

UConn



*S. Stagon; doctoral student of mechanical engineering, with nanorod growing apparatus at the Longley Building
(Peter Morenus/UConn Photo)*

Comprehensive Plan for Next Generation Connecticut: Investment Principles FY 2015 – FY 2024

Table of Contents

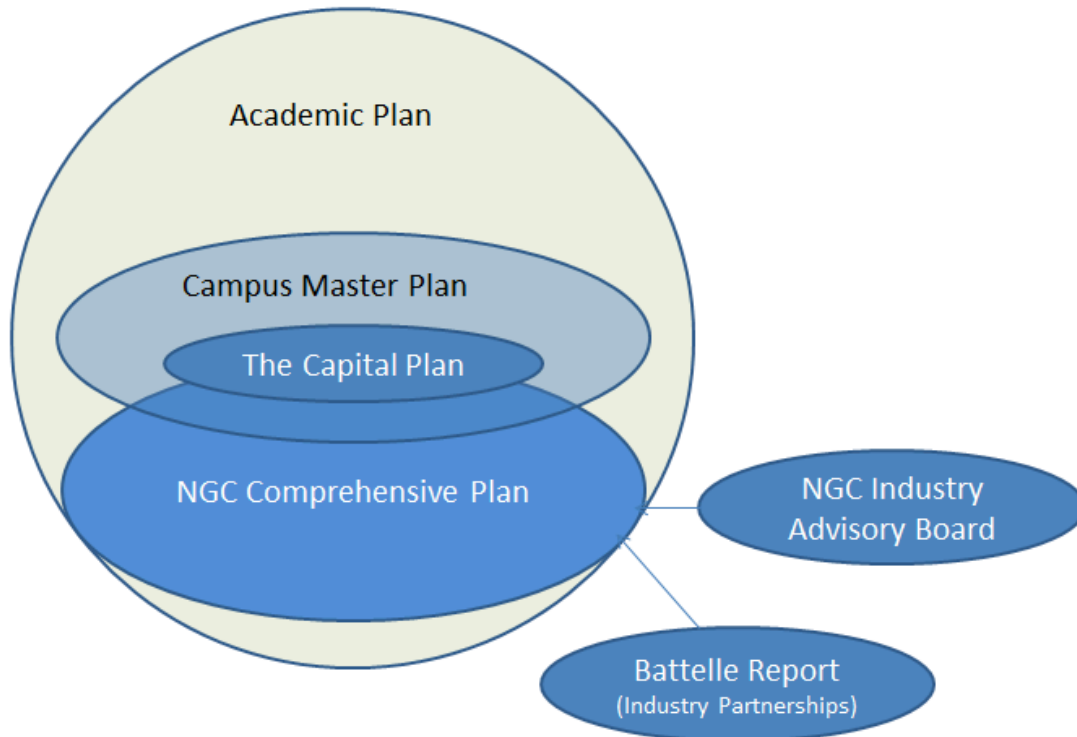
i.	Introduction	2
ii.	Next Generation Connecticut Background	4
iii.	Academic Plan	6
iv.	Incorporating Key Elements from Battelle and Industry Stakeholders	14
v.	Expanding Industry Partnerships, Entrepreneurial Activities, Licensing, Intellectual Property and Commercialization	18
vi.	Development of the New Campus Master Plan and Capital Program ...	26
vii.	Conclusion.....	33

Introduction:

Since the passage of the Next Generation Connecticut (NextGenCT) legislation [*Public Act No. 13-233, 13-184, 14-47*], the University of Connecticut (UConn) has undertaken major planning efforts. The University completed a new, overarching Academic Plan encompassing all aspects of the institution’s academic mission (research, teaching, service, and public engagement). This plan articulates the goals and objectives that emerged from a 14-month process involving over 300 faculty, staff and administrators. It builds upon current strengths, identifies areas of preeminence, informs faculty hiring decisions and guides the training of tomorrow’s workforce in keeping with the goals of the NextGenCT legislation. This process culminated in a Board of Trustees (BOT) approved Academic Plan entitled *Creating our Future; UConn’s Path to Excellence*, which emphasizes creativity, innovation and entrepreneurship for faculty, undergraduates, and graduate students.

While the Academic Plan articulates broad goals for the University with respect to its complete array of academic endeavors, there remained a need to specify how the transformation of the institution’s physical infrastructure would be implemented. For this, a parallel Campus Master Planning process was initiated to delineate overarching goals and guiding principles in support of the Academic Plan. As part of this effort, an accompanying Capital Plan provides the details of

each major capital project to be undertaken. The inter-relationship of these plans is shown below:



The University also needed to determine how best to expand its role as a key driver in the state's economic development. In this regard, Battelle, an independent research and development advisory firm, in collaboration with Connecticut Innovations, was commissioned to provide recommendations for building and sustaining industry partnerships.

Incorporating the key elements of the Academic Plan, the Campus Master Plan, the Capital Plan, recommendations from the Battelle report and input from key industry leaders who served on the NextGenCT advisory board, the University developed the NextGenCT Comprehensive Plan to guide the implementation of NextGenCT investments. This comprehensive plan meets the following four objectives as set forth in the Next Generation Connecticut Legislation:

1. Develop preeminence in the University of Connecticut's research and innovation programs;
2. Hire and support outstanding faculty;

3. Train and educate graduates to meet the future workforce needs of Connecticut; and
4. Initiate collaborative partnerships that lead to scientific and technological breakthroughs.

The Comprehensive Plan has been guided by our efforts to enroll increasing numbers of outstanding students, recruit and retain the highest caliber of research and teaching faculty, meet regional campus needs, continue to make campus improvements, complete a campus master plan for our physical infrastructure, and leverage the UConn Tech Park as an economic development driver for the region.

The Comprehensive Plan establishes a strategic roadmap for the University's investments over the next decade for the Next Generation Connecticut Initiative.

Next Generation Connecticut Background¹

The Next Generation Connecticut initiative represents one of the most ambitious state investments in economic development, higher education and research in the nation. The investments in NextGenCT will transform the University of Connecticut into a top public research institution, fueling Connecticut's economy with new technologies, training highly-skilled graduates, and creating new companies, patents, licenses, and high-wage jobs. The components of this ambitious ten-year plan include:

- Hiring new research and teaching faculty (the majority of whom will be in STEM disciplines, including Engineering, Biological, Mathematical and Physical Sciences);
- Increasing enrollment of undergraduate students at the Storrs and Stamford campuses;
- Building research facilities to house materials science, physics, biology, engineering, cognitive science, genomics and related disciplines;
- Constructing new teaching laboratories;
- Creating a premier STEM Honors program to attract increasing numbers of high achieving undergraduates;
- Upgrading aging infrastructure to accommodate new faculty and students;

¹ Excerpted in part and modified from "Next Generation Connecticut: Building Connecticut's Economic Future through STEM" submitted to CT State Legislature in April, 2014.

- Expanding Stamford degree programs and providing student housing in Stamford;
- Relocating the Greater Hartford Campus to downtown Hartford; and
- Creating outreach activities to industry regarding new faculty, new programs, equipment and laboratory space.

NextGenCT is comprised of both capital and operating budget components. Public Act 13-233, *An Act Concerning Next Generation Connecticut*, extended the UCONN 2000 program through Fiscal Year 2024, and added \$1.6 billion in new bond authority. The plan includes a request for state operating support totaling \$137 million through Fiscal Year 2024.

