



**WPI**

# WPI Sustainability Plan

**Committing to  
Ecological Stewardship,  
Social Justice,  
and Economic Security**

[wpi.edu/+sustainability](http://wpi.edu/+sustainability)

# Sustainability

*On the cover:*

WPI's Sports & Recreation Center

LEED Gold Certification



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## MESSAGE FROM THE PRESIDENT



I am proud to share the WPI Sustainability Plan with you. This plan represents the culmination of almost two years of work by a dedicated group of faculty, staff, and students from across WPI, who saw the need to organize our many diverse efforts into an ambitious strategic plan. On behalf of the WPI administration I am very pleased to endorse this plan and to support its full implementation. WPI's commitment to the three principles of sustainability—ecological stewardship, social justice, and economic security—has been implicit in the WPI Plan for undergraduate education for over 40 years, and we are now making an explicit commitment across all that we do in our teaching, research, and campus operations.

Every part of WPI has an important role to play in bringing this plan to fruition. With respect to academics and research, technology is certainly critical, but so are the disciplines of the social sciences, public policy, economics, history, and philosophy. The wise use of electricity, fuel, and water in campus operations is fundamental, but so are the behaviors of every member of the WPI community.



The achievement of sustainability must begin locally, but ultimate success requires a global vision. To that end, we pledge to engage with all of our communities: on campus, in Worcester, across the United States, and around the globe. Our Global Perspective Program is already deeply engaged in these activities, from the Worcester Project Center to our centers in Asia, Africa, and Latin America.

The role of the university is to simultaneously advance knowledge regarding our world while educating the future leaders of that world. Implicit in this role is the concept of sustainability. Now, more than any time in the past, it is uniquely the university that remembers and understands the past, comprehends the present, and looks to the long-term future of local and global society, and of the whole planet. We at WPI embrace this mission; our graduates are a testament to our success in meeting it.

Please join me in putting this plan into action. Its vision is inspiring, its goals are ambitious but attainable. Achievement of success requires that we all take part. Current activities and status are reported at [wpi.edu/+sustainability](http://wpi.edu/+sustainability).

Philip B. Ryan '65  
Interim President



## VISION AND GUIDING PRINCIPLES



### **Vision**

We at WPI will demonstrate our commitment to the preservation of the planet and all its life through the incorporation of the principles of sustainability throughout the institution. We will accomplish this goal by promoting a culture of sustainability that incorporates the beliefs and behaviors supported by our technical strengths and by our heritage of the application of both theory and practice, as embodied in our motto, *Lehr und Kunst*, to the solution of important problems. WPI will develop a bold and comprehensive strategy to advance the three broad goals of sustainability: ecological stewardship, social justice, and economic security.



## Guiding Principles

As our Vision makes clear, sustainability at WPI encompasses three mutually complementary components. While different interpretations of the three aspects of sustainability have been advocated, within the context of WPI, these principles have the following meanings:

**Ecological Stewardship** embodies the principle that human activities must respect the need to preserve our natural world.

**Economic Security** represents the understanding that all members of society deserve access to the means to support themselves and their families.

**Social Justice** represents our belief that respect for the dignity of every human being leads to the assurance of equitable rights and opportunities for everyone.

These three aspects will guide our actions in all of the following as the plan is implemented:

- Student learning, research, and scholarship
- The promotion of literacy and responsibility in sustainability throughout the entire WPI community
- Institutional strategic and master planning
- The design, evaluation, prioritization, materials selection, and ongoing maintenance of building and landscaping projects
- The utilization and scheduling of campus space
- WPI's investments
- Campus-related purchases, including transportation and the procurement of food, vehicles, appliances, equipment, cleaning, and office supplies
- The publication and communication of WPI's efforts and achievements regarding sustainability
- Cooperative work with institutions and governments to advance sustainability in the Worcester community and beyond



**In support of the Vision, this plan identifies four broad goals. Each of these goals demonstrates a comprehensive approach to sustainability at WPI that addresses teaching, research, campus operations, and the broader community. Each of the goals is supported by the specific tasks and objectives, as illustrated in the following section.**

## GOAL 1: ACADEMICS

**WPI's graduates will leave campus with the understanding and abilities to develop sustainable solutions to the world's problems. All WPI students, undergraduate and graduate, will have the opportunity to incorporate and critically evaluate significant aspects of sustainability in their education.**

Academics at WPI include a wide range of undergraduate and graduate programs, courses, and project activities that address all three principles of sustainability; more than 90 courses address one or more aspects of sustainability. Sustainability-related opportunities range from the Great Problems Seminars (GPS) for first year students, the Major Qualifying Project (MQP) for upper-level students, and thesis work for graduate students. In AY 2011-12 alone, WPI students and faculty advisors completed over 100 sustainability-related projects. However, there still is a need to ensure that each student has the opportunity to include sustainability in his or her education. It is important to ensure that every student will leave campus with the understanding and abilities to develop sustainable solutions to the world's problems.

