

WPI's Sustainability Plan - 2020-2025

Overview

Introduction: The needs and challenges in sustainability are greater than ever before. As a premier technological institution, WPI is committed to taking on a leading role in meeting these global sustainability challenges. The new Sustainability Plan will serve as a guide over the next five years to help us realize this role. This plan includes guiding principles, the vision, the broader sustainability ecosystem, and goals, objectives, and tasks that support and advance our vision and sustainability ecosystem. This overview provides a brief summary of the key aspects of the new Sustainability Plan.

Vision: WPI embraces a culture of sustainability that extends from the WPI campus and reaches across the globe, building on our project-based curriculum and unique blend of theory and practice to advance innovative solutions that support all three broad goals of sustainability: environmental stewardship, economic security, and social justice. We advance this culture of sustainability by embracing our campus as a living and learning laboratory, developing our local and regional community as a sustainability innovation hub, and engaging with our partners worldwide to address global sustainability challenges throughout the WPI Community.

WPI's Sustainability Ecosystem: WPI's Sustainability Ecosystem represents a multi-disciplinary framework that is aligned to meet local, regional, and global challenges in sustainability. More specifically, our ecosystem includes three primary initiatives:

(1) **Developing our campus as a living and learning laboratory** to engage our community and advance sustainability within our campus

(2) **Establishing WPI as a hub for innovation in sustainability** to extend our efforts beyond our campus to advance sustainability in the local community and region

(3) **Reaching out beyond our campus (locally, regionally, and globally)** to advance global sustainability and develop academic initiatives that impact communities worldwide.

These complementary initiatives allow for advances in sustainability that can provide beneficial impact both locally and globally.



Promoting a Culture of Sustainability: The Sustainability Plan provides the guidance for the values, actions, and endeavours for our sustainability ecosystem. Sustainability at WPI is founded on the three pillars of sustainability—environmental stewardship, economic security, and social justice. These three aspects will guide our actions as the plan is implemented over the five-year period. Our intent is to promote literacy, engagement, and responsibility in sustainability throughout our entire WPI community. This culture of sustainability will support our efforts to advance sustainability locally, regionally and globally.

Alignment with WPI Programs and Initiatives: The Sustainability Ecosystem represents a framework that illustrates how we direct our efforts and initiatives from within our campus (our campus laboratory) outward across the regions and the globe (our global laboratory). Our various departments, programs, and offices provide a foundation for this ecosystem. Our cross-disciplinary approaches, advanced through broader, systems approaches (e.g., the circular economy; the life cycle analysis; and the triple bottom line), provide us with a unique perspective for addressing complex global sustainability challenges. The key features of these various initiatives are advanced with consideration to our goals, objectives, and tasks in four areas: academics and curricula, research and scholarship, facilities and operations, and community engagement.

Sustainability Goals and Objectives

The Sustainability Plan includes a set of goals, objectives, and tasks in four areas: Academic Programs; Operations and Facilities; Research, Scholarship and Innovation; and Community Engagement. The goals and broad objectives for these areas consider all aspects of sustainability – environmental stewardship, economic security, and social justice – and support WPI’s sustainability ecosystem. Through the various objectives and tasks, we will work to address various sustainable development goals and global challenges, such as those shown in the figure below. The objectives and tasks are summarized below and are detailed in the full plan, which can be found at <http://www.wpi.edu/+Sustainability>.

ACADEMIC PROGRAMS: Our graduates will leave campus with the mind-set and abilities to develop sustainable solutions to the world’s problems.

A1: EDUCATION AND LEARNING FOR SUSTAINABILITY – MAJOR AND A MISSION: WPI students have the awareness, ability, and motivation to integrate sustainability into their academic programs, courses, and projects—including the major and a mission.

A2: SUSTAINABILITY IMPACT – FROM LOCAL TO GLOBAL REACH: Through our academic programs, students advance all aspects of sustainability in a way that will have true meaningful, positive impact on communities beyond the WPI campus—with local to global reach.

OPERATIONS AND FACILITIES: The principles of sustainability guide our operations as well as our academic and research programs.

O1: PRESERVING OUR RESOURCES - CREATIVE WAYS TO ACHIEVE SUSTAINABILITY - WPI reduces environmental impacts by reducing waste and the use of energy, water, and other resources, and by considering creative ideas to incentivize and promote efficiency and resource reduction.

O2: A SUSTAINABLE LIFESTYLE – A WELCOMING AND HEALTHY CAMPUS – WPI operations and facilities support the promotion of a healthy campus environment by assuring a safe, welcoming campus that promotes diversity, equity, and inclusion and by providing sustainable alternatives (e.g., transportation, dining, and food source options.)

RESEARCH, SCHOLARSHIP, AND INNOVATION: We will make significant contributions to the technologies, policies, and mind-set to help assure a sustainable world.

R1: INNOVATING GREEN—SUSTAINABILITY RESEARCH AND SCHOLARSHIP: Through research innovation and creativity, WPI’s research and scholarship provides valuable contributions in sustainability that encompass and integrate a range of disciplines.

R2: SYSTEMS FOR SUSTAINABILITY – CROSS DISCIPLINARY APPROACHES: By incorporating cooperative systems approaches (e.g., Circular economy, life cycle analysis, and development engineering), WPI’s research and scholarship provides leadership in sustainability.

COMMUNITY ENGAGEMENT: Every member of the WPI community will engage in sustainability related education, awareness, action, and service, in order to achieve positive, long-lasting change for all our communities.

C1: A CULTURE OF SUSTAINABILITY: WPI fosters a “culture of sustainability” in which the WPI community engages in activities that embrace and advance sustainability, and in which WPI recognizes and communicates sustainability impacts across all organizational, community, and academic activities.

C2: MEETING COMMUNITY NEEDS BEYOND WPI: — WPI engages with communities beyond the WPI campus to meet their sustainability needs, through effective dissemination, project engagement, partnering, and initiatives (e.g., STEM, PBL).