The University is committing significant institutional resources to launch NextGenCT by reallocating existing UCONN 2000 funds for the capital program and dedicating significant operating funds to support the academic program components.

NextGenCT will have a tremendous impact on growing Connecticut's STEM workforce to enable our State to compete effectively in the global marketplace. According to the National Academy of Engineering², two-thirds of the growth in GDP has its roots in STEM. The U.S. Bureau of Labor Statistics reports³ that:

- STEM jobs grew 3 times faster than non-STEM jobs in the last decade;
- STEM jobs are projected to continue to grow by 17 percent ('08-'18), as compared to 10 percent in non-STEM; and
- Approximately 20 percent of the STEM workforce is over the age of 55 and may retire over the next 10 years.

For these reasons, increasing our STEM enrollment, hiring additional STEM faculty, growing our STEM research funding, and constructing and renovating STEM facilities comprise the components of the NextGenCT initiative.

In the near-term, NextGenCT will create construction jobs, but more significantly, NextGenCT will produce sustainable long-term employment in high technology fields. This initiative will also leverage and maximize the State's related investments in Bioscience Connecticut, The Jackson Laboratory for Genomic Medicine, Aerospace Reinvestment Act and the Manufacturing Innovation Fund,

² National Academy of Engineering of the National Academies. Web. 24 Jan. 2013 www.nae.edu

³ Bureau of Labor Statistics. Web. 24 Jan. 2013 www.bls.gov

among others. By 2024, NextGenCT will yield over 2,000 new permanent jobs in prominent fields related to research and approximately 30,000 construction jobs.

Further investment in STEM will result in dramatic increases in both STEM research and STEM graduates, in turn producing innovations and inventions that will directly contribute to sustainable economic growth for Connecticut.

Academic Plan⁴

While the Academic Plan, *Creating our Future, UConn's Path to Excellence*, lays out broad goals for the University on its complete array of academic disciplines, the following are critical components relevant to the NextGenCT comprehensive plan:

Excellence in Research and Scholarship

- Establish innovative institutes that pursue interdisciplinary research and scholarship in the strategic areas;
- Increase refereed and scholarly journal articles, scholarly books, conference proceedings;
- Increase extramural research grants;
- Increase patents and licenses;
- Increase honorific awards and appointments;
- Recruit national academy members who can serve as core leaders in strategic areas, and nominate existing faculty for induction into national academies;
- Recruit faculty clusters for joint appointment across institutes and departments to promote interdisciplinary research;
- Build or expand core facilities with shared equipment;
- Assist and support faculty in proposal development and writing;
- Recruit top graduate students and postdoctoral scholars;
- Develop and implement a university workload policy to ensure that research, teaching, and service are appropriately balanced, reflecting disciplinary needs and understanding the need for flexibility based on the competitiveness in specific disciplines;

⁴ Excerpted in part and modified from UConn's Academic Plan; *Creating our Future, UConn's Path to Excellence*. Approved by the UConn Board of Trustees in April 2014.

- Establish the highest standards for evaluation of research performance in merit and promotion, tenure, and reappointment decisions;
- Measure research performance using Academic Analytics and other methods; and
- Increase the number of patents and licenses that are commercialized.

Investment in Interdisciplinary Initiatives

UConn has identified and embraced the formation of strong interdisciplinary research teams working at the intersection of two or more disciplines in this plan and modeled it after some of its most successful interdisciplinary endeavors.

The relevant components of the Academic Plan that emphasize STEM research and education include:

Advanced Materials and Manufacturing

Advanced materials and manufacturing is entering an age when materials are designed at the atomic and molecular level, in contrast to the historic approach of cutting and forming from bulk starting blocks. UConn will aggressively pursue three important areas: design of materials that influence/interact with cells, drugs, radiation, and electricity; programs that encompass discovery of industrial/clinical applications; and exploitation of novel capabilities of additive manufacturing. Six specific academic areas have been identified and their enhancement will make significant contributions to globally important challenges in energy, aerospace, repair/regeneration of tissues, targeted drug delivery, molecular detection/sensing, and conformable electronics and force generation.

Genetics, Genomics, and Personalized Medicine

Genetics, genomics, and personalized medicine are some of the greatest emerging strengths at UConn and have the opportunity to achieve preeminence and international recognition. Much of this work has begun with existing faculty through the new partnership with The Jackson Laboratory and the formation of the Institute for Systems Genomics. Strategic recruitments will be focused in the three main thematic areas of genome biology and evolution, personalized medicine, and stem cell genomics, as well as in the three cross-cutting areas: genome data analysis, interpretation and visualization; ethical, legal and social implications; and genome technology. Investments in a bioinformatics core and building the methods and resources for collecting biological specimens from

patients for sequencing and analysis will catapult UConn upward as a leader in the field of genomics.

Brain, Mind, and Cognition

UConn has the potential to lead in developing new innovations in science, education, and community outreach in the neurobiology of communication, which includes the cognitive, neural, and genetic bases of communicative development, function, and disorder. The University has growing strength in cognitive science, neuroscience, and the genetics of language and communication, both at the basic research level and in the application of basic research to disordered communication. UConn is uniquely poised to gain international preeminence in language/communication development via coordinated efforts to connect research from the gene/cell level to the cognition/behavior level. Institute development and coordination coupled with strategic hiring, particularly in bridging fields such as cognitive neuroscience and computational modeling, show great promise, as do current strengths in translational neuroscience. We also have the opportunity to gain an international reputation in research and treatment for such disorders as stroke, dementia, addiction, and autism, in addition to disorders of communication.

Sustainability and Resilience: Environment and Energy

Human society, and the ecosystems of which they are a part, can be viewed as interconnected systems whose components intimately interact to determine overall sustainability. Sustainability can be evaluated with regard to biodiversity, the conversion of renewable energy, environmental resilience, recycling of materials, as well as with regard to the abundance and distribution of goods and services upon which humans depend for sustenance and well-being. Appropriate interactions involve complex tradeoffs, and this highlights the need for a broad systems perspective, and a willingness to consider the needs of other stakeholders while applying an interdisciplinary view of the development of managerial, policy, and technological responses to important issues.

Complex Systems and Big Data

Complex systems focus on the understanding and enhancement of design, management, performance, learning and adaptation of interconnected parts or processes over their life span. Big data focuses on volumes of both structured and unstructured data that are too large to be effectively processed by traditional algorithmic, database and software engineering techniques. At the convergence

of computation, communications, control, cognitive processes and health, these topics cut across many colleges/schools and disciplines and present major opportunities for scholars and practitioners alike in the 21st century, e.g., medical care and discovery; drug design and testing; efficient product, process and servicing design and execution; supply chain management; combined behavioral/brain research; and the associated data storage, search and analytics. The development of a high performance computing capability at UConn is critical for the data analytics associated with these activities.