## GOAL 1 OBJECTIVES AND TASKS

In order to guide progress toward this goal, a number of objectives and tasks were developed and are included in the following table. Where applicable, the baseline year for each of the following objectives and tasks is fiscal year 2013 (FY13). The objectives for academics involve documenting and tracking the level of sustainability throughout WPI's programs, developing a continuing system to ensure that sustainability is included in every student's program, and enhancing the visibility of sustainability so that it continues to be integrated throughout WPI's programs.





Objective/Task	Measures for Progress	Target Begin/Complete <sup>1</sup>	Responsible Parties
<b>Objective:</b> Increased visibility and financial support for the global project centers	* Amount of funds (\$) received for global project centers * Monitoring of project centers' press and awards	FY14/ongoing	IGSD
<b>Objective:</b> Achieving social justice and meet basic human needs in sustainable global development through integration with academic programs	* Number of courses, projects, and research activities that address social justice and human needs	FY15/ongoing	Sustainability Studies program, Humanities/Arts Dept.
<b>Objective:</b> The role of sustainability is explicit in WPI's Statement of Values for Undergraduate Education and Learning Outcomes	* Role of sustainability explicit	FY14/FY15	Director of Sustainability, Undergraduate Studies, WPI Task Force on Sustainability
<b>Task:</b> Track the activities that address social justice and basic human needs in sustainable global development	* Number of courses, projects, and research activities with a component of human issues	FY15/ongoing	Sustainability Studies program, Humanities/Arts Dept.
<b>Task:</b> Track and coordinate sustainability content of IQPs, MQPs, GPS, and Humanities and Arts requirements	* Current and past data available on sustainability content	FY14/FY15 ongoing	Director of Sustainability, Undergraduate Studies, IGSD
<b>Task:</b> Formalize and highlight the significance of sustainability issues in the Great Problems Seminars, with consideration to the completion of the GPS by all students	* Evaluation of the status of GPS as a project to focus on sustainability issues * Marketing campaign to publicize sustainability and GPS established	FY14/ongoing	Associate Dean for the First Year
<b>Task:</b> Define the role of sustainability in the disciplines for all undergraduate and graduate academic majors	* Role of sustainability defined	FY14/FY15 ongoing	Director of Sustainability, department heads, program directors
<b>Task:</b> Assist students in incorporating sustainability into their majors	* Advising staff trained to advise on sustainability	FY14/FY15 ongoing	Academic Advising
<b>Task:</b> Create a major energy project center with substantial external collaborators	* Major energy project center established * Number of external collaborators	FY14	Director of the major energy project center, Director of Sustainability
<b>Task:</b> Establish a project center dedicated to supporting student projects that address on-campus sustainability	* Project center established * Number of student projects that address on-campus sustainability	FY14	Director of the project center, Director of Sustainability
<b>Task:</b> Define and document the sustainability component of each student's education	* Definition developed * Current and past data available on sustainability in students' education	FY14/FY15 ongoing	Director of Sustainability
<b>Task:</b> Track and report faculty expertise and interests in sustainability	* Tracking mechanism established * Current and past data available on faculty expertise and interests in sustainability	FY14/FY15 ongoing	Director of Sustainability, Office of the Provost

<sup>1</sup>FY refers to the fiscal year. For example, FY14 refers to the fiscal year beginning July 1, 2013, and ending June 30, 2014, and encompasses the academic year.

## GOAL 2: CAMPUS OPERATIONS

The operation of WPI's campus and facilities will demonstrate that the principles of sustainability guide our actions as well as our academic and research programs.

Currently WPI applies the principles of sustainability to its 90+ acres and over 2 million square feet of building space. With increasing enrollment, limited campus space, and a mix of buildings that range from those built in the late 1800s to mid-1900s to newer, LEED-certified buildings, the Institute faces the challenge of keeping open space available and using resources efficiently. Through sustainable building practices, state regulations, and partnerships with utility providers, WPI continues to improve its practices, resource allocations, and performance tracking. Operating the campus generates a heavy demand for energy, particularly for lighting, HVAC, computers, and specialized research equipment. Through energy monitoring, investment in energy efficiency programs, and practical use of buildings, energy consumption can be reduced. Water consumption increases each year, although the per capita water consumption remains steady. New water conservation devices are being installed throughout campus to help to decrease consumption. Efforts to increase recycling have been successful, but must be expanded to further reduce the volume of waste generated by the expanding WPI community.

WPI's project- and technology-based curriculum puts the university in a unique position to find innovative solutions to improve sustainability in its daily campus operations. Student-generated innovations and the application of innovative energy technology will further illustrate our motto of *Lehr and Kunst* for the benefit of the WPI community.

## GOAL 2 OBJECTIVES AND TASKS

In order to guide progress toward this goal, a number of objectives and tasks were developed and are included in the following table. Where applicable, the baseline year for each of the following objectives and tasks is FY13. The accomplishment of several broad objectives focused on green building, reducing utility consumption, and the campus waste stream will help lead to the attainment of our goal for Campus Operations. The breadth of these objectives leads to many specific tasks that involve all segments of the campus community, as listed in the following table.



