

FRAMEWORK FOR A SUSTAINABLE FUTURE



**SUNY POLYTECHNIC
INSTITUTE**



In the Executive Summary of the *Framework for a Sustainable Future*, the faculty, staff, and students, as well as the Interim President and senior leadership team of SUNY Polytechnic Institute, describe the institution, its vision and core values, and present a framework for a sustainable future.

SUNY Polytechnic Institute

In 2014, the State University of New York (SUNY) established SUNY Polytechnic Institute (SUNY Poly) through the merger of the SUNY College of Nanoscale Science and Engineering (CNSE) and SUNY Institute of Technology (SUNY IT). SUNY Poly has more than 3,000 students, a 13.6:1 student to faculty ratio, and a cumulative economic impact of more than \$15 billion in research and development investments over the last two decades. SUNY Poly is at the center of a dynamic educational and research-focused ecosystem in upstate New York. It provides students with a high-quality learning experience and offers students, faculty, and staff a fertile ground to innovate and collaborate. It is noteworthy that SUNY Poly has seen increased enrollment since its inception, which is contrary to the national trend for higher education institutions.

Call for a Sustainable Future

As Chancellor Kristina M. Johnson stated during the May 2018 Town Hall meeting at SUNY Poly's Utica campus, it is critical for us to formulate a framework to start a new chapter for SUNY Poly as an academic institution—focusing on innovative academic and research programs and empowering an inclusive and supportive campus with outstanding and diverse faculty, staff, and students, while striving to achieve a financially viable and sustainable future.

Framework Goals:

1. Establish a common vision for SUNY Poly: Our common vision will be the foundation of our institutional culture, and it will help set an overall direction for SUNY Poly in the decades to come.
2. Lay the groundwork for the future: As we look into the future, it is important to lay the groundwork for much-needed infrastructure by understanding key challenges facing SUNY Poly; identifying near-term opportunities to address these challenges; and making key, long-term recommendations in preparation of the search and onboarding of a permanent president.

Framework Process

To initiate the Framework processes, Interim President Grace Wang held numerous meetings with colleagues in groups, including SUNY Poly's faculty, shared governance, student government leaders, students, staff, members of the President's cabinet, and community and business leaders. These discussions were candid and constructive, and resulted in the enunciation of a set of challenges and opportunities. Accordingly, 11 committees were formed in three areas: Innovative Academic Programs and Research; People and Culture; and Ways and Means. The committee structure is shown in Figure 1.



Collectively with shared governance, faculty, students, and staff, the committees presented SUNY Poly’s vision, core values, key challenges, and recommendations.



Figure 1. Committee Structure of the Framework for a Sustainable Future.

Vision

“The vision of SUNY Polytechnic Institute is to provide high-quality experiential learning for our students, empower faculty, students, and staff to conduct impactful, leading-edge research, scholarship, and innovation, and engage private and public sector partners to answer 21st century technological and workforce challenges in a financially sustainable and inclusive manner.”

Core Values

- Academic excellence
- Use of knowledge and technologies to benefit the society
- Just-in-time and life-long learning
- Community engagement
- Integrity
- Diversity, inclusion, and transparency

Key Challenges

- **Distance:** SUNY Poly’s Albany and Utica campuses are 90 miles away from each other, which can significantly limit potential synergies in academic offerings as well as the leveraging of economies of scale to improve institutional cost efficiency.
- **Infrastructure:** Much-needed campus infrastructure covering both sites needs to be established to improve academic research support, strategic enrollment efforts, student



retention and success, and to address the issues of having no current capital facility plan in place for the Albany campus, in addition to a lack of a robust institutional budget and financial management plan.

- ***New Identity:*** SUNY Poly needs to establish a new identity. Leadership transitions in recent years, organizational restructuring, and the merger in 2014 all call for a clear vision of SUNY Poly and a cohesive, long-term effort to establish the new identity of the institution.