Creativity, Innovation and Entrepreneurship (CIE)

Faculty and student involvement in creative, innovative and entrepreneurial activities is necessary to fully implement the goals of Next Generation Connecticut. Research and educational programs will 1) enable cross-disciplinary discovery of new knowledge; 2) develop differentiated educational outcomes and competitive advantage for our students; and 3) capturing implementable solutions to the complex problems facing society, the global economy, and its associated markets. CIE will transform the university-wide culture which strongly emphasizes an environment in which students, faculty, and staff “imagine and invent the future,” as opposed to prepare for it. This culture would promote inter- and trans-disciplinary research, teaching, and service/outreach/public engagement, all while respecting the value of disciplines and disciplinary knowledge; would provide a range of options for how faculty, students, and staff can be involved in relevant activities; would emphasize both the economic value of CIE and the personal benefits of living a more creative, fulfilling life; and would serve as a magnet to attract creative, innovative and entrepreneurial faculty, students, and external collaborators to UConn. Investments in this area include minors and concentrations at the UG and graduate levels in creativity and innovation, expansion of entrepreneurial activities through Proof of Concept Centers, Business Plan Development and Implementation, and New Company formation based on faculty and student research with entrepreneurs and industry partners.

Sustaining and Expanding Excellence in Undergraduate Education

In order for NextGenCT to be successful, UConn must maintain excellence in undergraduate education particularly in training graduates in STEM fields. Through this plan, we will

- Increase the undergraduate student body through a carefully articulated enrollment management plan, which will include the construction of a new Next Generation Residence Hall for the current Honors and new STEM Honors program as well as for the STEM Living and Learning Communities;
- Increase quality of entering students as measured by SAT and GPA;
- Increase graduation rates and reduce time to degree;
- Increase number of degrees in STEM disciplines;
- Increase percentage of smaller classes (with fewer than 20 students) and reduce larger classes (with more than 50 students);
- Increase percentage of courses taught by full-time faculty with terminal degrees in their field;
- Increase the number of new courses, concentrations, minors, and majors aligned to key interdisciplinary areas;
- Increase new professional development programs;
- Increase diversity of students;
- Increase support for students from economically disadvantaged backgrounds;
- Increase percentage of students who pursue undergraduate research, experiential learning, and internships;
- Increase percentage of students who pursue study abroad activities and/or international internship and service learning activities;
- Increase percentage of students who receive prestigious national fellowships; and
- Increase rankings in *U.S. News & World Report*.

Achieving Excellence in Graduate Education

Strong graduate education programs not only increase research and technology transfer, but they are critical to meeting workforce needs and job creation. Through this plan, UConn will:

- Recruit the top graduate student candidates from across the globe with aggressive outreach efforts and on-campus support services;
- Develop opportunities for funding more graduate research assistantships and other fellowships and ensure that graduate students have teaching loads that do not divert their attention from their research;
- Provide internships with industry and research appointments in federal laboratories;

- Increase pre- and post-doctoral training grants through NIH, NSF, DOE, and other federal agencies;
- Develop professional programs for students to improve skills in:
 - Leadership;
 - Career development;
 - Teaching effectiveness;
 - Professional communication; and
 - Proposal writing.
- Increase quality of entering students as measured by GRE, GPA, and undergraduate institution;
- Increase number of NSF, DOD, NIH, and other nationally competitive graduate fellows;
- Increase graduation rate and reduce time to degree;
- Increase number of new courses, concentrations, and fields of study aligned to key interdisciplinary areas;
- Increase percentage of students who pursue industry and agency internships;
- Increase diversity of students;
- Increase placement in prestigious postdoctoral fellowships and academic appointments;
- Increase placement in prestigious industry, government, and nonprofit organizations; and
- Increase rankings through *U.S. News & World Report*, *Advanced Academics*, and Shanghai Jiaotong.

Sustaining Excellence in Teaching Effectiveness

We expect strong teaching from UConn faculty, teaching that encompasses multiple approaches for student learning and engagement. Our students learn in different ways, increasingly relying on and leveraging technology. To promote excellence in teaching, the University will:

- Emphasize teaching performance in merit evaluation and promotion, tenure, and reappointment decisions;
- Establish innovation funds for curriculum development;
- Reward excellence in teaching and advising;
- Reward excellence in commercializing research and working with industry;
- Implement midterm, formative Student Evaluations of Teaching to provide feedback;
- Investigate, with appropriate senate committees, ways of sharing Student Evaluations of Teaching with our students;

- Strengthen opportunities at our Institute for Teaching and Learning (with faculty leaders) to train all new and underperforming faculty, develop a process for peer evaluation of teaching, and invest in advanced classrooms, collaboration spaces and technologies to reflect modern learning modalities.

Current Efforts to Attract Faculty and Expand Student Enrollment⁵

Operating support from the State for the NextGenCT initiative did not begin until FY15, but the University has nevertheless been actively implementing the student enrollment expansion component of the initiative. While enrollments at the other private and public universities and colleges are on a downward trajectory, mirroring state and regional demographic trends, the opposite has been true at UConn. Due to our tremendous value and the excitement over the NextGenCT initiative, total freshman applications across all campuses for Fall 2015 reached 36,000, a 15 percent increase over the prior year, and an estimated 434 more freshmen enrolled in the Storrs and Regional campuses this past year (a 5 percent increase), comprising a freshmen class that was more diverse and more qualified than ever.

The fall 2015 freshmen class is the largest new class we have ever enrolled, and their high academic quality and diversity are great examples of how state investments in UConn are paying off. The University is proud to keep great students in Connecticut, and to attract new students to our state every year. A record number of this year's freshmen have been accepted into UConn's competitive Honors Program, and almost one-third of the members of the Class of 2019 are from minority groups, making it one of the most ethnically diverse group of students to join the University. Over the past 20 years, the average SAT score of incoming freshmen has jumped from 1028 in 1995 to this year's average of 1233, and the number of valedictorians and salutatorians in the freshman class has increased from 40 in 1995 to 145 in 2015. The University has improved freshmen retention and minority freshmen retention over this same time period as well. The freshmen retention rate of 93 percent ranks 14th nationally among our public research peer universities. Following that positive trend are the University's 4-year and 6-year undergraduate graduation rates. Since 1995, the 4-year rate has risen from 43 percent to 70 percent and the 6-year rate has risen from 70 percent to 81 percent. The average time to graduate for UConn students is at a remarkably low 4.2 years, which helps to keep parent/student educational costs down. In addition, the University has made significant progress towards improving the following NextGenCT goals:

⁵ Excerpted in part and modified from "UConn 2000: Rebuilding, Renewing and Enhancing The University of Connecticut"; the forty-first in a series of reports to Governor Dannel P. Malloy, submitted January 2016.

- Storrs Engineering Undergraduate Enrollment increased from 1,995 in FY13 to 2,804 in FY16;
- Storrs STEM Undergraduate Enrollment increased from 7,995 in FY13 to 9,760 in FY16;
- Storrs Undergraduate Enrollment increased from 17,528 in FY13 to 18,826 in FY16;
- Undergraduate STEM Degrees Awarded increased from 2,387 in FY13 to 2,634 in FY15.

To accommodate the increasing enrollment and to strengthen academic and research areas, the University committed additional support to the NextGenCT initiative in FY14. As a result, 112 new faculty were hired in Fall 2013. While the majority of new faculty hires have been appointed at the Assistant Professor level, 42 were hired as Associate or Full Professors. Furthermore, the University has hired 85 NextGenCT faculty in FY14 and FY15 with 49 of those hires in the STEM fields. These faculty have contributed to the increase in the amount of research proposals and research awards. The positive impact on research expenditures and business activity will be seen over the next few years as the growing number of proposals and research awards translate into expenditures and business activity. Importantly, the University has made significant progress towards improving the following metrics:

- Research Awards increased from \$79M in FY13 to \$121M in FY15;
- Average Award Size per faculty increased from \$223K in FY13 to \$263K in FY15.