Objective/Task	Measures for Progress	Target Begin/Complete <sup>1</sup>	Responsible Parties
<b>Objective:</b> Utility consumption is reduced by 25% over 5 years	<ul style="list-style-type: none"> <li>* Electricity consumption (kWh/year/person)</li> <li>* Heating per capita (BTUs &amp; therms/year/person)</li> <li>* Water consumption per capita (gallons/year/person)</li> </ul>	FY14/FY18	Facilities
<b>Objective:</b> In addition to new construction, all major building renovations on campus are LEED-certifiable	<ul style="list-style-type: none"> <li>* New construction LEED-certifiable</li> <li>* Renovations LEED-certifiable</li> </ul>	FY15/ongoing	Director of Sustainability, Facilities
<b>Objective:</b> The amount of campus waste disposed of in landfills or incinerators on a per capita basis is reduced to 10% below the national average	<ul style="list-style-type: none"> <li>* National average</li> <li>* Pounds or tons of waste/year/person</li> </ul>	FY14/FY18	Director of Sustainability, Facilities
<b>Task:</b> Define building usage and assess building schedules to efficiently manage heating and cooling	<ul style="list-style-type: none"> <li>* Policies and schedules developed and implemented</li> </ul>	FY14/FY15	Director of Sustainability, Facilities
<b>Task:</b> Invest in energy programs (focus on deferred maintenance with support from utility incentives)	<ul style="list-style-type: none"> <li>* Amount of funds (\$) invested in energy programs on an annual basis</li> </ul>	FY15/ongoing	Director of Sustainability, Facilities
<b>Task:</b> Establish a green revolving fund	<ul style="list-style-type: none"> <li>* Revolving fund and associated procedures established</li> <li>* Amount of money (\$) available through the fund</li> </ul>	FY15	Finance & Operations, Facilities, Director of Sustainability
<b>Task:</b> Monitor energy use real-time with submetering	<ul style="list-style-type: none"> <li>* Energy use monitored real-time with submetering</li> </ul>	FY16/ongoing	Facilities
<b>Task:</b> Increase sustainability in computing by using sustainable principles in the purchasing and operation of data centers, and through community education and awareness programs.	<ul style="list-style-type: none"> <li>* Energy savings (kWh ) associated with computer use</li> <li>* Number of participants in sustainable computing programs</li> <li>* Computer recycling</li> </ul>	FY15/ongoing	IT, Director of Sustainability
<b>Task:</b> Evaluate how recycling and trash pick-up is managed, including disposal contractors and research opportunities	<ul style="list-style-type: none"> <li>* Comprehensive waste/recycling audit (with suggested solutions) complete</li> </ul>	FY14	Facilities
<b>Task:</b> Improve campus recycling infrastructure by purchasing and installing user-friendly recycling containers and adding solar compactors to campus outdoor trash receptacles	<ul style="list-style-type: none"> <li>* Number of recycling containers purchased and installed</li> <li>* Number of solar compactors added to campus outside trash receptacles (compared to number of outside trash receptacles total)</li> </ul>	FY15	Facilities, Director of Sustainability
<b>Task:</b> Develop a marketing campaign to tell the story of recycling at WPI	<ul style="list-style-type: none"> <li>* Marketing campaign for recycling developed and implemented</li> <li>* Campus culture and knowledge of recycling</li> <li>* Pounds or tons of recycling/year/person</li> </ul>	FY15	Director of Sustainability, Marketing and Communications
<b>Task:</b> Eliminate disposable/single-use plastic water bottles from the campus	<ul style="list-style-type: none"> <li>* Number of disposable/single-use plastic water bottles bought/sold on campus</li> </ul>	FY15	Director of Sustainability, Facilities, Chartwells
<b>Task:</b> Install water bottle filling stations on the campus	<ul style="list-style-type: none"> <li>* Number of filling stations installed</li> <li>* Number of people using filling stations</li> </ul>	FY15	Director of Sustainability, Facilities, Chartwells
<b>Task:</b> Develop and implement purchasing guidelines to select products manufactured, packaged, and distributed in sustainable manners, and/or are made from recycled goods	<ul style="list-style-type: none"> <li>* Guidelines developed and published</li> <li>* Amount (\$) spent on green products compared to amount spent on non-green products</li> </ul>	FY15	Director of Sustainability, Purchasing, Departments
<b>Task:</b> Measure GHG emissions and report Scope 1 and 2 emissions annually	<ul style="list-style-type: none"> <li>* Greenhouse gas emissions measured annually</li> <li>* Scope 1 and 2 emissions reported annually</li> </ul>	FY14/ongoing	Director of Sustainability, Facilities
<b>Task:</b> Establish a methodology and timeline for reducing GHG emissions	<ul style="list-style-type: none"> <li>* GHG reduction target set</li> <li>* Method and timeline established</li> </ul>	FY14/FY15	Director of Sustainability, Facilities, community

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## GOAL 3: RESEARCH AND SCHOLARSHIP

