

# UF Sustainability in Built Environment Implementation Plan

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## Vision

In framing the vision for sustainability in the Built Environment, participants envisioned a campus with buildings that would be designed to last 100 years, and to provide a healthy, productive environment for the university community, with a minimal impact on the environment. As we build on our historic traditions, our vision would include constructing buildings that would stand the test of time to join existing historic buildings on campus.

The full impacts of design and material selection would be considered in the decision-making process. A life cycle analysis, from raw materials through production and disposal, would be considered in planning and purchasing phases. The university would continue to follow the Campus Master Plan, which encompasses many facets of campus planning including physical development, environmental preservation and management, infrastructure, design standards, intergovernmental coordination and neighborhood/community partnerships. Since planning is an ongoing and collaborative undertaking, a wide array of committees, task teams, and open forums would be employed to bring together stakeholders and develop consensus about the future of the University of Florida campus community.

## Desired Outcomes

**Build Healthy, User-Friendly Buildings** - Indoor environments would be designed to be healthy, beautiful, and user friendly for community wellbeing and productivity. Campus design elements would be uniform for aesthetics and ease-of-use. Collaborative groups would meet to make building decisions to best fit user needs.

**Create Flexible Building Space** - Design buildings with flexible space for shared use. Optimize usable square footage in the design stage of new buildings, before they are built. Implement and support telecommuting and distance learning to conserve building space and resources.

**Design Smart Buildings** - Construct and renovate buildings to adjust to occupancy needs. All campus buildings would meet high performance criteria and include flexible use areas. The value of resource and energy efficiencies would be preserved through the design-to-build process. Buildings would maximize LEED energy points, and all projects would be designed to meet LEED Platinum standards. UF would strive to improve the sustainability of each new building.

**Employ Closed Loop Systems** - Incorporate alternative, distributed energy technology wherever possible, including waste-to-energy processes. Develop off-peak storage for utilities – thermal storage, chilled storage, hydrogen, etc. – to reduce peak load.

**Encourage Preventative Maintenance** - Develop a proactive process to improve efficiency in existing buildings through ongoing maintenance of existing systems. Develop policies to identify, repair, and upgrade inefficient equipment that uses excess energy and/or water. Preventative maintenance would improve system reliability, decrease the cost of replacement equipment, and decrease system downtime. Employ accessible user feedback tools that help users and building maintenance staff to ensure buildings are working as efficiently as possible throughout their lifecycles.

**Establish Unified Policies** - Establish clear, consistent policies concerning facilities construction and maintenance, with support from the administration. Establish accountability for building performance and maintenance from design through operation. Provide guidelines and training for project managers, vendors and contractors to operate sustainably.

**Implement Life Cycle Analysis Policies** - Establish policies to analyze the full life-cycle costs/benefits of our energy, water, lighting, landscaping, ventilation, material use, and transit proximity to help guide the decisions we make about the development of our campus. Incorporate life-cycle cost analysis into the budgeting, design, engineering, and approval process of all new buildings and major renovations.

**Re-Align University Donations** - Encourage donors to fund operations and optimization of existing systems. Only construct new buildings when necessary.

**Recycling and Reuse of Construction Waste** - Establish deconstruction and construction waste policies that mandate recycling, preferably through local re-use vendors. Negotiate lower costs to reuse/recycle materials than the cost to dispose at a landfill.

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### Action Plan

The table on the following pages lists the initial actions that can be taken over the next three years to move toward the vision for sustainability in Built Environment at UF. The intention of creating this list of actions is to provide a platform for working groups as they begin to implement the vision. This list can be modified over time, and is meant to be a “living document.” Progress toward these actions will be evaluated annually and an updated action plan will be developed in the spring of 2012.