However, the number of new faculty in the future will be significantly lower than planned because of the cuts in State operating support since FY15. These cuts have also restricted our ability to replace retiring faculty, which can result in net loss of faculty despite the new hiring through NextGenCT. Due to the reduction in NextGenCT funding that has occurred in FY16, our original goals of hiring faculty to train the next generation of students, conduct transformational research, create new companies based on intellectual property from this research, and to drive job creation in CT may be significantly reduced. Progress toward NextGenCT goals could be further eroded if originally planned funding is not restored and if out-year funding is not appropriated at requested levels.

Additional key tools needed to attract more students to Storrs and the regional campuses include new STEM scholarship funds of \$1 million and Big Idea grants (enabling undergraduates to conduct a research project) which were first

awarded to high achieving students in FY15 and will continue over the entire NextGenCT funding period.

Incorporating Key Elements from Battelle⁶ and Industry Stakeholders⁷

The University partnered with Connecticut Innovations, SPO Associates and Battelle, the leading independent research and development advisory firm on technology matters, to seek input on how best to enhance the University's academic and research capabilities and develop industry partnerships. The Battelle report identifies strategic growth areas for the research, innovation, workforce and economic development needs of Connecticut. The following excerpts from the Battelle report form the basis of technology thrusts for the NextGenCT comprehensive plan.

Three strategic paths have been identified as part of the roadmap to better align UConn's strengths with the needs of industry and to foster partnerships in key areas. These strategic paths focus on specific actions that UConn will implement as part of the NextGenCT comprehensive plan.

Strategic Path 1: Leverage UConn's Five Strategic Technology Platforms to Focus and Broaden its Industry Collaboration Activities and Partnerships at the UConn Tech Park

The following technology sectors were incorporated into the development of the Academic Plan and the Tech Park initiatives.

- Additive Manufacturing and Advanced Materials: drawing on the breadth of industry innovation drivers in engines and turbines, surgical and implant devices, and advanced materials, with a significant base of UConn R&D Assets.
- System Science and Integration: drawing on the breadth of manufacturing-related industry innovation drivers and broader R&D assets at UConn involved in systems research, from environmental sustainability to disease prevention and health promotion.
- Data Analytics and Bioinformatics: drawing on the importance of health IT, accountable healthcare, and personalized health along with the broader base of finance and insurance in Connecticut.

⁶ Excerpted and modified from "Building Public-Private Partnerships for Economic Growth: A Strategic Roadmap for Industry Partnership Development at the University of Connecticut" Battelle Technology Partnership Practice Report, January 2014

⁷ Comments and discussion items from the NextGenCT Industry Advisory Board Meeting, 7/30/14

- Energy Conversion and Storage: tapping the State's strengths in electric power distribution, lighting manufacturing, and ongoing industry innovation in fuel cells and batteries, along with the presence of UConn R&D assets.
- Sensors and Instruments: tapping the innovation and economic performance of industry drivers in electronics, sensors, and optics.

Strategic Path 2: Advance Business-Friendly Policies and Practices at UConn to Foster Partnerships with Industry

The Battelle Technology Partnership Practice has been working with and benchmarking leading U.S. research universities, including Penn State, Ohio State, Carnegie Mellon University, Georgia Tech, and Purdue, in industry sponsored research. Battelle has found that their success results from continually refining policies and enhancing their capacities to advance business-friendly approaches that reflect the ways businesses compete and advance innovation in a global, knowledge-based economy. UConn will implement policies and best practices such as those implemented at these universities in order to develop critical industry partnerships. Specific recommendations that UConn will adopt to advance business-friendly policies and practices in support of industry partnerships include the following:

- Establish a dedicated industry partnership function apart from technology transfer activities and philanthropic development (UConn Foundation) functions;
- Advance streamlined and predictable intellectual property and contracting policies for industry sponsored research;
- Develop faculty incentives for engaging in industry partnerships;
- Promote the formation of research centers and broader industry consortium activities, especially across the five Strategic Technology Platforms;
- Further student engagement in industry sponsored research activities;
- Create tailored graduate and professional education programs that rely heavily on distance learning technologies to address the workforce development needs of industry;
- Partner with industries to provide a higher level of technical training;
- To maintain continuity, internship and other types of student engagement with industry should extend over the summer months;
- Promote a culture within UConn's faculty and administration based on a business model with respect to timelines, ROI, and metrics;

- Develop an operating/development plan and governance structure for the Tech Park;
- Improve industry interactions including sales, marketing and partnership development;
- Create “firewalls” to protect industry confidentiality, data security and trade secrets;
- Tech Park should be fitted-out with high-tech industry tools for off-site conferencing (e.g. smart-boards, video conferencing etc.);
- Shift emphasis from marketing existing UConn IP to development of new and innovative IP with industry partners;
- Reward industry partnership and collaborative research through the Promotion/Tenure/Reappointment process, and create opportunities for industry-based sabbatical leaves;
- Create a business center with a focus on entrepreneurship;
- Create a maker-space or innovation/entrepreneurial center for proof-of-concept work;
- Collaborate with legislators, the State DECD and Department of Commerce to assist in attracting businesses from other states and nations;
- Meet with the NextGenCT industry advisory board on at least a semi-annual basis to identify emerging industry drivers, review best-practices and policies to increase university-industry collaborations, opportunities for future partnerships with existing faculty, and potential growth areas for faculty hires.

Strategic Path 3: Further Develop and Implement Collaborative Resources at UConn to Strengthen Alliances with Industry

- Create a University Affiliated Research Park;
- Align the development of the Tech Park to be congruent with state and regional economic development efforts.

UConn Technology Park⁸

⁸ Excerpted in part and modified from “UConn 2000: Rebuilding, Renewing and Enhancing The University of Connecticut”, The Forty First in a series of reports to Governor Dannel P. Malloy submitted January 2016

In collaboration with industry partners and entrepreneurs, UConn is developing a Technology Park at the Storrs campus. With the State's financial support (Public Act 14-98), UConn has begun construction on the Park's inaugural building, the Innovation Partnership Building (IPB). When completed in 2017, this 113,000 square foot building will feature highly specialized laboratories, core facilities and equipment to support collaborative research and development activities among university, industrial and entrepreneurial partners. The primary emphasis of the Tech Park is to translate key research and development advances into commercial products that will benefit high-technology manufacturers and entrepreneurs. During the IPB building's design phase, a number of partnerships have already been developed with key industries including:

- \$25M UConn-FEI Center for Advanced Microscopy and Materials Analysis
- \$9M Eversource Energy Center
- \$7.5M GE Advanced Technology Initiative
- \$7.2M Fraunhofer Center for Energy Innovation
- \$10M UTC Institute for Advanced Systems Engineering
- \$7.5M Additive Manufacturing & Innovation Center
- \$7.5M Flexible Hybrid Electronics Manufacturing Innovation Institute
- \$6M Comcast Center for Security Innovation
- \$2M EDAX-Partnership for Advanced Electron Microscopy Cameras & Detectors

The direct and attendant activities of the UConn Tech Park are expected to create thousands of new jobs in Connecticut, secure UConn's position as a leader in high-tech innovation, and serve as a vital research and development partner to key industries. The Tech Park will enhance Connecticut's global competitiveness and will become a critical component of the State's future economic growth.