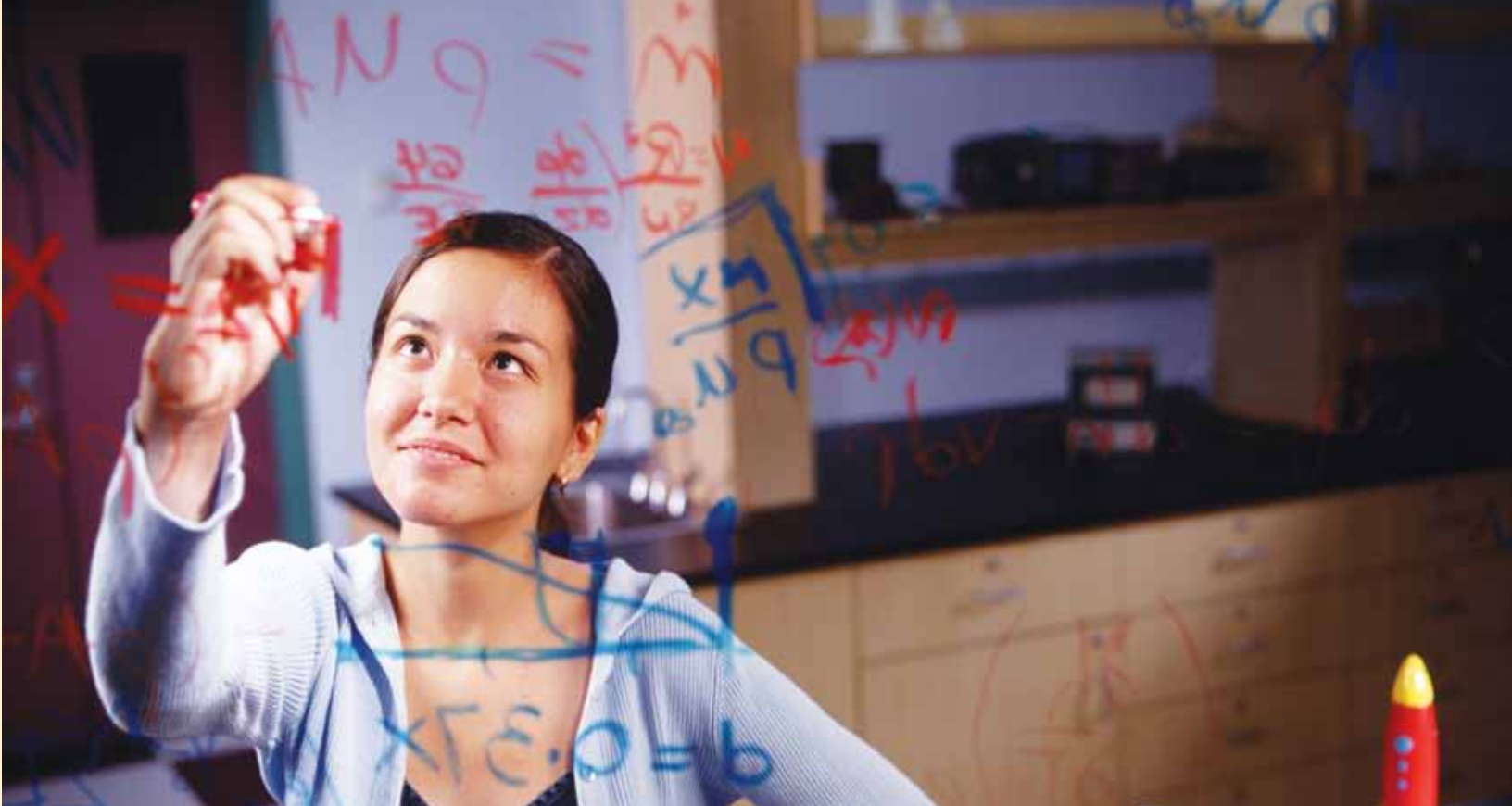
Through our research and scholarly activities WPI will make significant contributions to the technologies, the policies, and the attitudes that will help assure a sustainable world.

One third of WPI faculty have been identified with research and scholarly interests in some area of sustainability. The range of interests is broad, and there are many opportunities for synergy among groups of faculty to enhance the impact of their work. The following topics represent areas of significant interest across WPI at present: Energy (batteries, fuel cells, hydrogen, and biofuels), water supply and pollution, sustainable development, materials and recycling, and history and philosophy of sustainability. As WPI identifies research focus areas, it will be important that our existing strengths be leveraged to maximum benefit.



### GOAL 3 OBJECTIVES AND TASKS

In order to guide progress toward this goal, a number of objectives and tasks were developed and are included in the following table. Where applicable, the baseline year for each of the following objectives and tasks is FY13. The objectives and tasks for research involve tracking, providing coordination, and promoting and enhancing the visibility of WPI's research and accomplishments in the sustainability area.



