CAROLINA NORTH

The UNIVERSITY of NORTH CAROLINA at CHAPEL HILL

Sustainable Design and Infrastructure Workshop
Intro Plenary Session: November 6, 2006

Today's Agenda

- Welcome
- Brief Introductions
- Brief Project Description and Status
- Project Schedule
- Overview of Infrastructure Workshops for Discovery Phase
- Agenda for this Workshop
- Review of Workshop Dialogue from September
- Review of and Dialogue about draft Carolina North Guiding Principles

Carolina North

Research and Innovation Campus

Corporate Partnerships

Faculty/Employee/Grad Housing

Service Retail/Commercial/Civic

Main Campus

Flagship Research University

Hospitals/Health Care Centers

Student Life and Housing

Mason Farm

Outreach

Recreation

Research

HOMESTEAD RD

HOMESTEAD RD

HIGH SCHOOL RD

HOMESTEAD RD

SEAWELL SCHOOL RD

AIRPORT RD

ESTES DR

ESTES RD

AIRPORT DR

SEAWELL SCHOOL RD

Project Description

- 979 acres, one mile north of main campus
- Past plans have been tabled; public LAC convened to propose guiding principles
- Enhance research and partnerships
  - A living-learning campus
  - Mixed-use academic community
  - Innovation and economic development
  - Sustainable campus
  - Integrated into the broader community
  - Academic and research clusters
  - Graduate student and employee/faculty housing
  - Service retail/commercial/civic
- Phased development

Horace Williams - Carolina North
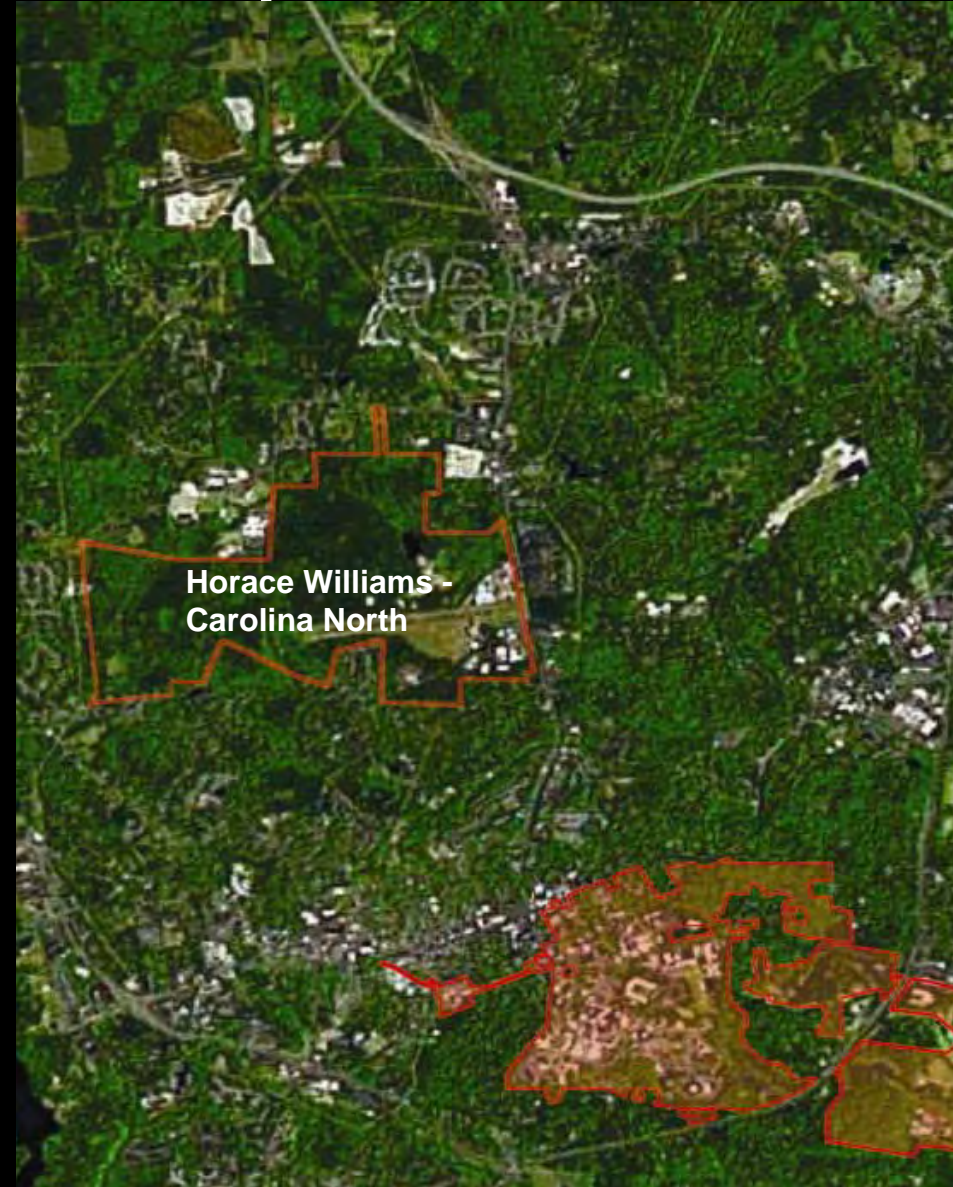
Project Schedule