The emphasis of the IPB will be to broadly serve the 5,000 companies located within a 65 mile radius of Hartford, CT, that are closely aligned with the following core competencies; *additive manufacturing, advanced materials, biomedical engineering and devices, hardware security, advanced systems engineering, clean energy alternatives, and genetics/genomics and personalized medicine*. In this new environment of a rapidly expanding portfolio of available technologies, the principal objectives of the IPB are to provide Connecticut companies with access to discovery, a highly trained and effective workforce, product development and design, and manufacturing.

Expanding Industry Partnerships, Entrepreneurial Activities, Licensing Intellectual Property and Commercialization

As part of the effort to expand UConn's research capacities and competitiveness, the University will provide research faculty with grant proposal development support to prepare submissions for the following key programs that align with NextGenCT including:

- National Network of Manufacturing Innovation;
- Manufacturing Partnership Community;
- NIH P30 Centers;
- National Science Foundation Engineering Research Center;
- National Science Foundation Materials Research Center;
- National Science Foundation Science & Technology Center;
- Department of Energy-Energy Frontiers Research Center;
- Department of Energy ARPA-E;
- Department of Defense MURI;
- NIH Big Brain Initiative;
- Related programs at federal agencies;
- Industry programs.

Opportunities for Industry Collaboration

In addition to those identified in the Battelle report, UConn will leverage the following programs to enhance industry collaborations and to help advance the goals of NextGenCT:

- Department of Economic & Community Development (DECD):
 - \$70M Connecticut Manufacturing Innovation Fund (MIF) administered through DECD to assist the manufacturing industry to innovate commercial products and services and help drive enhancement in, or development of, products or services designed to strengthen their competitive position. The MIF supports competitive initiatives in the following areas:
 - Voucher Program (DECD/CCAT) – It is designed to help keep pace with the state-of-the-art product development and manufacturing technology. The program provides companies with access to the expertise they need to become more efficient, productive, and profitable.

- Incumbent Worker Training Initiative (DECD/DOL) – The program provides financial assistance to train incumbent workers in the appropriate skills to meet current and emerging market needs.
 - Apprenticeship Program (DECD/DOL) – To support a combination of on-the-job training and classroom instruction for apprentices in Connecticut’s manufacturing industry. Grants awarded through the program can be used for wage subsidy, tuition reimbursement and to offset the costs of gaining appropriate credentials for apprentices.
 - \$300K Small Business Incubator Program (SBIP) eases the inherently high financial burden of growing a start-up technology based business in today’s economic climate. Support under this program is offered to technology companies that are housed in Connecticut based incubator facilities. The program is funded by DECD and administered in partnership with CCAT.
- \$200M CT Bioscience Innovation Fund to develop collaborations with UConn faculty and industry partners to leverage external funds from federal agencies – administered through CI.
- \$600K Technology Talent Bridge (TTB) – a program that connects student interns with work on relevant projects (and companies) within the State - administered through CI.
- \$1.5M Small Business Innovation Research ACP Program – available for small, high-tech Connecticut businesses seeking funding for R&D and commercialization - administered through CI.
- \$400K Innovation Challenge – to work with small companies to meet innovation opportunities established by anchor companies seeking to leverage the ongoing master agreements of UConn with major Connecticut companies - administered by CI.
- \$250K Manufacturing Technical Assistance Program (MTAP) – collaboration between the University and the Connecticut Center for Advanced Technology (CCAT) is designed to spur innovation within the state’s manufacturing sector - administered through UConn and CCAT.
- Student Internships – through UConn’s Center for Career Services and many departments.
- Senior Design Projects – a 1-2 semester course designed for senior engineering students to solve real-world engineering problems for industry sponsors with the guidance of faculty mentors - administered through UConn’s School of Engineering.
- Industry sponsorship of undergraduate and graduate research students through research grants.

- **Industry Liaison Program:** In order to advance innovation through collaborative research, UConn employs industry liaisons whose mission includes outreach to scientists and engineers from industry. These individuals establish partnerships with industry at many levels - from student internships and senior design projects (described above), to the formation of large, industry- or federally-sponsored research projects and collaborations. In addition, the Industry Liaisons work with Chambers of Commerce, Trade Associations, supply chains and OEMs to broaden awareness of UConn's research capabilities, and leverage State programs (e.g. Connecticut Innovation, DECD etc. as described below) to establish and to strengthen partnerships between UConn faculty and industry partners. There are also many individuals embedded within schools, colleges, centers and institutes who facilitate interactions with industry. IMS Industrial Affiliates Program – since 1974, the program has provided companies with access to UConn resources that can assist industry with materials-related research, development and production projects - administered through UConn's Institute of Materials Science.
- **Eli Whitney Equity Fund**– to provide R&D support and research space to innovative companies receiving investment from CI.

Entrepreneurship and Innovation

There are many other new business and entrepreneurial initiatives intended to encourage and foster a vigorous entrepreneurial culture at UConn and increase the success potential of commercially viable companies formed from its innovations, entrepreneurial and proof-of-concept competitions. These activities are designed to: 1) Maximize entrepreneurial education and incentivize the creation of cross-disciplinary innovation teams; 2) Aid the teams in identifying and addressing key business issues through mentorship and real-world problem solving activities; and 3) Provide mechanisms to deploy and allocate resources to the best commercialization opportunities that can attract future public or private fundraising. The University has made progress successfully engaging with partners on these entrepreneurial initiatives.

- A partnership funded by Connecticut Innovations for \$10M was established with Yale for the Program in Innovative Therapeutics for CT's Health (PITCH) program designed to provide a streamlined translational pathway for researchers to convert their discoveries to new therapeutics.
- A new \$750K UConn Innovation Fund was created in partnership with Connecticut Innovations and Webster Bank to invest in UConn affiliated startups.

- The University was designated as a NSF I Corp Site with a \$300K grant to support development of new technology ventures through educational and support for faculty-lead student teams.
- A SPARK Technology Commercialization Fund was established at Storrs and UConn Health to support prototype and proof of concept work necessary to establish a startup or attract commercial partners.
- Connecticut Center for Entrepreneurship and Innovation (CCEI): CCEI serves as a hub for entrepreneurship at the University and facilitates student and faculty participation in entrepreneurial activities.
- Intellectual Property and Entrepreneurship Law Clinic (IP Law Clinic): The IP Law Clinic at the UConn School of Law partners with TCP to help potential companies with analysis of the IP landscape. The IP Law Clinic provides law students with the opportunity to counsel Connecticut's innovators in an extensive range of intellectual property (patent, trademark, copyright and trade secret) and related business law issues.
- Innovation Quest (iQ): The iQ program is a component of entrepreneurial training at UConn. It was established through a collaborative effort of TAP and CCEI but is funded, supported, and driven by UConn alumni.
- The University joined Yale, Quinnipiac University and Connecticut Innovations to establish the Bioscience Pilot Program to support commercializing biomedical technology innovation (medical devices diagnostics and health information technology) development at early stages with \$30K grants that help prepare projects to be competitive under the State Bioscience Innovation Fund.
- The Third Bridge Grant provides seed funding to engineering with promising technologies developed independently and within UConn labs. The goal of The Third Bridge is to mentor and aid these students as they advance their technologies toward commercialization.
- The Office of the Vice President for Research Technology Commercialization Services (TCS): TCS is the University's technology transfer enterprise and has successfully launched over 50 companies. In addition to startup creation, TCS also markets commercially viable patents through license agreements with appropriate industry partners. TCS works closely with internal and external stakeholders and maintains a close relationship with UConn's other entrepreneurship programs.
- The University Technology Incubation Program (TIP), which offers incubator facilities at three locations across the State: Storrs, Farmington, and Avery Point, is able to offer technically-based start-up companies access to a unique range of unparalleled resources including: Incubator facilities featuring wet labs and access to

instrumentation; Collaboration with scientific experts; Technically trained student interns, employees and graduates; The University's world-class library resources; Customized business educational events, planning assistance and mentoring; and Incubator Facilities and Services.