Objective/Task	Measures for Progress	Target Begin/Complete <sup>1</sup>	Responsible Parties
<b>Objective:</b> WPI is recognized for its contributions in one or more areas of sustainability research	* Track awards and publications	FY14/ongoing	Director of Sustainability, WPI Task Force on Sustainability
<b>Objective:</b> All of WPI's sustainability-related research work is visible and accessible via the web	* Operational status of web pages * Online publication of annual reports listing relevant publications, grants, and graduate degrees	FY14/ongoing	Director of Sustainability, Marketing & Communications
<b>Task:</b> Appoint a coordinator for sustainability-related research	* Coordinator appointed	FY14	Director of Sustainability, Office of the Provost
<b>Task:</b> Identify and establish one (or more) major center(s) in area(s) of WPI's current strengths in sustainability	* Center in place * Collaborations/partnerships/funding established	FY15	Sustainability Research Coordinator
<b>Task:</b> Establish a lecture series to address sustainability-related topics	* Sustainability-related lecture series established * Number of sustainability-related lectures held * Number of lecture series participants	FY14/ongoing	Director of Sustainability
<b>Task:</b> Initiate a series of sustainability conferences in areas of WPI's research strength	* Sustainability conference series initiated * Number of conferences held * Number of conference participants	FY15/ongoing	Director of Sustainability
<b>Task:</b> Organize a Sustainability category for GRAD	* Sustainability category organized	FY14/ongoing	Graduate Dean, Director of Sustainability

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## GOAL 4: COMMUNITY ENGAGEMENT

WPI's students, faculty, and staff will be actively engaged in promoting a culture of sustainability to enhance the current and future welfare of our communities: on campus, in Worcester, for our nation, and globally.



Community engagement that combines personal responsibility with civic engagement is critical to all three aspects of sustainability. WPI has the ability to connect with, involve, and impact our campus, the city of Worcester, the commonwealth of Massachusetts, and national and global communities in powerful ways through project centers, student organizations, community initiatives, and the Global Perspective Program, as well as through the on-campus initiatives outlined in this report. The 30+ project centers around the world provide opportunities for WPI students to address issues including water quality, commercial development, affordable housing, and energy efficiency.

More effort is needed to ensure that all members of the campus community have the opportunity and support to engage in sustainability efforts both on and off campus. The offices of Student Activities and Human Resources share the role of ensuring that new students and employees are included in an orientation program that discusses sustainability on campus and each individual's responsibility to aid WPI in becoming a more sustainable campus. More work is needed to provide a central source for information and communication to our campus community, and it should involve improving and regularly updating the sustainability website as well as WPI's social media outlets.

The community is actively engaged in national and global activities such as Earth Day events and Recyclemania, sponsorship of speakers, and a range of other activities resulting in national recognition and high rankings for WPI, summarized in the online supporting resources for this plan.



## GOAL 4

### OBJECTIVES AND TASKS

In order to guide progress toward this goal, a number of objectives and tasks were developed and are included in the following table. Where applicable, the baseline year for each of the following objectives and tasks is FY13. Goal 4 necessitates that we become more coordinated and focused on assuring that our academic programs serve local, regional, and global communities as well as our students. The follow-

ing tasks and objectives concentrate on developing awareness and competence regarding sustainability in all students, faculty, and staff, as well as the greater community.

Objective/Task	Measures for Progress	Target Begin/Complete <sup>1</sup>	Responsible Parties
<b>Objective:</b> At least 50% of the campus community is engaged in sustainability efforts	<ul style="list-style-type: none"> <li>* Percentage of WPI campus engaged</li> <li>* Participation in programs and events</li> </ul>	FY15/ongoing	Director of Sustainability, Sustainability Advisory and working groups, Human Resources
<b>Objective:</b> Sustainability-related project centers involve both the WPI campus and local communities	<ul style="list-style-type: none"> <li>* Project centers annually report on community engagement measures and sustainability efforts</li> <li>* Tracking community involvement</li> </ul>	FY15/ongoing	Director of Sustainability, IGSD, Project Center Directors
<b>Objective:</b> WPI's expertise is available via projects and other mechanisms to assist community, governments and non-profit groups	<ul style="list-style-type: none"> <li>* Expertise available via website</li> </ul>	FY15/ongoing	Director of Sustainability; on-campus faculty leaders; Library; CPE; IGSD, Government Relations
<b>Task:</b> Implement a sustainability training and education program for students/faculty/staff (i.e., new staff, faculty, and student orientation program)	<ul style="list-style-type: none"> <li>* Training and education programs established</li> <li>* Number of participants in sustainability training and education program</li> </ul>	FY16/ongoing	Director of Sustainability, Human Resources, Office of the First Year and Insight Program
<b>Task:</b> Incorporate sustainability targets into key student/staff/faculty roles	<ul style="list-style-type: none"> <li>* Sustainability targets incorporated</li> </ul>	FY16/ongoing	Director of Sustainability, Human Resources, Office of the First Year and Insight Program
<b>Task:</b> Develop a mechanism for engaging all constituents in sustainability planning activities on campus and beyond	<ul style="list-style-type: none"> <li>* Website created</li> <li>* Number of visits to website</li> </ul>	FY15/ongoing	Director of Sustainability, Sustainability Task Force Web Office, Government Relations
<b>Task:</b> Develop award/recognition program to support on-campus and off-campus sustainability efforts	<ul style="list-style-type: none"> <li>* Numbers of awards given</li> <li>* Numbers of nominations/applications for awards received</li> </ul>	AY14/ongoing	Director of Sustainability, Sustainability Task Force, Government Relations
<b>Task:</b> Develop a transportation plan for the WPI community to decrease reliance on single-occupancy vehicles	<ul style="list-style-type: none"> <li>* Plan developed</li> <li>* Reduction in single occupancy vehicle miles traveled</li> <li>* Increase in carpooling, public transportation use, walking and cycling</li> </ul>	AY14/ongoing	Director of Sustainability, Advisory Council, Human Resources, Government Relations