Key Recommendations

- ***Enhance academic strengths and excellence:*** The Framework committees recommended SUNY Poly continue to enhance academic strengths and excellence and thus increase enrollment through (1) building innovative degree programs, such as the “Bridge to Nano” program, the DNP (Doctor of Nursing Practice), and BS/MS dual-degree program for Engineering; (2) implementing data-driven student success; and (3) expanding graduate degree programs, both online and in-classroom. Many of these degree programs are directly linked to preparing the workforce of the future for existing and new industrial and health-related opportunities.
- ***Establish academic and research support infrastructure:*** The Framework committees recommended establishing infrastructure to assist faculty in pursuing external research funding, streamlining support of shared R&D facilities, clarifying technology transfer processes, and providing research compliance training. The committees also recommended building research infrastructure at the Utica campus. SUNY Poly has already launched a capital facilities planning process for both campuses, which is critical for strategic, long-term growth of the Institution.
- ***Enable and leverage partnerships:*** The future growth of SUNY Poly requires educational partnerships with community colleges, key industry partners, other SUNY campuses, and non-SUNY institutions to provide seamless transfer, experiential learning, and flexibility for our students to thrive in an Artificial Intelligence (AI)-driven, on-demand, and distributed labor landscape.
- ***Empower people and cultivate diversity and inclusion:*** The committee recommended empowering the SUNY Poly community by ensuring open and transparent communication; cultivating an inclusive and welcoming environment via diversity awareness training to students, faculty, and staff; and seeking constructive input to address critical issues collectively.



- **Engage regional communities and rebuild a supporting network:** The committee recommended that we engage the external communities to meet regional workforce needs; connect with alumni as well as existing and potential donors to revitalize philanthropic support; and enhance SUNY Poly's reputation in the Mohawk Valley and Capital regions, and across New York State.

Highlight of Recent Activities to Address Key Recommendations

- **Enhance academic strengths and excellence**
 - **Accreditation:** The College of Business Management team completed AACSB accreditation and the Mechanical Engineering and Nanoscale Engineering programs earned ABET accreditation.
 - **New Health Program:** The College of Health Sciences launched an MS of Transformational Leadership in Nursing program.
 - **Individualized Undergraduate Programs:** SUNY Poly will initiate offering an increasingly individualized undergraduate student experience.
 - **Ranking:** In 2019, SUNY Poly ranked among the top 10 U.S. institutions for an online Master's degree in Accounting. The online Master of Business Administration (MBA) at SUNY Poly has ranked eighth in *Online MBA Today's* list of Top Online MBA Programs in New York.
 - **Research:** SUNY Poly faculty members continue to conduct life-changing research and attract external research funding. Numerous research articles published in top journals highlight peer acceptance of research excellence. Examples of the journals range from *Physical Review B* to the *Journal of Micro/Nanolithography, MEMS, and MOEMS*.
- **Establish academic and research support infrastructure**
 - **Research Support:** An Office of Research Advancement and Graduate Studies was established to support and stimulate faculty research activities. Supported by Chancellor Johnson, the Office provided the first round of seed funding to nearly 50 faculty members at both campuses, enabling faculty researchers to pursue more external funding.
 - **Student Code of Conduct:** The College Council approved an updated Student Code of Conduct to provide enhanced clarity.
 - **New Utica Residence Hall:** SUNY Poly broke the ground in May 2019 to build a new, net-zero carbon-certified residence hall at its Utica campus, which will help meet the housing needs of a growing residential student population.
 - **New Albany Site Dorm and Food Services:** SUNY Poly's Albany site now offers a more comprehensive student experience through a partnership with the University at Albany (UAlbany). Starting Fall 2019, SUNY Poly Albany campus students have been utilizing UAlbany's Freedom Apartments and extensive dining services.