Outside review and input: Constructive comments from the NextGenCT Industry Advisory Board and CT General Assembly have been incorporated into this Comprehensive Plan; however, the following specific comments were emphasized during these meetings:

NextGenCT Industry Advisory Board Meeting: On July 30, 2014 the NextGenCT Industry Advisory Board⁹ met to provide input on the Comprehensive Plan. During the discussion, Board Members urged UConn:

- To consider potential industry partnerships and research opportunities when recruiting new faculty:

UConn Commitment: UConn always strives to hire the best, brightest and most productive faculty members in the areas of teaching, research, service and public engagement. Additional emphasis will be placed on evidence of collaborations with industry, patent filings, and industry-sponsored research agreements.

- To emphasize the quality of faculty during the recruiting process, and to hire a larger percentage of mid-level and senior faculty with proven track-records.

UConn Commitment: As noted above, UConn always strives to hire the best, brightest and most productive faculty members in the areas of teaching, research, service and public engagement. As detailed elsewhere in the report, significant hiring at the Associate and Full professor has already occurred over the past three years, and UConn will continue to recruit faculty at higher ranks who are well established in their fields.

- To make sure that faculty hires are not just excellent researchers, but also excellent teachers and mentors.

⁹ NextGenCT Industry Advisory Board Members: Deb Santy, Connecticut Innovations; Frank Preli, Pratt & Whitney; J. Paul Oates, Cigna; Michael G. Polo, AdChem Manufacturing Technologies Inc.; Joseph Brennan, CBIA, Ray Reimer; Traveler's Insurance

UConn Commitment: As detailed elsewhere in this report, UConn places a very high value on excellence in teaching, advising and student mentoring and will continue to do so.

- Place a greater emphasis on cross-disciplinary training of students and include more “real-world” problem-solving exercises in the curriculum to better match the challenges they’ll face in industry settings.

UConn Commitment: A major point emphasized in the recently adopted Academic Plan is UConn’s commitment to aggressively pursue seven interdisciplinary areas, including some of those identified in the Battelle Report. In addition, critical thinking skills and real-world problem-solving is engrained in courses across the University. UConn will expand upon this approach as it adopts complementary teaching techniques (e.g. “flipped classrooms,” online education, industry-sponsored student internships, externships, co-op programs, Senior Design projects) at all levels of education.

CT General Assembly Hearing¹⁰: On August 5, 2014, the bipartisan leadership of the Finance, Commerce and Higher Education Committees held a public hearing to provide input into the draft Comprehensive Plan per section 3 of PA 13-233. During the discussion, legislators urged UConn to:

- To make sure that UConn remains affordable;

UConn commitment: The University strives to provide an affordable, accessible college experience to Connecticut students. This commitment to students and their families has also been recognized by independent authorities like Kiplinger’s Personal Finance, which has consistently named UConn as one of the “best value” public universities in the nation – ranking UConn as the 25th best value among public research universities during the last two years. Additionally, a recent report on UConn’s affordability by the Legislative Program Review and Investigations Committee noted the following:

- Need-based financial aid at UConn has grown by 81 percent since 2005-06.

¹⁰ “Next Gen CT update” held with chairs and ranking members of the General Assembly’s Finance, Commerce and Higher Education, Tuesday, August 5, 2014, at 3:00 p.m., Legislative Office Building, Room 2E

- UConn spent \$74.9 million on institutional grant aid for students in 2012-13, which has grown by 75 percent beyond inflation since 2005-06.
 - Compared to its peers, UConn's prices are about in the middle or lower and the cost of attending UConn has grown at a rate much lower than comparable institutions. According to the report, while the median cost of attending a state flagship university increased by 22 percent between 2008-09 and 2011-12, the increase at UConn was 9 percent.
 - UConn's federal student debt generally compares favorably to similar universities, and UConn short-term student default rate is low at 2.3 percent.
- To implement and institutionalize industry-friendly policies;

UConn Commitment: The University identified this critical focus area through its collaboration with Battelle. UConn will continue to review its policies to insure that they are industry-friendly as indicated earlier in this report.

- To aggressively pursue IP, technology commercialization and licensing opportunities;

UConn Commitment: The University agrees this is another essential focus area and commits to the activities outlined earlier to expand our successes in these areas.

- To work with state agencies to help attract more industries into the State and assist Connecticut companies;

UConn Commitment: As noted earlier, UConn entered into an agreement with Connecticut Innovations and Battelle to develop strategies to increase innovation and industry partnerships.

- To hire and support more faculty at the Associate and Full Professor level;

UConn Commitment: The University is already doing this and plans to continue hiring a range of faculty members in the future pending annual state appropriations for the NextGenCT initiative.

- To define a process for identifying future areas of growth potential in keeping with the State's main industry sectors;

UConn Commitment: Based on this feedback, the University will meet with the NextGenCT industry advisory board on an “as needed” basis to review best-practices and policies that augment university-industry collaborations.

- To better publicize UConn’s strengths and stature as a leading public research institution.

UConn Commitment: The University has a robust communications operation that will continue to promote UConn’s academic and research expertise.

PA 13-233 also highlights the need for the University to maintain its focus on a number of the areas mentioned at the August 5, 2014, meeting and requires the University to report annually, starting in January 1, 2016, on the following:

- (1) research proposals, research awards and research expenditures;
- (2) student applications, student enrollment and degrees awarded at the bachelor's, master's and doctoral levels;
- (3) industry partnerships including joint projects, consortium projects and incubator support;
- (4) a summary of university and joint university-industry intellectual property activities, including the number of disclosures, patents, licenses, new businesses and entrepreneurial activities established with university technologies; and
- (5) identification of research and innovation benchmarks and an analysis of the university's progress in meeting such benchmarks in comparison to nationally-ranked research universities.

Development of the Campus Master Plan and Capital Program¹¹

The University’s Master Plan provides a template for the development of the University’s physical plant and infrastructure. The 1998 Storrs Campus Master Plan was updated in 2006 to reflect the extensive physical changes on all the campuses resulting from the UCONN 2000 and 21st Century UConn initiatives. It should be noted that the Master Plan was modified throughout the project planning, design and construction process of UCONN 2000. As part of the Technology Park initiative, an update to the North Campus Master Plan was prepared to delineate various building sites, vehicular and pedestrian pathways,

¹¹ Excerpted in part and modified from “UCONN 2000: Rebuilding, Renewing and Enhancing The University of Connecticut”, The Forty First in a series of reports to Governor Dannel P. Malloy submitted January 2016