Through March 2007

- Public Process through LAC to develop Guiding Principles
- UNC explores the possibilities and parameters for Sustainable Design & Infrastructure

Through May 2007

- Foundational Studies
  - Ecological Assessment (final 1/07)
  - Joint Transit Study (final 4/07?)
  - Fiscal Impact Study

March – October 2007

- Master Plan
- Phase 1 Site Plan
- Trustees approval and submittal to Towns

Through Summer 2008

- Site Development Guidelines
- Preliminary Utilities Analysis
- High Performance Building Standards

Infrastructure Workshops

Sustainable Design & Infrastructure Workshops

DISCOVERY PHASE

- November 6-8: Exploring Possibilities for Carolina North, Part 1

- November 27-29: Exploring Possibilities for Carolina North, Part 2

- December 12-14: Development of Parameters

- January 8-10: Presentation of Draft Results/ Begin Technical Studies

- February: Technical Studies
- March: Technical Studies

Exploring the Possibilities Part 1

--Plenary Introductory Session

Tuesday, November 7
- --Landscape, Natural Habitat, Water Quality
- --Water, Sewer, Stormwater Systems
- --Internal Transportation, Parking, Roads

Wednesday, November 8
- --Building Typology
- --Energy Generation, Consumption, Utilities
- --Worksession to Summarize
- --Plenary Session with Report Out

Workgroup Subtopics

When exploring the possibilities consider the following sub-topics:

- Institutional Commitment
- Human Health and Productivity
- Construction Process
- Operations

Exploring the Possibilities Part 1

Monday, November 6
- --Plenary Introductory Session

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September Kickoff Review

Potential Barriers to Success

Upper Level

1. **Innovation Leadership**
2. **Political Context**
3. **Internal Consensus**
4. **Development Costs**

Lower Level

1. **Operation Costs**
2. **Evolving Regulations, Standards, and Practices**
3. **Reliability**
4. **External Agencies**
5. **Flexibility**
6. **Longevity**
7. **Regional Context**

Reliability	1
Longevity	
Flexibility	5
Development Costs	6
Operation Costs	4
Innovation Leadership	10
Evolving Regulations, Standards, Practices	4
Political Context	7
Regional Context	
External Agencies	1
Internal Consensus	6