- *Food Pantry*: SUNY Poly established a food pantry through support from the Dominion Energy Charitable Foundation, the Wal-Mart Foundation, and Sodexo, as well as faculty, staff, and students to address food insecurity within the SUNY Poly community. Since January 2019, the Poly Food Pantry has provided nearly 100 students, faculty, and staff with 3,775 pounds of food and 1,281 pounds of toiletries.
- ***Enable and leverage partnerships***
 - *“Path to Poly”*: An articulation agreement with Mohawk Valley Community College simplifies the transfer process for students to earn their degrees at SUNY Poly. Similar programs were announced with Herkimer County Community College and Schenectady County Community College.
 - *Pathway to Medical School*: Additionally, under a new agreement, high school seniors interested in pursuing a doctoral medical degree at SUNY Upstate Medical University (SUNY UMU) after earning a baccalaureate diploma at SUNY Poly may now simultaneously be accepted to both as part of UMU’s Accelerated Scholars Program (ASP).
 - *New Interdisciplinary Program*: SUNY Poly, Albany Law School, and the Research Foundation for SUNY launched an innovative experiential learning program through which students from Albany Law and SUNY Poly will work in interdisciplinary teams to advance technology-focused projects.
 - *Workforce Development Partnerships*: SUNY Poly partnered with Rome Memorial Hospital to offer their nurses learning opportunities to meet new educational standards; and with GLOBALFOUNDRIES to provide enhanced undergraduate and graduate career advancement opportunities for their employees.
 - *Industrial Partners*: IBM, a long-time partner on the Albany campus, plans to invest over \$2 billion to build an AI Hardware Center. Applied Materials, Inc., plans to invest \$600 million to establish the Materials Engineering Technology Accelerator (META Center) at the Albany campus for leading-edge materials and devices R&D.
 - *Governmental Partnership*: SUNY Poly has reinvigorated relationships with key Mohawk Valley-based partners, such as the Air Force Research Laboratory—Information Directorate, to catalyze education and research initiatives, including AI and quantum information science and engineering, and enable exciting research and career opportunities for SUNY Poly’s students and faculty.
- ***Empower people and cultivate diversity and inclusion***
 - *Senior Leadership*: SUNY Poly realigned the senior leadership team to provide clarity and focus for each unit while enabling senior leaders to advance SUNY Poly’s mission. The Administration developed respective SUNY Poly webpages to clarify roles and responsibilities of each senior leader for the SUNY Poly community.
 - *Empowering Women*: Recognizing the importance of empowering female students, faculty, and staff at SUNY Poly, the institution has hosted multiple events to celebrate women and provide mentoring opportunities. This includes the “Women Who Mean



Business” speed-networking events that provide mentoring and networking opportunities to female students; and the “Women Who Inspire” event, which provides a fireside-chat style conversation to celebrate women who inspired us. SUNY Poly’s Albany campus hosted “SUNY Poly CNSE Women's Lunch” to provide networking opportunities among SUNY Poly’s female students, faculty, and engineers from on-site partners.

- *Celebrating Diversity*: In February 2019, SUNY Poly’s Utica campus hosted “The Black Museum: An Exhibition of Black Excellence” at the Student Center where students, faculty, and staff gained a powerful perspective on the STEM successes that many in the black community have achieved.
- ***Engage regional communities and rebuild a supporting network***
 - *FIRST Robotics Competition*: In March 2019, SUNY Poly hosted the FIRST Robotics Competition, attracting more than 3,000 students and their families to Utica over 3 days.
 - *Community Outreach*: SUNY Poly hosted a Mini Maker Faire, drone-racing tournaments, and a Manufacturing Day Expo to increase SUNY Poly’s community outreach.
 - *Specific Community Engagement*: SUNY Poly has actively engaged community stakeholders throughout the year. Interim President Grace Wang presented SUNY Poly’s progress at the Mohawk Valley EDGE Board of Directors meeting, Women’s Fund of Central New York’s board meeting, and the Leading EDGE Award Ceremony, among other events.

Committees’ Recommendations of Near-term and Long-term Actions

- ***Enhance academic strengths and excellence***
 - *“Bridge to Nano” Program*: Establish the “Bridge to Nano” program to leverage the strengths of both the Utica and Albany campuses. The Program offers the first two years of undergraduate education at SUNY Poly’s Utica campus to leverage its vibrant campus life and variety of course offerings; then the students move to the Albany campus to finish their third and fourth year undergraduate education where they will gain unique, hands-on research and internship experience.
 - *Graduate Programs in Engineering*: Develop graduate courses in Civil, Electrical, Computer, and Mechanical Engineering with the plan of developing full program proposals for Master’s degrees in at least Mechanical Engineering during the 2019-20 academic year.
 - *Innovative Health Sciences Programs*: Grow health sciences programs including a Doctor of Nursing Practice (DNP) in Psychiatric Mental Health and Master of Science in Health Informatics.
 - *Advancing Research Culture*: Establish a sustained mechanism of seed funding to catalyze more faculty research activities. Expand opportunities for graduate students to contribute