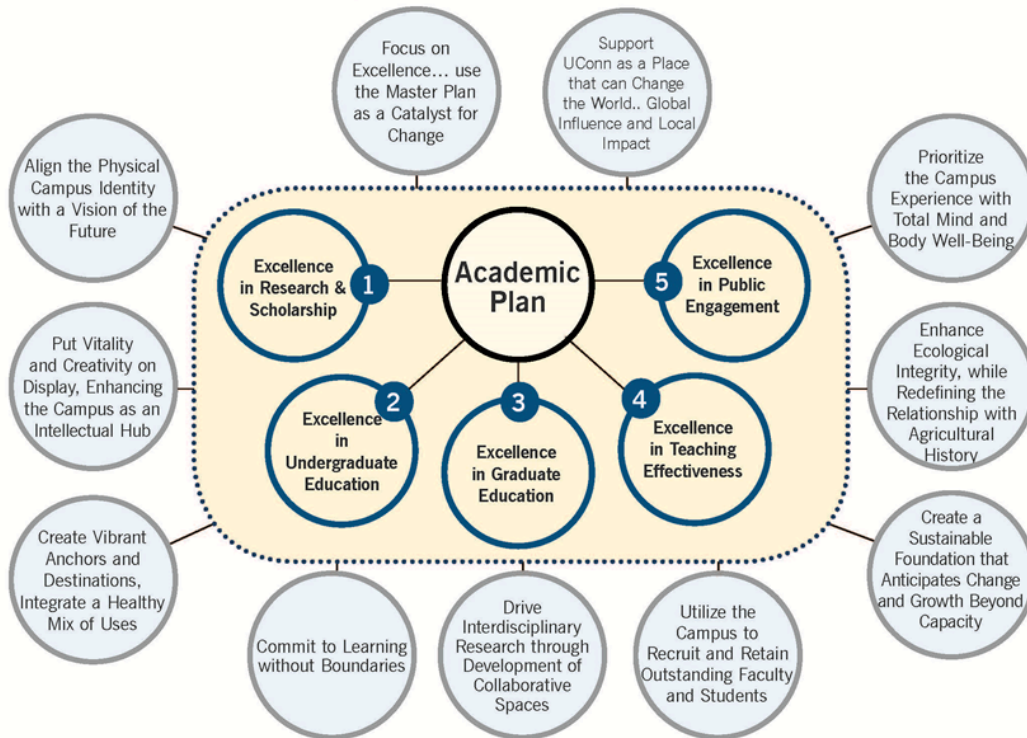
utility corridors, and landscape improvements to facilitate the future development of that part of campus. This work is incorporated in the comprehensive 2015 Master Plan for the campus.

The 2015 Master Plan reflects the impacts of the projects included in the Next Generation Connecticut program and guides the development of the Storrs campus for the twenty (20) year period between 2015 and 2035. The 2015 Master Plan documents the state of existing conditions on campus, and issues related to land use; space needs for academic, research, student life and administrative uses; recommended deferred maintenance and capital investments in the physical plant; environmental issues and sustainable design principles for future development; parking, circulation and transportation issues; and specific strategies to improve landscape quality and open spaces. The Master Plan references the programmatic ties to the Regional campuses, but does not include separate master plans for those locations.

Campus Master Plan Overview

The 2015 Campus Master Plan is a comprehensive summary of the current conditions of the campus as of 2015 and a guideline for the proposed development of the Storrs campus over the next 20 years. The first ten years of development (2015-2024) is driven by the recently adopted Academic Vision Plan and fueled by the *Next Generation Connecticut* funding program. The plan also forecasts development that may occur beyond the *Next Generation Connecticut* projects (2025-2035). This potential future development will require new funding sources and builds on the success of the first decade of growth. The total amount of development portrayed in the plan includes facilities that would be needed to grow the undergraduate student population, accommodate a substantially larger research enterprise, repair or replace obsolete facilities and meet the commitments of the Climate Action Plan for a sustainable campus.

Master Plan Principles



Implementation of the Master Plan

Future planned development will be programmed and designed to conform to the concepts and the development pattern contained in the Master Plan documents. The Master Plan will inform the design and implementation of the utility infrastructure, storm water management systems, roads and parking areas, landscape and land use, and individual projects. The urban form of the campus will take shape as envisioned in the Master Plan and will be refined by future design initiatives as specific developments are designed and built. The Master Plan will inform and guide future development decisions, but the final location, design, and programming of projects will be decided when those projects are implemented. Individual construction projects undertaken as part of this plan will, as always, be brought to the Board of Trustees for approval, along with the project budgets.

Board of Trustees Action

The Board of Trustees accepted the draft Campus Master Plan as presented at the February 25, 2015, Board meeting and directed the University Master

Planner and Chief Architect to complete the final edit of the technical appendices and prepare the Final Master Plan for publication and distribution. The Board further authorized the use of the Campus Master Plan dated February 25, 2015, as the basis of design for the formulation of future development projects for the campus. The final versions of the Master Plan and its Executive Summary, Design Guidelines and Appendices, dated May 2015, were issued and are posted on the UConn website at masterplan.uconn.edu/documents.

Capital Program Overview

Implementation of the capital plan is critical to achieving all of the goals of NextGenCT. To accommodate the additional faculty, staff and students, and to enhance UConn's STEM disciplines, a major capital investment is essential. The investment is needed to support new and renovated facilities for research and teaching labs, classrooms, academic support, residence and dining halls, parking, utilities, information technology, equipment and various infrastructure upgrades.

New STEM facilities will provide state-of-the-art research space, including multi-disciplinary laboratories, centralized core facilities and equipment. In order to foster and enable faculty collaborations across diverse disciplines in STEM, shared equipment will be purchased, such as the functional magnetic resonance imaging system (fMRI), and additive manufacturing equipment. This will also include startup equipment in support of the new faculty. Startup equipment may include advanced lasers, sensors, cell culture facilities, atomic force microscopes, polymer extruders, metals processing equipment, etc. This equipment will be critical in growing the capabilities of the faculty to compete for major research grants in emerging areas of manufacturing, materials, energy, biomedical technologies, information science and systems genomics. Additional funds will be used to accommodate growth and upgrade our information technology data center.

In conjunction with the new facilities, the University will consolidate academic programs, and create new or renovate existing academic learning environments.

The consistently high demand for on-campus housing at the University and the planned enrollment growth will require additional residence halls. A Next Generation CT residence hall is currently under construction to support the recruitment of high achieving STEM students. In addition, the University will renovate existing residential life facilities. In consultation with surrounding towns, the University will need to improve its parking, public transportation and

roadways. This includes new centralized parking, relocation of existing parking lots and various traffic improvements throughout campus.

The planned expansions will also necessitate infrastructure upgrades, such as steam line replacement, sewer system upgrades, a supplemental water supply, and various other underground utility improvements.

Status of Current Facility Projects

The University has already begun to move forward on several projects to meet the needs of additional enrollment and new faculty. These projects include the new Engineering and Science Building, the UConn Technology Park and North Hillside Road Extension (now “Discovery Drive”), a new Next Generation CT Residence Hall, the Hartford Campus relocation, and the Stamford Campus housing initiative.

Engineering and Science Building

The School of Engineering is located in several buildings, five on the main Storrs campus and four at the Depot campus. The three oldest and least renovated buildings on the main campus were built between 1959 and 1987 and can no longer support emerging interdisciplinary engineering programs such as bioengineering and nanotechnology. A planning study identified program components for a new Engineering & Science building that will be a state-of-the-art laboratory for trans-disciplinary research in Bio-Nano Engineering, Cyber-Physical System Engineering, Chemical Engineering and other Sciences that will catalyze research advances in convergence technologies.

A new five story Engineering and Science building will be located at the site of the Old Central Warehouse with 3 floors of Engineering and 2 floors of Life Sciences including the Institute for Systems Genomics. Construction began in June 2015 and is anticipated to be complete in spring 2017.