Mix of Baseline Knowledge
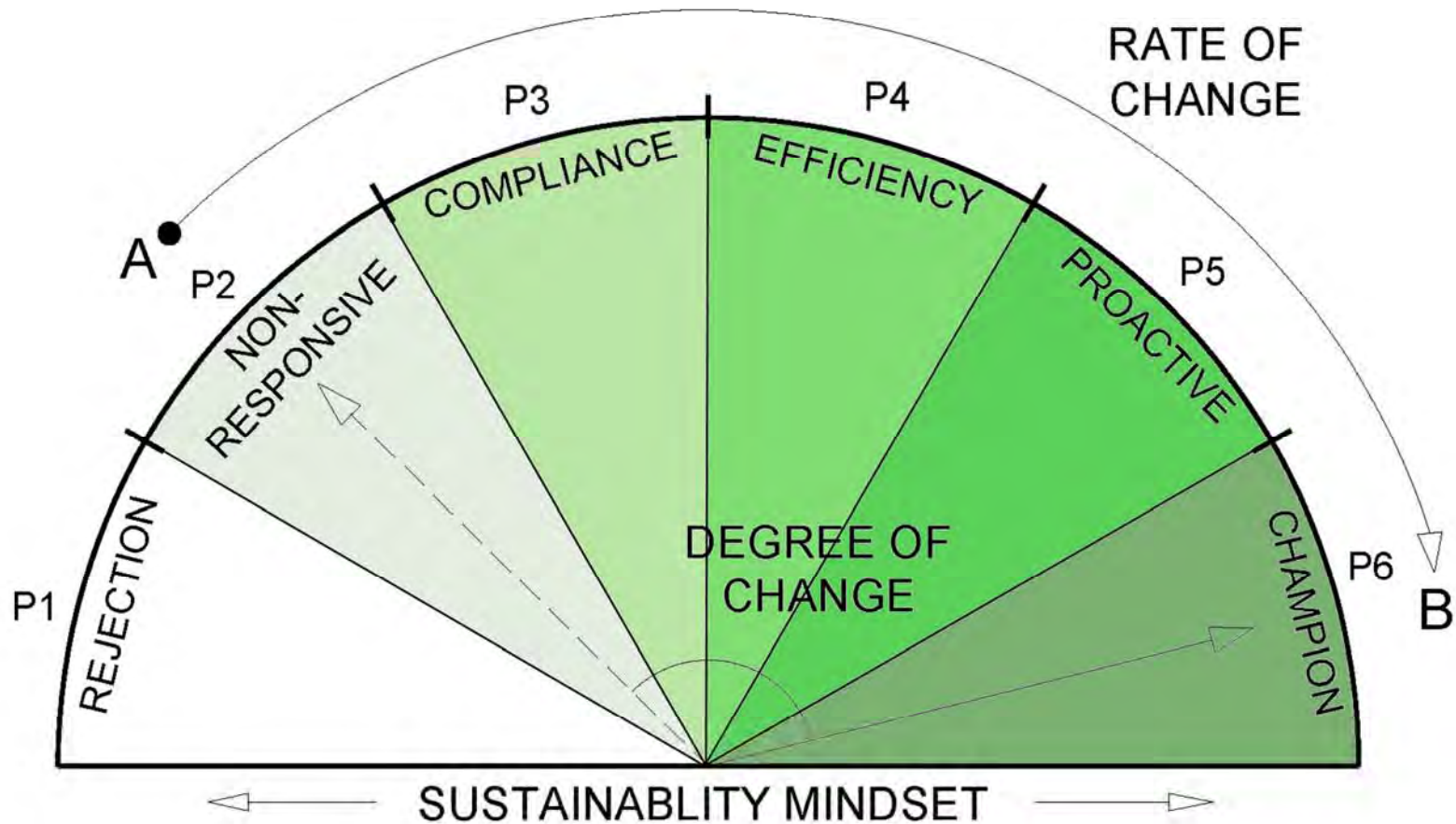
"Pivotal Experiences, Organizational Change & Champions for Sustainability" Josette M. Plaut, Brian Dunbar, James Folkestad, Colorado State University