Outcome	Action	People
Build Healthy, User-Friendly Buildings	1. Develop interpretive displays for LEED buildings	<ul style="list-style-type: none"> <li>• <b>Facilities, Planning and Construction</b></li> <li>• <b>Office of Sustainability</b></li> <li>• College of Fine Arts</li> </ul>
Build Healthy, User-Friendly Buildings	2. Create campus design guidelines for greenscaping and landscaping design.	<ul style="list-style-type: none"> <li>• <b>Facilities, Planning and Construction</b></li> <li>• <b>Physical Plant Division</b></li> <li>• Housing</li> <li>• IFAS Facilities Operations</li> <li>• Shands</li> </ul>
Build Healthy, User-Friendly Buildings Design Smart Buildings Implement Life Cycle Analysis Policies	3. Institutionalize our commitment to: energy modeling, LEED Gold certification, IT Infrastructure, user behavior/cooperation, building systems zoning; optimize existing systems and buildings before addressing new construction	<ul style="list-style-type: none"> <li>• <b>Business Affairs</b></li> <li>• Facilities, Planning and Construction</li> <li>• Green Team Network</li> <li>• IFAS Administration</li> <li>• Office of Institutional Planning and Research</li> <li>• Office of Sustainability</li> <li>• Office of the President</li> <li>• Office of the Provost</li> <li>• Government Relations</li> </ul>
Create Flexible Building Space	4. Explore options for video-telephony meeting spaces and telecommute support centers/workspaces, conduct pilots (explore potential in Eastside Building)	<ul style="list-style-type: none"> <li>• <b>Chief Information Officer</b></li> <li>• Facilities, Planning and Construction</li> <li>• Human Resource Services</li> <li>• IT staff across campus</li> <li>• Office of Sustainability</li> </ul>
Create Flexible Building Space	5. Look at options for movable walls, raised floors for office space	<ul style="list-style-type: none"> <li>• <b>Facilities, Planning and Construction</b></li> </ul>

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Outcome	Action	People
<p>Create Flexible Building Space</p> <p>Design Smart Buildings</p>	<p>6. Require building systems zoning in design for smart management of space</p>	<ul style="list-style-type: none"> <li>• <b>Facilities, Planning and Construction</b></li> <li>• <b>Physical Plant Division</b></li> <li>• Housing</li> <li>• IFAS Facilities Operations</li> <li>• Office of Institutional Planning and Research</li> <li>• Office of the President</li> <li>• Office of the Provost</li> <li>• Shands</li> <li>• User groups</li> </ul>
<p>Design Smart Buildings</p>	<p>7. Commit to ongoing revision of Design and Construction Standards, including upfront space utilization and waste management</p>	<ul style="list-style-type: none"> <li>• <b>Facilities, Planning &amp; Construction</b></li> <li>• Environmental Health &amp; Safety</li> <li>• Housing Facilities Management</li> <li>• IFAS Facilities Operations</li> <li>• Physical Plant Division</li> <li>• Shands</li> </ul>
<p>Design Smart Buildings</p>	<p>8. Assess and prioritize server room and backup generator consolidation potential</p>	<ul style="list-style-type: none"> <li>• <b>Computer Networking Services</b></li> <li>• Chief Information Officer</li> <li>• Facilities, Planning &amp; Construction</li> <li>• IFAS Facilities Operations</li> <li>• Office of Sustainability</li> <li>• Physical Plant Division</li> <li>• Distributed IT staff</li> </ul>
<p>Design Smart Buildings</p>	<p>9. Continue, support, and expand Advanced Metering Infrastructure (AMI) with smart meters</p>	<ul style="list-style-type: none"> <li>• <b>Physical Plant Division</b></li> <li>• Facilities, Planning &amp; Construction</li> <li>• IFAS Facilities Operations</li> </ul>
<p>Employ Closed Loop Systems</p>	<p>10. Study the potential of utilizing condensate from building HVAC systems</p>	<ul style="list-style-type: none"> <li>• <b>Physical Plant Division</b></li> <li>• Facilities, Planning &amp; Construction</li> <li>• IFAS Facilities Operations</li> </ul>
<p>Employ Closed Loop Systems</p>	<p>11. Develop pilot program for stand-by generators for peak demand</p>	<ul style="list-style-type: none"> <li>• <b>Physical Plant Division</b></li> <li>• Progress Energy</li> </ul>

