Space Management @ Cornell

Mary-Lynn Cummings
Director of Capital & Space Planning
Cornell University

SUNY/PPAA
January 27, 2016
Space Management Generalities
Planning Context at Cornell
4 Good Things – Recommended!
2 Unique Things
Final Thoughts
Q & A
Quick Survey
Situational Specific

• Institutional
  – Goals, initiatives, priorities
  – Culture
• Personal
  – Skills & abilities
• Timelines
  – Long game vs. short
Where Cornell was and is…

• **2007:** Finished campus master plan
  – Predicting growth
  – Where is it coming from?

• **2007-2008:** Director of Space Planning as new position

• **Signed American College and University Presidents Climate Commitment**

• **2008:** Financial collapse
Where Cornell has been…

• 2008-today
  – New budget model for campus
  – Creating framework for space management
    • While instituting a cost for space
  – Sustainability as major focus, instigator
  – Turned off the tap on capital construction
  – Comprehensive space study
And where Cornell may be going…

• 2015: New President, new Provost
• A new space study!
• More active involvement of the center in college capital planning and project development
  – Controlled (no?) growth
  – Investments in existing buildings
    • Prioritize space allocations
    • Address deferred maintenance
    • Programmatic renewals
Campus Growth

- Average new GSF per decade
  1860-2010: 1,137,000
  1961-2010: 1,884,000

- Master plan predicted 3-4M gross square feet (GSF) in 30 years (2037)
Ithaca Main Campus

Growth since FY07: 1,458,749 GSF
Growth since FY12: 227,348
Growth since FY14: 14,090
What I bring (and don’t)

• Academic training in Natural Resources
• Professional background in research and environmental health and safety

NOT
• Interior design
• CADD
Space Planning Role at Cornell: Generalist

- Guidance – documentation, standardization
- Space reallocations
- Problem-solving
- Study management
- Space program review
- Sustainability
- Culture change agent
  - Managing space as a resource, not an amenity

NOT
- Code compliance
- Move coordination
- Real Estate acquisition and management
Space Management Program Framework

**Plan**
- Policy, Procedures, Standards, Principles
- Project Programming
- College & Division Planning

**Do**
- Space Use Advisory Committee
- Optimizing Use of Existing Space
- Build Right/Project Approval Process
- Peer Networking

**Check**
- Reporting
- Monitoring
- Decision-Making

**Improve**
- Review Policy, Procedures, Standards
- Institute Controls: Tools
- Space Charge
4 Good Things

1. Formed space committee
2. Adopted principles
3. Developed reallocation procedure
4. Developed space request process
Space Use Advisory Committee

• Governance
• Represent the key stakeholders/users of space
• Develop policies, procedures and other recommendations
  – Use and renovation of space
  – Allocation of existing space
  – Plans for future allocation needs
• Make recommendations on all allocations of University space, including off-campus leased space
3 Things the Space Committee Helps to Sort Out

1. People
2. Priorities
3. Politics
Space Management Principles

• All space belongs to the University
• Ownership begins with President & Provost and is delegated down
• Accountability begins locally and proceeds upward
• Space assignments are not permanent
• Space Use Advisory Committee charged as broker
• Space allocations based on existing facilities
• Space decisions based on articulated needs
“Basis of Design”

INTENT

Increase access to classroom and event space to support mission-driven activities of the institution and promote more efficient use of campus space in accordance with the Cornell University Space Management Principles approved by the Capital Funding & Priorities Committee on April 24, 2012.
Procedure for Space Reallocation

• Occupying unit identifies space as excess
• Tells space planner
• Space committee approves for reallocation
• Space planner collects proposals
  – Standard format
• Space committee evaluates, ranks top 3
  – Published prioritization criteria
Reallocations

Then:
• Free for all
• Most politically successful, regardless of true need, mission alignment, ability to pay, etc.

Now:
• Everyone has a chance
• Space allocation prioritized based on need, practically achievable vision, adjacencies, financial feasibility

TRANSPARENT, “FAIR”
Space Request Process

- Short Form, Long Form
- Submitted to space committee
- Who, what, when, where, why
- Dean or Vice President signature

– By signing, the dean/vice president/vice provost asserts that the need requested here cannot be met within existing space controlled by the College/Division. Further, the signer acknowledges the applicability of budget model requirements concerning the distribution of operations and maintenance expenses for space based on unit space allocations.
Space Requests

Then:

• Backroom deals
• No obvious path to resolution
• Build new rather than deal with politics

Now:

• One master list of institutional priorities
• Dean/VP signature makes units work harder to resolve locally
• Gracefully deal with “random” requests
Other Reference Documents

• 1994 Space Planning Guidelines
  – Office & classroom now in revision
• Space Mgmt Principles as applied to Cornell Instructional Space
• Space Use Principles for Registered Organizations
• Fees for Internal Users of Cornell Physical Space
• Guidelines for Space Needs Studies
2 Things Relatively Unique to Space Management @ Cornell

1. Space charge
2. Key action in climate action planning
Space Charging

- Peer institutions (e.g., Stanford, University of Michigan)
  - More direct pressure to reduce the rate of growth, due to municipal restrictions or other physical constraints

- At Cornell:
  - Built into budget model through facilities costing: stewardship, utilities, operations & maintenance
  - Incentivizing closer look at utilization
Sustainability & Space at Cornell

• Climate Action Plan (2009)
  – Focused on carbon-equivalent emission reductions