Movement Towards Innovation
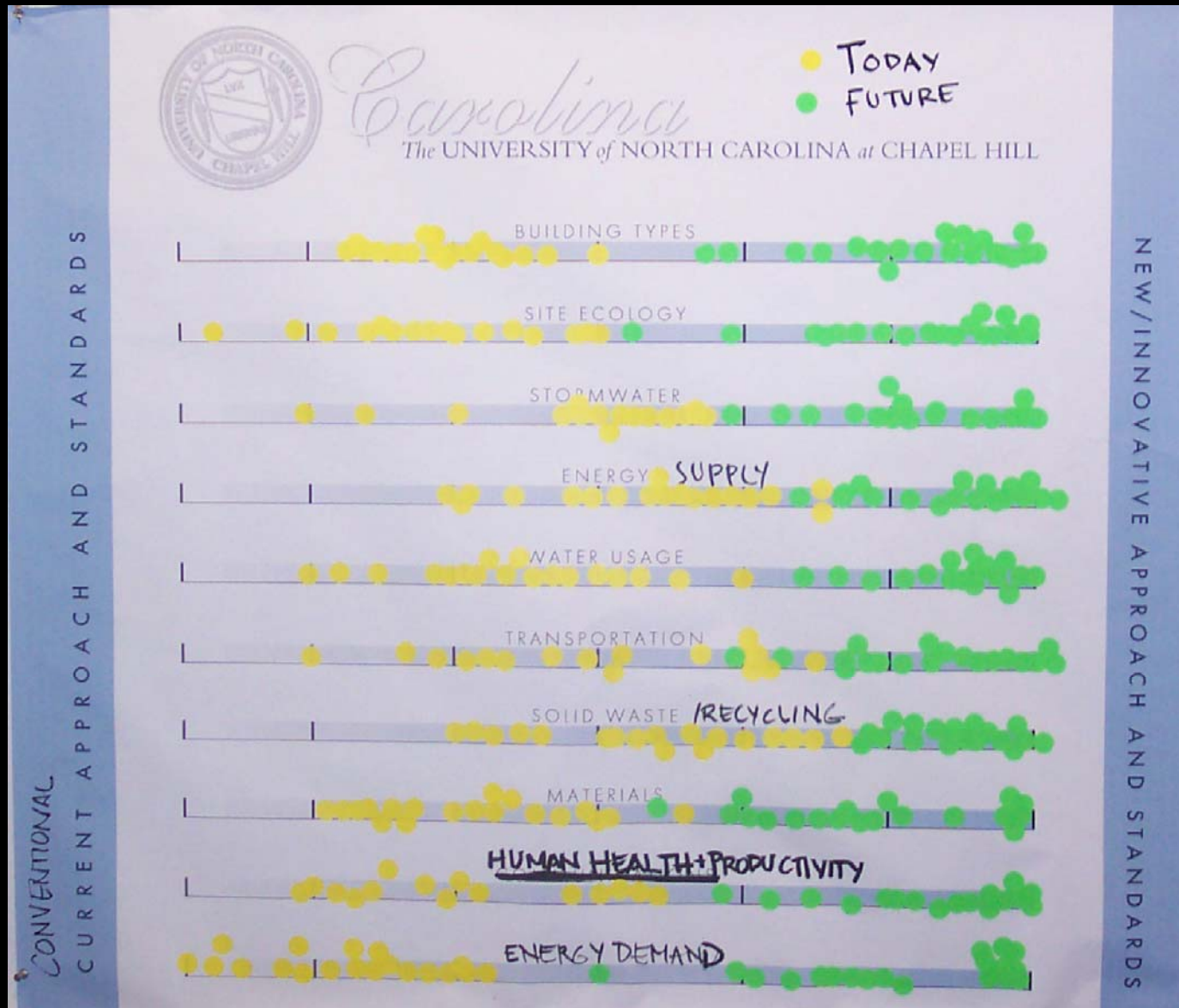
September Kickoff Review

Things we heard from you:

- The sustainable mission is just part of the larger University Mission
- Initiatives come from grass root student efforts, academic departments, and facilities management departments
- Generally users either feel that sustainable issues take away from their needs or just don't understand them
- Some sustainable initiatives working well
  - Site, stormwater, academic courses, bus system and waste management
- Others are a work in progress where great strides are possible
  - Energy Use and Generation
- Excited about evaluating the options for moving away from fossil fuels
- Sustainable initiatives are not leading decision making at this time
- As sustainable issues become more mainstream the University must continue to step up if it wants to be seen as a leader
- Carolina North is part of the University of North Carolina at Chapel Hill and should not be seen as separate.

September Kickoff Review

Things we heard you want:

- How to customize sustainable thinking for Carolina North
- Sustainable initiatives to have a bigger role in decision making
- Clarity on how CRED affects decisions is desired
- Integrate with users educating both sides so appropriate uses and technologies can be understood
- Ideas implemented at the Carolina North location should be considered for the existing campus
- A way to score the success of initiatives