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Outcome	Action	People
Employ Closed Loop Systems	12. Review technologies for potential load shedding	<ul style="list-style-type: none"> <li>• <b>Physical Plant Division</b></li> <li>• Facilities, Planning &amp; Construction</li> <li>• Housing</li> <li>• IFAS</li> <li>• Progress Energy</li> </ul>
Employ Closed Loop Systems	13. Explore stand-alone (off-loop) buildings for application of passive solar and other distributed energy	<ul style="list-style-type: none"> <li>• <b>Facilities, Planning &amp; Construction</b></li> <li>• Florida Institute for Sustainable Energy (FISE)</li> <li>• Housing</li> <li>• IFAS Facilities Operations</li> <li>• Physical Plant Division</li> <li>• Progress Energy</li> <li>• Shands</li> </ul>
Employ Closed Loop Systems Implement Life Cycle Analysis Policies	14. Educate user groups and maintenance staff through pre-construction meetings, at final completion, and throughout occupancy (on-going training and recognition)	<ul style="list-style-type: none"> <li>• <b>Facilities, Planning &amp; Construction</b></li> <li>• <b>Physical Plant Division</b></li> <li>• Building Services</li> <li>• Environmental Health &amp; Safety</li> <li>• Green Team Network</li> <li>• Housing</li> <li>• IFAS Facilities Operations</li> <li>• Office of Sustainability</li> <li>• Purchasing</li> <li>• Shands</li> <li>• User Groups (occupants)</li> </ul>
Encourage Preventative Maintenance	15. Improve assessment, scheduling and cleaning of HVAC coils	<ul style="list-style-type: none"> <li>• <b>Physical Plant Division</b></li> <li>• Housing Facilities Management</li> <li>• IFAS Facilities Operations</li> <li>• Shands</li> </ul>
Encourage Preventative Maintenance	16. Work on baseline for existing buildings through volume certification (LEED EB O&M)	<ul style="list-style-type: none"> <li>• <b>Facilities, Planning &amp; Construction</b></li> <li>• Housing</li> <li>• IFAS Facilities Operations</li> <li>• Physical Plant Division</li> <li>• Shands</li> </ul>

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Outcome	Action	People
Encourage Preventative Maintenance	17. Evaluate and retrofit lighting	<ul style="list-style-type: none"> <li>• <b>Physical Plant Division</b></li> <li>• Facilities, Planning &amp; Construction</li> <li>• Housing Facilities Management</li> <li>• IFAS Facilities Operations</li> <li>• Shands</li> </ul>
Encourage Preventative Maintenance Establish Unified Policies	18. Finance, implement, and monitor Phase I consensus Energy Summit strategies <ul style="list-style-type: none"> <li>• Develop subcommittees to implement action items</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Business Affairs</b></li> <li>• Academic Technologies</li> <li>• Computing &amp; Networking Services</li> <li>• Environmental Health &amp; Safety</li> <li>• Facilities, Planning &amp; Construction</li> <li>• Health Science Center</li> <li>• Housing</li> <li>• IFAS</li> <li>• Office of Sustainability</li> <li>• Physical Plant Division</li> <li>• University Athletic Association</li> </ul>
Encourage Preventative Maintenance	19. Investigate feasibility of building retro-commissioning	<ul style="list-style-type: none"> <li>• <b>Physical Plant Division</b></li> <li>• Facilities, Planning &amp; Construction</li> <li>• IFAS Facilities Operations</li> </ul>
Encourage Preventative Maintenance Establish Unified Policies	20. Perform a needs assessment for development and improvement of information management, building information, and building automation systems; include metrics that work across stakeholder groups (make it accessible to building managers/occupants)	<ul style="list-style-type: none"> <li>• <b>Facilities, Planning &amp; Construction</b></li> <li>• <b>Physical Plant Division</b></li> <li>• Academic Technologies</li> <li>• Business Affairs</li> <li>• Computing &amp; Networking Services</li> <li>• Environmental Health &amp; Safety</li> <li>• Health Science Center</li> <li>• Housing</li> <li>• IFAS</li> <li>• Office of Sustainability</li> <li>• University Athletic Association</li> </ul>

