competition for non-resident students is intense, and the revenue growth curve will likely flatten. Enrollment goals should be revisited in light of our experience, and integrated with broader planning goals. Selected use of program-specific fees should be pursued.

Continuing and Professional Education has shown strong revenue growth, and this could continue in light of reforms at UMassOnline. Support for curricular innovation and maintenance of effective financial incentives will be important. Increased private support is the focus of the UMass Rising campaign; in the near term, benefits will come primarily from annual giving and matching gifts. Greater use of sponsorships and other partnerships should be explored. Individual units have shown creativity in developing revenue-generating ideas. The next step is to develop a systematic, sustainable “venture capital” strategy, focusing on identifying capital, developing guidelines for business plans, and evaluating success.

Focusing Resources. Public research universities find themselves in an “arms race.” Successful competition requires greater efficiency and effectiveness. “E&E” efforts in a number of areas have already been effective, and should become even more aggressive. One recommendation is to control the cost of compliance and business processes. Another is to adopt more intentional and evidence-based budgeting and resource allocation systems.

Financial pressure increases the value of creativity and competence. Talented and dedicated staff who can navigate complex transactions and provide high levels of service are essential. Positions should be appropriately classified and compensated, staffing patterns should be reexamined, and clear and rewarding career paths should be available. Our commitment to diversity and inclusiveness should be reflected in openness to new ideas and different perspectives.

Sustaining the Physical Campus

Despite all the changes we face, our mission and business model will remain deeply dependent on our physical assets. This presents a central dilemma. The state constructed the campus over decades, but buildings and infrastructure are coming to the end of their useful lives. The responsibility for facilities construction and maintenance has fallen primarily to the campus, and is one of the main factors driving up student costs. A sustainable facilities strategy — and in turn, a sustainable financial strategy — requires renewed state investment in our physical assets.

Expanding the resource base. The state may not be in the position to invest at its former levels, but direct state capital investment remains essential. Recent renewal of state capital investment is encouraging, and reflects a deepening relationship and shared understanding of the campus’s contributions to the state. In the short term, our focus is on known opportunities for continued state investment such as uncommitted state bond funds and the Massachusetts Life Science Corporation (MLSC) earmark for the campus. In the longer term, a sustainable facilities strategy relies fundamentally on significant, sustained and reliable increases in state capital funding. The campus must aggressively demonstrate the benefits of state investment, and explore additional state partnerships.

The campus has had some success attracting donor support for selected facilities projects. Our experience indicates that private giving is most likely when in response to targeted matching opportunities.

Focusing Resources. Given the scale of likely facilities expenditures in coming years, even small percentage efficiencies can translate into significant cash savings. Two broad principles should be followed: 1) where possible, focus on creating new capacity rather than restoring old capacity; and 2) focus on quality to provide lasting value. The campus faces a major challenge in integrating mission-based program planning and facilities planning. The process of accommodating new faculty hires, the larger renovation strategy, and overall campus and capital planning need to be more closely aligned with planning for the teaching and research missions. Individual projects and funding streams need to be placed in the context of an overall institutional strategy.

The effort to control costs should include seeking relief from state requirements and policies that result in high costs for construction and renovation work. A related inquiry should be made into costs of locally managed projects. Achieving greater value for our money should be pursued through adaptive reuse of existing buildings, strategic space management, and continued improvements in environmental performance. Information technology is increasingly central to teaching, research, and administrative effectiveness. A new Chief Information Officer will have the opportunity to assess issues and strategies, and develop appropriate funding approaches.