As sustainable issues become more mainstream the University must continue to step up if it wants to be seen as a leader
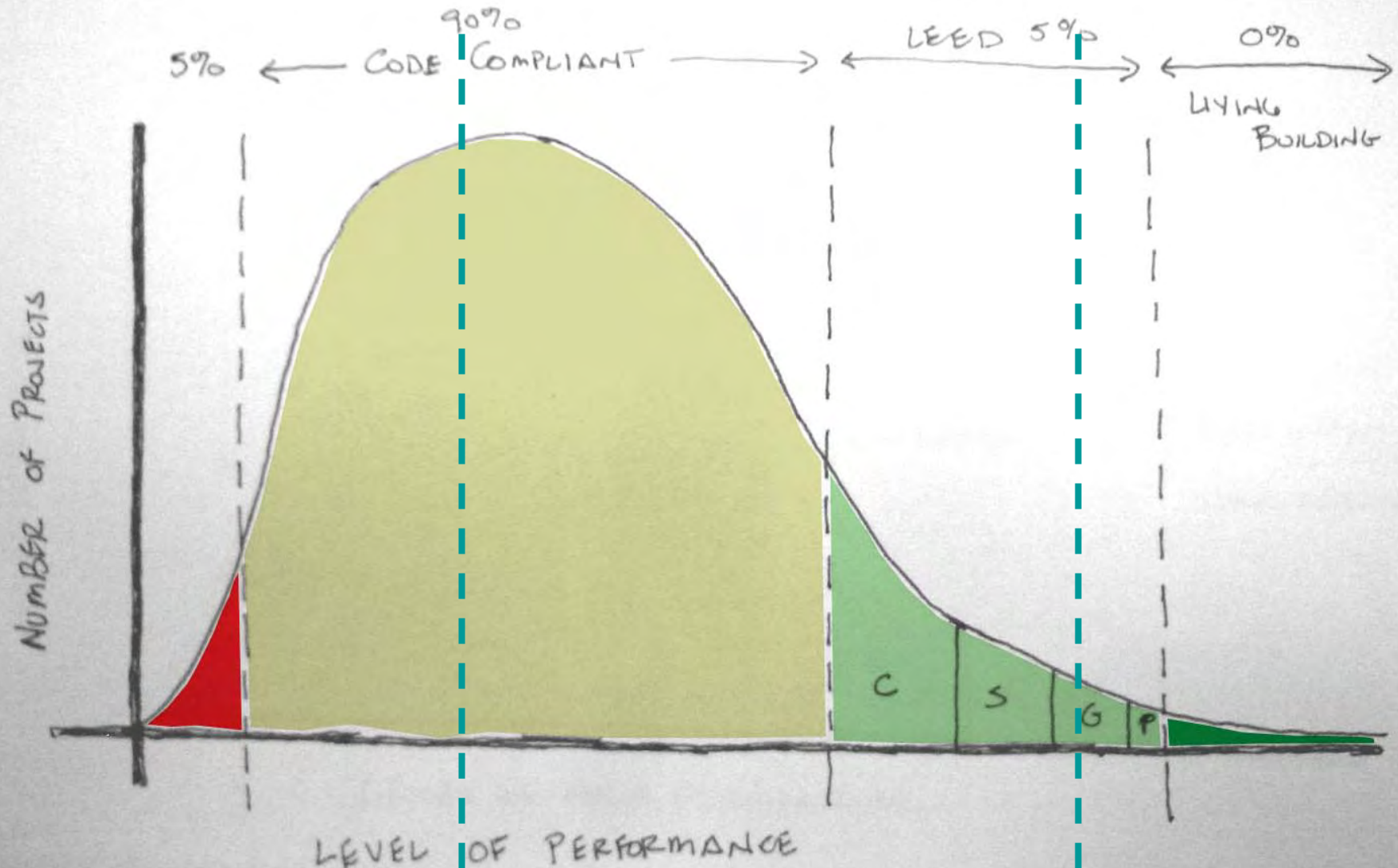
Overview of General Principles

*--developed by UNC Carolina North Core Team
and presented to LAC*

Carolina North will…

1. Support Carolina's Mission
2. Provide for Economic Progress
3. Create a Campus Environment to Enhance the University's Intellectual Climate and Relationship to Chapel Hill and Carrboro
4. Create a Model for Sustainability
5. Develop a Balance between Campus and Community

Create a Model for Sustainability

Concept for a Living Campus

*A Living Campus is designed to provide all of its own operating needs
and not burden other systems beyond its borders*

- Treat all wastewater on site
- People and Planet friendly transportation
- Treat water as a valuable resource
- Restore native habitat
- Treat buildings as species
- Design for human health and productivity
- Educate at every opportunity
- Plan based on resources
- Operate a climate neutral campus

Plenary session comments/questions

- Who was present at the initial kick-off meeting?
- Who should we be looking toward as peers, other leaders, other campuses that are doing this type of innovation?
  - Harvard
  - Reference to Chronicle articles (October 20)
- Is there anyone else trying to build a living campus/sustainable campus from scratch?
  - Harvard Allston
  - UC Merced
- Is there any sense of this as a village within a village?
  - Resources?   --internal support/reliance?
  - Services?   --need for outside services?

- Is the land base viewed as an agricultural, fuel, timber, water resource?
- How far do we go in quantifying the costs or cost savings of the sustainable path?...in order to convince the decision makers
  - This group might be able to give inputs about the costs/savings
  - Some quantification is possible…should lead to a dialogue
- How much of the planning will have innovation pushing up against the existing code?
  - Ex: water supply lines built based on fire suppression requirements
  - Both technologies and codes will adapt/change over time

- How to integrate research and education facilities into infrastructure systems
  - Applied research
  - Can be open to new things but can't afford failures
- What is the dialogue with the County (heard a lot about process with the Towns)? What about larger community level? Need to include them in process
- How are we going to reconcile/merge the efforts of all these different sub-groups are going to be doing over the next few months?
  - Not all overlapping planning efforts have the same end point