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**WPI is well positioned to create a campus environment that exemplifies ecological stewardship, social justice, and economic security. A number of particular strengths should be noted:**

- A project-based and globally oriented undergraduate program that engages students and faculty in the “great problems” of sustainability
- The breadth of current sustainability activities in academic areas ranging from philosophy to life sciences to chemical engineering
- A physical plant and campus environment that provides numerous opportunities for implementation of sustainability practices
- A history of sustainability-related achievements, including recognition as one of the Sierra Club’s “Coolest Schools” in 2010 and 2011, one of the Princeton Review’s “Green Colleges” in 2010, 2011, 2012, and 2013, and a “highly rated institution” by the Sustainability Endowment Institute’s Green Report Card
- Ongoing student service to the community: WPI students reported over 29,000 hours of community service in the 2012–13 academic year

## **WPI Task Force on Sustainability**

The task force was organized by President Dennis Berkey in 2007, co-chaired by the provost and the chief financial officer, and composed of administration, staff, faculty, and student representatives. The task force marked WPI’s first formal and explicit commitment to the principles of sustainability, although the wise use of resources and consideration of the broader impacts of our work have been woven into WPI’s academic, research, and operations fabric for many years. Over the past six years, the task force has supported sustainability across the WPI campus and community, including the development of this plan.

## **The Planning Process**

The development of the sustainability plan began in the summer of 2011 with the drafting of a vision statement and an outline of the overall planning process. The plan was developed in two phases:



**Phase One** assessed WPI's current status, compared key sustainability indicators to those at peer institutions, gathered community input, and proposed broad goals.

**Phase Two**, represented by this document, further developed goals and specific objectives and identified key supporting tasks. Needed resources, metrics, and the required organizational structure were also identified.

The working group co-chairs then identified volunteers from among the students, faculty, and staff to participate in the planning process. The working groups incorporated community input from the launch event, online surveys, and open meetings into their reports. Based on this information, the Phase One Final Report was prepared in the fall of 2012 and delivered to the

president and the Board of Trustees, who pledged their support for the continued development of the plan. Phase One results were also communicated to the WPI community via open forums, web postings, and online surveys. Community members were asked to vote on the goals and key objectives resulting from Phase One so that a consensus for community priorities could be incorporated into the final plan. These results are summarized in the online resources. A World Café event, the results of which are also among the online resources supplementing this plan, was attended by more than 50 students, staff, and faculty who provided feedback on key elements of the plan. The working groups reviewed the broad range of input they received and presented the results to the President's Task Force on Sustainability in May 2013.





WPI community engagement in the planning process began with a campus-wide kickoff event in March 2012. Key members of the WPI community were named to co-chair working groups for four basic areas:

- Academics and Research
- Campus Operations
- Community Engagement
- Institutional Policies

## Oversight of Sustainability

Since the organizational structure that supports the sustainability goals is critical for their realization, this Plan proposes a structure that builds on past success and maintains the breadth of participation that is essential to such a broad endeavor. While sustainability initiatives spearheaded by part-time and volunteer efforts have achieved significant accomplishments, all of the working groups provided clear guidance that the creation of a high-level administrative position to support the goals in the Sustainability Plan was pivotal to the plan's success. In the spring of 2013, funding for a position was approved as part of the fiscal year 2014 budget.

With the creation of the Director of Sustainability position, it is appropriate to develop a new, comprehensive structure for oversight of sustainability activities at WPI.

