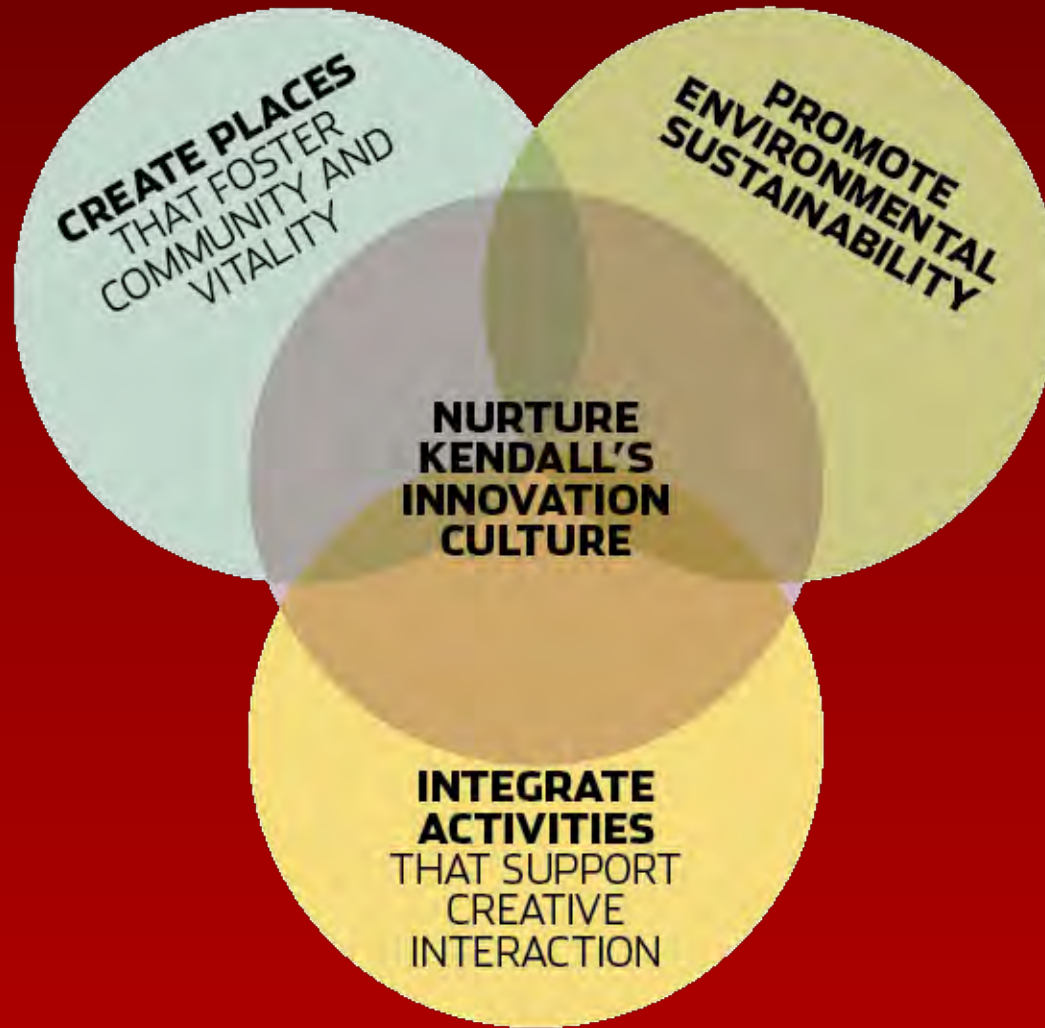


Plan framework: Four perspectives



urban design/planning study for
the **central** and **kendall square area**

Sustainability in K2: Topics discussed to date

- Density
- Mixed use development
- Green space/pervious surfaces
- Transit-Oriented Development and Transportation Demand Management (TDM)



urban design/planning study for
the **central** and **kendall square area**

Sustainability in K2: Goals

- Build neighborhood with reduced environmental impacts
- Demonstrate leadership as sustainable, cost-efficient place to do business

Deloitte report on green buildings: “More than 90 percent of respondents reported a greater ability to attract talent, and more than 80 percent reported greater employee retention (81 percent) or improved worker productivity (87 percent). Seventy-five percent saw improved employee health, and 73 percent reported operational cost reductions.” - CoStar Group Newsletter 2008

- Support community vitality



urban design/planning study for the **central** and **kendall square area**

Sustainability in K2: Goals (cont'd)

- 80% of Cambridge greenhouse gas emissions come from building energy consumption in existing buildings
- Proposed land use vision increases built square footage potential by 3 million square feet
- Significant portion of future square footage likely to have high energy intensity
- Reducing consumption of non-renewable energy is a key strategy



urban design/planning study for
the **central** and **kendall square area**

Sustainability in K2: Objectives

- High building energy performance
- Increased use of renewable energy and/or district steam
- Low reliance on automobiles; increased use of alternative fuel vehicles
- Mitigation of urban heat island
- Reduced storm water runoff quantity and improved water quality
- Water conservation
- Minimize waste generation
- Make sustainability visible



urban design/planning study for
the **central** and **kendall square area**

Sustainability in K2: Potential Strategies

- Potential strategies for BUILDINGS:
 - LEED Gold certifiability (current standard is LEED Silver certifiability; focuses on building construction)
 - LEED Existing Buildings Operations and Management (focuses on building performance)
 - Energy Star Label (building in top 25% nationally for energy use per square foot)
 - Energy performance based on above national energy code requirements



Sustainability in K2: Potential Strategies

- Potential strategies for BUILDINGS (cont'd):
 - District steam feasibility assessment
 - Conformance with MEPA GHG Policy
 - Cool roofs (white/green); vegetated walls
 - On-site storm water retention/treatment
 - Green office programs (recycling, purchasing, etc.)



Sustainability in K2: Potential Strategies

- Potential strategies for STREETSCAPE/OPEN SPACE:
 - Increase tree canopy coverage
 - Paving materials with high reflectance
- Potential strategies for TRANSPORTATION:
 - TDM (already incorporated)
 - Support for Hubway bikesharing program
 - Expansion of EV charging network
 - Increased use of alternative fuel vehicles (EV, biodiesel)



Sustainability in K2

- The future: the K2 EcoDistrict?
- EcoDistricts are appearing in cities across the world, for example:
 - Seattle 2030 District
 - FortZED in Fort Collins, CO
 - Dockside Green, Vancouver, CA
 - EcoCity Hamburg
- Based on public-private partnerships



urban design/planning study for
the **central** and **kendall square area**