• Green Development “wedge” working group
  – Building energy
  – Smart growth
Emissions Forecast

MT CO2-e

GREENHOUSE GAS REDUCTION WEDGES

Business As Usual

Current Path Without CAP

Green Development

Energy Conservation

Alternative Transportation

Fuel Mix And Renewables

Offsetting Actions

IPCC Climate Stabilization

Neutrality Goal

2005 2010 2015 2020 2025 2030 2035 2040 2045 2050

1/27/16

SUNY/PPAA
How to define greenhouse gas savings? Analysis of building efficiencies

<table>
<thead>
<tr>
<th>Project</th>
<th>Project Type</th>
<th>Current Size</th>
<th>Possible Size</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>New office building</td>
<td>119194 gsf</td>
<td>100618 gsf</td>
<td>(16%) GROSS</td>
</tr>
<tr>
<td>B</td>
<td>Replacement lab building</td>
<td></td>
<td></td>
<td>(15-24%) GROSS</td>
</tr>
<tr>
<td>C</td>
<td>Gut renovation of office/classroom building</td>
<td>328 people</td>
<td>381 people</td>
<td>16% PEOPLE</td>
</tr>
<tr>
<td>D</td>
<td>Unit master plan - proposed mix of renovation &amp; new construction</td>
<td></td>
<td></td>
<td>(10%) NET</td>
</tr>
<tr>
<td>E</td>
<td>New office with minor classroom component</td>
<td>58274 nsf</td>
<td>56056 nsf</td>
<td>(4%) NET</td>
</tr>
<tr>
<td>F</td>
<td>New lab building</td>
<td></td>
<td></td>
<td>(28%)</td>
</tr>
</tbody>
</table>

1/27/16 SUNY/PPAA
<table>
<thead>
<tr>
<th>Action</th>
<th>Life Cycle NPV ($M; 5% discount rate) Through 2050</th>
<th>2050 Annual GHG Reduction (1000 MT CO₂e*)</th>
<th>Other Primary Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capital Costs</td>
<td>Net Benefit Savings - Cost</td>
<td></td>
</tr>
<tr>
<td>Space Planning and Management</td>
<td>2</td>
<td>114</td>
<td>Sustain open space; reduce future operating costs; Flex work offers higher employee satisfaction</td>
</tr>
<tr>
<td>Bldg Energy Standards</td>
<td>20</td>
<td>21</td>
<td>Higher comfort; smaller systems</td>
</tr>
<tr>
<td>Energy Conservation*</td>
<td>103</td>
<td>155</td>
<td>Higher comfort and HVAC control</td>
</tr>
<tr>
<td>Commuter Travel</td>
<td>0</td>
<td>3</td>
<td>Less campus traffic; better services</td>
</tr>
<tr>
<td>Business Travel</td>
<td>2</td>
<td>5</td>
<td>Improved video-conferencing capacity</td>
</tr>
<tr>
<td>Campus Fleet</td>
<td>3</td>
<td>4</td>
<td>PR: Campus vehicles are visible symbol</td>
</tr>
<tr>
<td>Upgrades to Hydro Plant</td>
<td>2</td>
<td>2</td>
<td>Some capital needed anyway to maintain</td>
</tr>
<tr>
<td>Replace TG-1</td>
<td>1</td>
<td>2</td>
<td>Will also extend life</td>
</tr>
<tr>
<td>Co-Fire Wood</td>
<td>0.3</td>
<td>(1)</td>
<td>Local (community) economic benefit; may enable future actions; improved fuel security</td>
</tr>
<tr>
<td>Hybrid EGS and Biogas</td>
<td>142</td>
<td>9</td>
<td>Regional economic benefit (jobs)/national tech interest</td>
</tr>
<tr>
<td>Large Scale Wind</td>
<td>28</td>
<td>6</td>
<td>PR: Visible symbol of sustainability</td>
</tr>
<tr>
<td>Landfill Gas @ Geneva</td>
<td>0</td>
<td>6</td>
<td>Not part of inventory total; reputational enhancement</td>
</tr>
<tr>
<td><strong>TOTAL FOR ALL ACTIONS</strong></td>
<td><strong>$303 million</strong></td>
<td><strong>$230 million</strong></td>
<td><strong>211,000 MT</strong></td>
</tr>
</tbody>
</table>
Green Development Actions

- **Building Energy Standards** – Less Energy per Square Foot
- **Space Planning and Management** – Maximize Use of Existing and New Space
- **Improved Land Use** – Maintain a Compact, Efficient Campus
5 Challenges

1. Peer competition
2. Space managed locally
3. Space as status
4. Money doesn’t keep up with trends
   – Active learning classrooms
5. Trends differ: business vs. higher education
   – Hot desking/hoteling
   – Alternate work strategies
Okay, 5 More…

6. New construction – gifts/recognition/legacy
7. Existing buildings – structural constraints
8. Academic calendar
9. No static state
10. Multiple stakeholders, complicated issues & sometimes no clear decision-maker
    – Classroom scheduling, management & technology
5 Final Thoughts

1. Easier to do space management in times of restricted resources
2. Space resources are integral to so many priorities – e.g., faculty growth, delivery of new pedagogies – involved in many interesting discussions
3. Rewarding – shape the oversight and use of space resources
4. Smart people can solve complex problems when empowered to do so
5. Fun!
Thank You!

http://dbp.cornell.edu/home/offices/space-planning/
Bonus Slide