The following structure is recommended:

**A Director of Sustainability**

- Reports to the Executive Vice President and works closely with the Provost
- Assumes responsibility for positioning the institution to meet the goals defined in the plan, as well as convening and guiding the stakeholders in the implementation of the Sustainability Plan

**A Reorganized WPI Task Force on Sustainability**

- A steering committee including the following persons: EVP/CFO, Provost, Dean of Students, VP for Human Resources, Chief Marketing Officer, Head of Dining Services, Dean of Engineering, Dean of Arts and

Sciences, an appropriate faculty member, one undergraduate, and one graduate student

- New working groups in the following areas:

Academics (both teaching and research), Student Life, Campus Operations, and Community Outreach

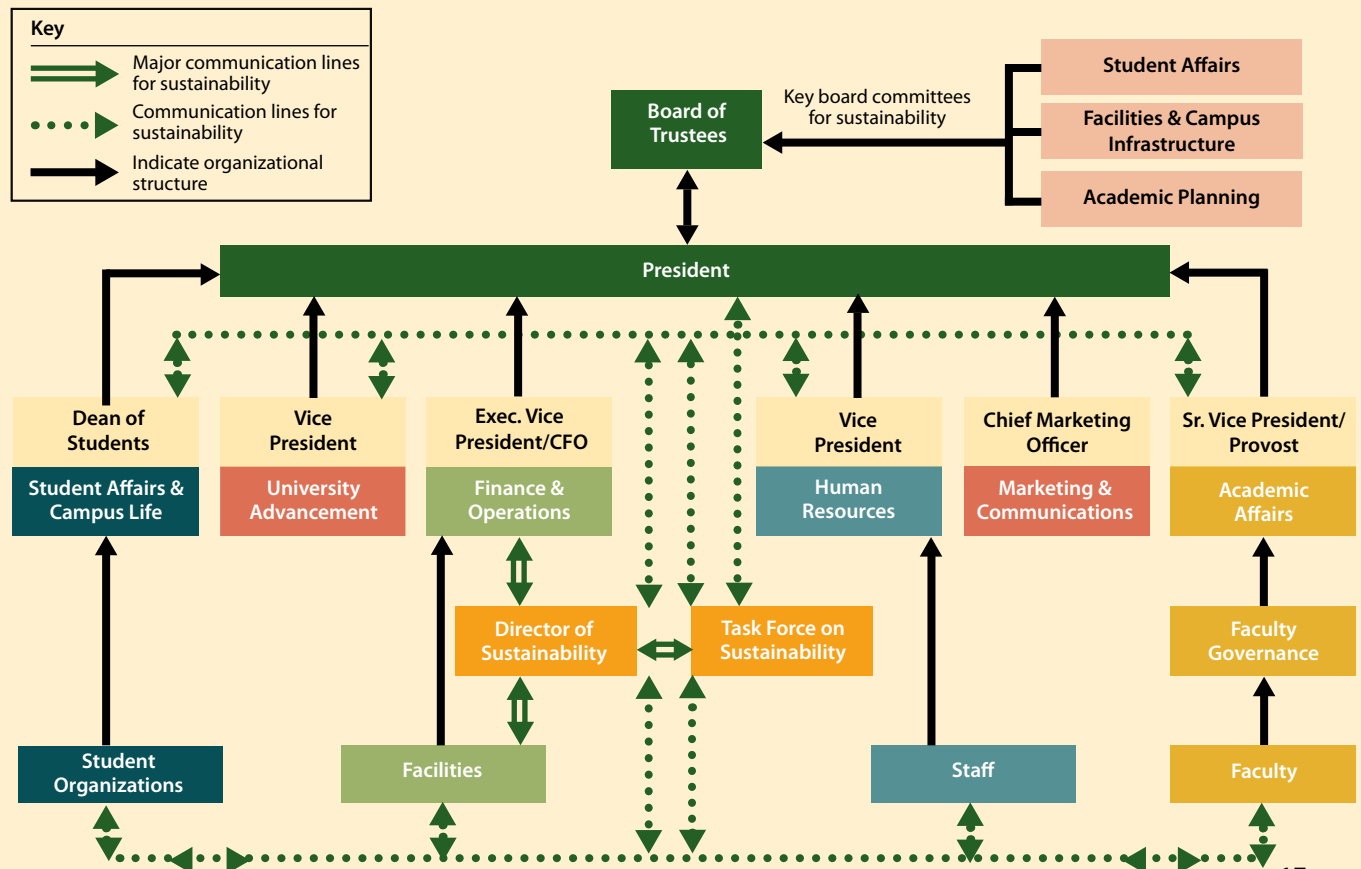
**A Formal Report**

- Annually issued by the administration to the Board of Trustees on the progress made toward sustainability goals

The steering committee will assist the Director of Sustainability in developing priorities and will communicate those priorities to their divisions. These groups will work closely with the director and steering committee in implementing the priorities.

The following sustainability structure graphic represents the major positions, functions, and communications paths for sustainability at WPI. The chart demonstrates the extent to which sustainability pervades WPI's activities and operations.

**WPI Sustainability Structure**



In order to track, report, and verify progress toward the four goals of this plan, objectives and tasks must have clear and measurable outcomes. Key performance measures are required for these, accompanied by an explanation of the method of measurement, the parties responsible for the measurements, and the method of communicating the results. Ongoing measurement of each component of the goals is vital for verifying progress and for assuring the ultimate success of the plan.

Some measures are already in place and have been reported in each of the four annual Campus Sustainability Reports. These measures include electricity and water consumption, greenhouse gas emissions, waste generation, a number of sustainability-related and focused courses, and hours of community service.