Technology Quadrant Phase III

Public Act 14-98 provides funding in the amount of \$169.5 million for the UConn Technology Park project and allows this project to be managed through the authority of the UCONN 2000 Program. This project provides for the development of the first building in a technology park located along the North Hillside Road Extension. The initial facility will consist of an 113,000 square foot Innovation Partnership Building that will house world class equipment and offer

shared laboratories for use by industry scientists and business entrepreneurs as they work side-by-side with the University's researchers.

Construction began in July 2015 and the initial building will be completed in early 2017 with specialty labs complete in late 2017.

North Hillside Road Completion

This project provides for the extension of North Hillside Road by 5,300 linear feet to Route 44. The project also provides for related utilities including gas, electrical, water, sewer and telecommunications under the new extension. The project will enhance access to the Storrs campus directly from Route 44 and provide relief from traffic congestion on Route 195. Additionally, both the road and accompanying utilities will permit future development of the North Campus which is envisioned as the primary area of expansion for the main campus, permitting new University buildings, residential capacity, and public/private partnerships. The Town of Mansfield is supportive of the road project. UCONN 2000 funds were augmented by \$5.8 million in Federal funds granted to the University for this project; as well as funds provided for the University's new Technology Park. Construction began in July of 2014 and the road opened to traffic in December 2015. Final landscaping will be completed in the spring of 2016.

Residential Life Facilities

The new design/build Next Generation CT residence hall is presently under construction with the entire structure complete and exterior masonry and windows being installed. The Next Generation CT residence hall is located in the Hilltop Residential area and will have a living/learning community, as well as approximately 730 beds. It is scheduled to be complete by August 2016.

Regional Campuses

Relocating the Greater Hartford Campus to downtown Hartford will provide enhanced service learning and internship opportunities for undergraduate and graduate education programs; expand economic activity through increased interaction with local businesses; and consolidate undergraduate programs, Department of Public Policy, School of Social Work and School of Business into one downtown location. Design of the new UConn Hartford campus is finalized and site construction began in the summer of 2015. The new campus will include classrooms, a 75 seat lecture hall, labs, faculty offices, tutoring centers, conference rooms, study rooms, break-out rooms, a café and staff offices. The University is evaluating strategic partnerships with the neighboring institutions

and businesses in order to avoid over-building and will use underutilized existing space in the market to supplement its new building. The University purchased a 32,000 square foot building at 38 Prospect Street and is finalizing an operating and shared use agreement with the Hartford Public Library as other campus components. The result will be a neighborhood campus that helps to revitalize downtown Hartford. The project is scheduled for completion in the fall of 2017.

Since the Stamford Downtown Campus was constructed, additional students have been attracted by the new downtown facility and the establishment of degree programs. This student growth, combined with NextGenCT's planned academic expansions, has raised the need for residential housing in Stamford. In response to a public solicitation, the University is in the process of evaluating proposals to provide residential housing for students at or near the UConn Stamford campus. The current goal is to commence construction by the end of 2016 and have housing available to students by, or before, the Fall 2018 semester.

The Avery Point Campus includes dilapidated facilities, formerly known as the Coast Guard Research & Development Building Barracks and Mess Hall, located at the center of the campus. Built in the 1930s, they are approximately 460,000 gross square feet, rarely used since 1970 and unoccupied since 2006. It was the recommendation of the engineers and campus administrators that the utilities be relocated and the buildings demolished. The first phase of demolition took place in summer 2014 and relocation of utilities was completed in the summer 2015.

Future Projects at various stages in the planning process:

Academic and Research Facilities

New STEM facilities will provide state-of-the-art research space, including multi-disciplinary laboratories, centralized core facilities and equipment, to accommodate a growing number of research faculty and the increasing student enrollments in these disciplines. Expansion of research space is necessary to enable the University to recruit outstanding faculty and develop emerging interdisciplinary research collaborations.

The Gant Building complex, which includes the Institute of Materials Science, Physics and Math buildings, was completed in the early 1970s. The complex has a total of 238,000 gross square feet of space with offices, research labs, classrooms and computer facilities. A major renovation or replacement of the

space is required to address the physical deterioration, to update the research and teaching facilities and to meet current program requirements.

Construction commenced in October 2015 on the 68,000 square foot Henry R. Monteith Building and adjacent Schenker Lecture Hall. These spaces, initially planned as “swing space” have been reprogrammed as a new home for the Math Department which will vacate a wing of the Gant complex.

The Torrey Life Sciences Building was constructed in 1961. The six level facility has 148,000 gross square feet of research labs, teaching labs, offices and classrooms. The primary occupant of the building is the Biology Department. This building is in poor condition, probably not susceptible to cost-effective renovation, and therefore likely to be demolished. Until that can occur, some repairs will be needed.

Final plans for science facilities, including whether to renovate or demolish and construct new buildings with respect to Gant and Torrey are currently under development.

Infrastructure Improvements

The University completed an expansion to the existing heating plant when a new Cogeneration system was completed in 2006. The University will need additional chilled water, emergency power for life safety as well as emergency power for business continuity purposes to accommodate new growth. The project to install additional chilled water capacity is in construction. Also, the University needs to address utility issues in the expanding North end of campus.

Other active infrastructure projects include the replacement of the main water line from the Willimantic well fields to Storrs and sewage treatment plant repairs. Future infrastructure projects include steam infrastructure in the central campus and below campus roads, and electrical substation and capacity improvements. Also, a new Main Accumulation Area for short-term storage of regulated wastes from academic labs and support operations, and new academic and research facilities will be needed. An environmental assessment for the new water supply was completed and approved by OPM in September 2013. The new water supply will be an interconnection between the UConn system and the Connecticut Water Company (CWC). The University and CWC finalized a contractual agreement in December 2013. A final permit was published by DEEP in June 2015.

Construction is underway, with estimated completion no later than the end of 2016.

The University will utilize the final Campus Master Plan to confirm planning assumptions for projects that have already begun and to develop assumptions for the new projects. The Campus Master Plan implementation will be divided into two sections, 2014-2024, which coincides with NextGenCT funding, and 2024-2034. The concurrent identification of project sites for both decades will facilitate adherence to the principles of the Campus Master Plan and the thoughtful integration of the infrastructure systems that support the projects. The Campus Master Plan will document the vision and implementation strategies for UConn's physical plant development as a premier research university and economic driver for the State.

Conclusion

Next Generation Connecticut is a bold state initiative that seeks to fuel the State's economic development, advance public higher education and strengthen UConn's research portfolio and capabilities through STEM research and academic initiatives. This comprehensive plan incorporates the critical elements of the University's recently approved Academic Plan, the key findings from the Battelle report, current faculty and student recruitment efforts, Bioscience Connecticut and The Jackson Laboratory for Genomic Medicine, the University's Capital Plan and the UConn Tech Park. With input and guidance from the Industry Advisory Committee, this document provides a blueprint for the NextGenCT strategic investments that will enhance UConn's commitment to increase sustainable, high quality jobs in Connecticut; support and grow existing state companies; provide quality STEM graduates; and leverage ongoing state economic development initiatives. Taken together, implementation of this plan will establish the University as one of the top public research institutions, stimulating Connecticut's economy with new technologies, supplying the workforce with highly-skilled graduates, and fostering the creation of new companies, patents, licenses, and high-wage jobs.