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Outcome	Action	People
Encourage Preventative Maintenance Establish Unified Policies	21. Develop building assessment framework template for all buildings across campus (LEED EB O&M), and make this the basis for design	<ul style="list-style-type: none"> <li>• <b>Facilities, Planning &amp; Construction</b></li> <li>• <b>Physical Plant Division</b></li> <li>• Building stakeholders</li> <li>• Environmental Health &amp; Safety</li> <li>• Housing</li> <li>• IFAS Facilities Operations</li> <li>• Shands</li> </ul>
Establish Unified Policies	22. Develop energy benchmarks for all new buildings	<ul style="list-style-type: none"> <li>• <b>Business Affairs</b></li> <li>• Facilities, Planning &amp; Construction</li> <li>• IFAS Facilities Operations</li> <li>• Physical Plant Division</li> <li>• Office of Sustainability</li> </ul>
Establish Unified Policies	23. Add building performance measurement into project management guidelines	<ul style="list-style-type: none"> <li>• <b>Facilities, Planning &amp; Construction</b></li> <li>• Housing Facilities Management</li> <li>• IFAS Facilities Operations</li> <li>• Physical Plant Division</li> <li>• Shands</li> </ul>
Establish Unified Policies	24. Continue and expand building setbacks during holidays and low-usage periods	<ul style="list-style-type: none"> <li>• <b>Physical Plant Division</b></li> <li>• All building scheduling and space management entities</li> <li>• Housing Facilities Management</li> <li>• IFAS Facilities Operations</li> <li>• Registrar</li> </ul>
Establish Unified Policies	25. Develop and communicate comprehensive unifying policies that support all buildings, including auxiliaries, DSOs, and major units (green cleaning, zero waste, Purchasing, PM, landscaping/exterior, etc.)	<ul style="list-style-type: none"> <li>• <b>Business Affairs</b></li> <li>• Auxiliaries, Direct Support Organizations (DSOs) and units</li> <li>• Facilities, Planning &amp; Construction</li> <li>• Housing Facilities Management</li> <li>• IFAS Facilities Operations</li> <li>• Office of Sustainability</li> <li>• Physical Plant Division</li> <li>• Purchasing</li> </ul>

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Outcome	Action	People
Establish Unified Policies	26. Research appropriate location/documentation for related directives and policies	<ul style="list-style-type: none"> <li>• <b>Business Affairs</b></li> </ul>
Implement Life Cycle Analysis Policies	27. Ensure all infrastructure retrofits and decisions go through life-cycle cost analysis and comply with UF Design and Construction Standards	<ul style="list-style-type: none"> <li>• College of Design, Construction and Planning</li> <li>• Facilities, Planning &amp; Construction</li> <li>• Office of Sustainability</li> <li>• Physical Plant Division</li> <li>• Shared Governance Committees</li> </ul>
Re-align University Donations	28. Discuss ways to attract donations for retrofits, renovations and upgrades	<ul style="list-style-type: none"> <li>• <b>UF Foundation</b></li> <li>• Departmental and College Development Staff</li> <li>• Office of Sustainability</li> </ul>
Recycling and Reuse of Construction Waste	29. Review policies, and look at options for internal use of C+D waste, engage local demolition/deconstruction contractors and/or explore donation of materials to local non-profits	<ul style="list-style-type: none"> <li>• <b>Facilities, Planning &amp; Construction</b></li> <li>• <b>Physical Plant Division</b></li> <li>• Alachua County Waste Alternatives</li> <li>• Asset Management</li> <li>• Housing</li> <li>• IFAS Facilities Operations</li> <li>• Office of Sustainability</li> <li>• Shands</li> </ul>