The Director of Sustainability will ultimately be responsible for the oversight of the Sustainability Plan. To this end, this individual will be pivotal in managing key metrics. The primary role is to coordinate and centralize the collection of data from offices throughout the campus community. The Director of Sustainability will ensure that the offices that oversee the key performance data are knowledgeable about the Sustainability Plan and the associated objectives and tasks so that they are actively engaged in data collection, analysis, and dissemination.



For each of the four major goals of the Sustainability Plan, objectives and tasks have been developed by the Sustainability Plan Working Groups to support the achievement of the goals, and they can be found in the Table presented with each goal. For each objective and task, the following have been identified:

- **Measures for Progress**, defining the data to be measured and the manner in which it will be measured.
- **Target Begin/Complete**, indicating in what year the objectives will be attained and the tasks completed. The timeline helps prioritize the objectives and tasks.
- **Responsible Parties**, specifying the person or group that will be responsible for the desired outcome as well as who will be responsible for providing the data to measure progress toward the outcome.



For objectives and tasks that rely on metrics not readily available or have not yet been identified for collection, encouraging student project work in developing these can be effective. For example, a survey to collect data on the method of commuting to campus can be developed in order to set a benchmark on current transportation methods. Also, collaboration between the Director of Sustainability and the IGSD or Gordon Library to create a coordinating function that formally aggregates sustainability-themed student projects will assist in compiling and reporting on our activities.

In order to determine whether progress is being made for any goal, objective, or task, it is necessary to define a benchmark period – the time period against which new data can be compared. It's often the time period before which major activities to bring improvements began.

The baseline year for most aspects of our reporting will be fiscal year 2013 (July 1, 2012 to June 30, 2013).

The objectives and related performance data will be compiled and reviewed annually by the Director of Sustainability and the Steering Committee. Periodically throughout the year, these data will be summarized, and an interpretation of the results with an assessment of institutional performance on these measures will be provided to the Steering Committee. Recommendations on improvements will accompany the commentary on the performance of individual measures of objectives.

WPI will continue to document sustainability accomplishments in the Annual Campus Sustainability Report. Progress on the Plan will be continually updated at [wpi.edu/+sustainability](http://wpi.edu/+sustainability).



## Definitions of Terms and Acronyms

**Project-based Curriculum:** Projects are a signature element of WPI's academic curriculum, following WPI's motto, *Lehr und Kunst* (Theory and Practice). Each project represents an opportunity to apply the knowledge learned in classes and labs to real-world problems. Projects are completed either on campus, in Worcester, or globally through the Interdisciplinary and Global Studies Division (IGSD).

**Great Problems Seminars (GPS):** This academic project, optional for students in their first year, prepares students for WPI's unique project-enriched curriculum and serves as an introduction to university-level research. Topics include titles such as "Heal the World," "The World's Water," "Power the World," and "Food Sustainability."

**Interactive Qualifying Project (IQP):** The IQP is a graduation requirement, typically completed in the junior year. This project, not generally related to the students' major fields, brings together students from various disciplines who work in teams, either on campus or at our project centers located around the globe to solve problems that matter to real people and real communities.

**Major Qualifying Project (MQP):** The MQP is a graduation requirement, completed in the senior year. The MQP provides students nearing graduation the opportunity to gain real-world design or research experience within their major field and to develop skills that employers and graduate schools desire.

**Graduate Research Appreciation Day (GRAD):** This annual event allows graduate students to present their research to the community.

## Background Information

Further resources supporting this plan can be found at [wpi.edu/sustainability](http://wpi.edu/sustainability):

- Academic Mission and Structure
- Sustainability-related Awards and Recognition
- Phase 1 Report
- Community Input :
  - Input on the Phase 1 Report
  - Results from the World Café
- Sustainability Annual Reports
- Planning contributors



## Acknowledgements

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- John Orr, Co-chair, WPI Task Force on Sustainability; Professor, Electrical & Computer Engineering
- Liz Tomaszewski, Facilities Systems Manager/Sustainability Coordinator
- Caryn MacDonald '14, environmental engineering major, 2013 Student Sustainability intern
- Ryan Pollin '14, mechanical engineering major, 2012 Student Sustainability intern
- Gretchen Engbring, Sustainability Project Coordinator, GreenerU

The ideas brought forth in the Sustainability Plan were developed by the Sustainability Plan Working Groups and consultants from GreenerU:

- John Orr and Paul Mathisen, Co-chairs, Academic Programs and Research
- Bill Spratt and Jon Bartelson, Co-chairs, Campus Operations
- Anne Ogilvie and Christine Girouard, Co-chairs, Community Engagement
- Judi Trainor and Deborah Scott, Co-chairs, Institutional Policies
- Bonny Bentzin and Brett Pasinella, GreenerU

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2010, 2011



2011



2010-2013

## WPI Makes the Grade

WPI's commitment to sustainability has been recognized by the Princeton Review's Guide to 322 Green Colleges, Sierra Magazine's Top 100 Cool Schools list, and the Sustainable Endowments Institute's 2011 College Sustainability Report Card.



**WPI**

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