- to research. Nurture a culture of research with undergraduate students at the Utica campus.
- *Carnegie Designation as a Doctoral Institution*: SUNY Poly needs to award at least 20 Ph.D. degrees per year in order to acquire the designation. In order to continue to perform and to enhance its status amongst other research-intensive institutions, it is critical for SUNY Poly to work toward this designation.
 - ***Establish academic and research support infrastructure***
 - *Websites*: Restructure SUNY Poly's website to facilitate easy search and navigation for current and prospective students, faculty, and staff. Enhance website content and enable timely updates by creating a user-friendly process for faculty and staff to submit web updates.
 - *Data-driven Solutions*: Use data to further understand and improve student enrollment, retention, and completion.
 - *Research Support Infrastructure*: Invest in research infrastructure at both SUNY Poly's Albany and Utica campuses, including laboratory equipment, software, and other resources. Streamline research compliance to better support faculty. Establish processes for Tech Transfer and patent disclosure and filing. Share funding opportunities (including industry) on a regular basis. Publicize and promote SUNY Poly's research advances and news.
 - *Capital Facility Plans*: The Utica campus Capital Facility Plan for the next decade was launched by SUNY's Construction Fund via a contract with a consulting firm. The consulting firm has collected input from faculty, students, staff, and the leadership team and will provide a Capital Facility Plan for the Utica Campus by spring 2020. The Albany campus Capital Facility Plan has yet to be created. In June 2019, the SUNY Construction Fund engaged a consulting firm and kicked off the capital planning process for SUNY Poly's Albany campus, and this Capital Plan is expected to be complete in fall 2020.
 - ***Enable and leverage partnerships***
 - *Workforce Development Partnership*: SUNY Poly's graduate academic programs can address significant workforce needs, including knowledge, technical skills, and competencies for many industry partners. This includes companies that are active in the emerging manufacturing economy in New York State; companies whose interests are aligned with the foci of the Air Force Research Laboratory and the businesses in the Mohawk Valley region such as the Griffiss Business Park; and companies and institutions requiring experts and practitioners in healthcare, data analytics, accounting and financial services.
 - *Building Partnerships*: Develop a one-stop shop for coordinated industry engagement that would include intake for academic programming, research initiatives, and philanthropic



funding, etc. Establish a proposal development team to seek and respond to joint university-industry collaborations.

- ***Empower people and cultivate diversity and inclusion***
 - ***Diversity Leadership:*** Establish the role of the Chief Diversity Officer as a full-time senior position that reports directly to the President.
 - ***Diversity and Inclusion Initiatives:*** Incorporate diversity awareness training into a mandatory orientation for first-year students, led by trained staff. Offer annual skills, knowledge, and awareness training to faculty and staff, led by an experienced facilitator. Continue to promote targeted recruitment of diverse faculty and staff.
 - ***ADA Accessibility:*** Work towards ADA (Americans with Disabilities Act) Accessibility including evaluation of accessibility and maintenance of walkways, etc.
 - ***Open and Transparent Communication:*** A “Solutions Box” platform has been designed to allow SUNY Poly faculty, staff, and students to make solutions-driven recommendations. These boxes are available on both campuses, as well as online, and can be completed anonymously. SUNY Poly’s senior leadership team should offer open, transparent discussion of recommended solutions on a regular basis. SUNY Poly’s senior leadership team should also provide the modest resources necessary to administer a survey of employees to understand what is working well and what can be improved upon, on an annual basis.

- ***Engage regional communities and rebuild a supporting network***
 - ***Community Engagement:*** Develop new social media tools and engagement strategies for effective engagement of students, faculty, and staff. Actively engage the local community.
 - ***Budget Advocacy:*** Continue to cultivate new relationships and partnerships to further support university efforts. Continue to advocate for facility capital and the new residential facility.
 - ***Fundraising:*** Develop the network and raise funding for endowed faculty positions, scholarships, and naming opportunities.
 - ***Advancement Support:*** In order to meet the long-term needs of philanthropic efforts, the SUNY Poly Foundation will require additional staff and resources to build the capacity for sizable fundraising campaigns in the future.

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