

Behind the Scenes with UCAR Sustainability Action Steps You Can Use

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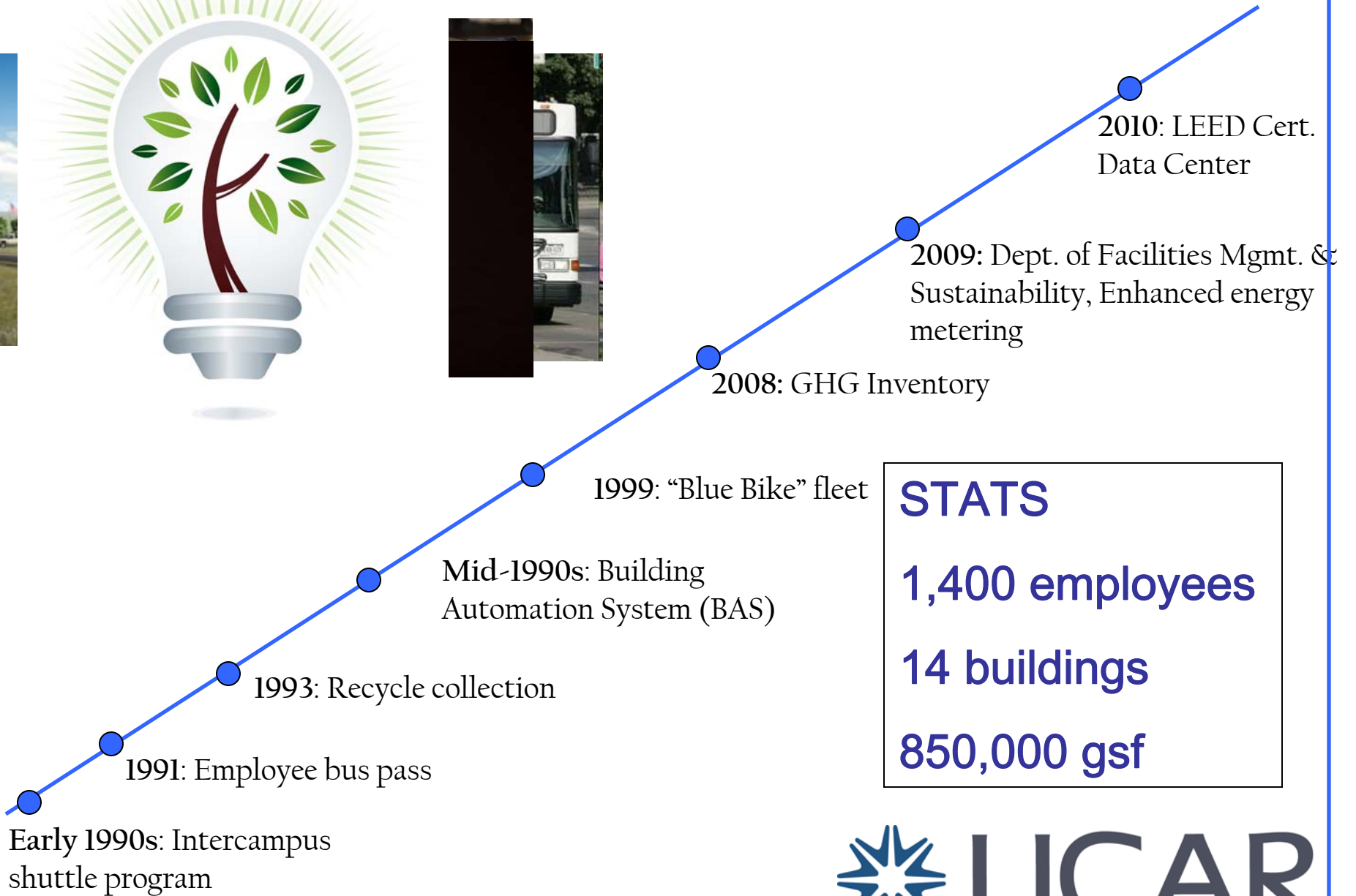
Facilities Management & Sustainability
University Corporation for Atmospheric Research (UCAR)



Building Toward Sustainability

- Foundation
- Architecture
- Metrics
- Finance





STATS

1,400 employees

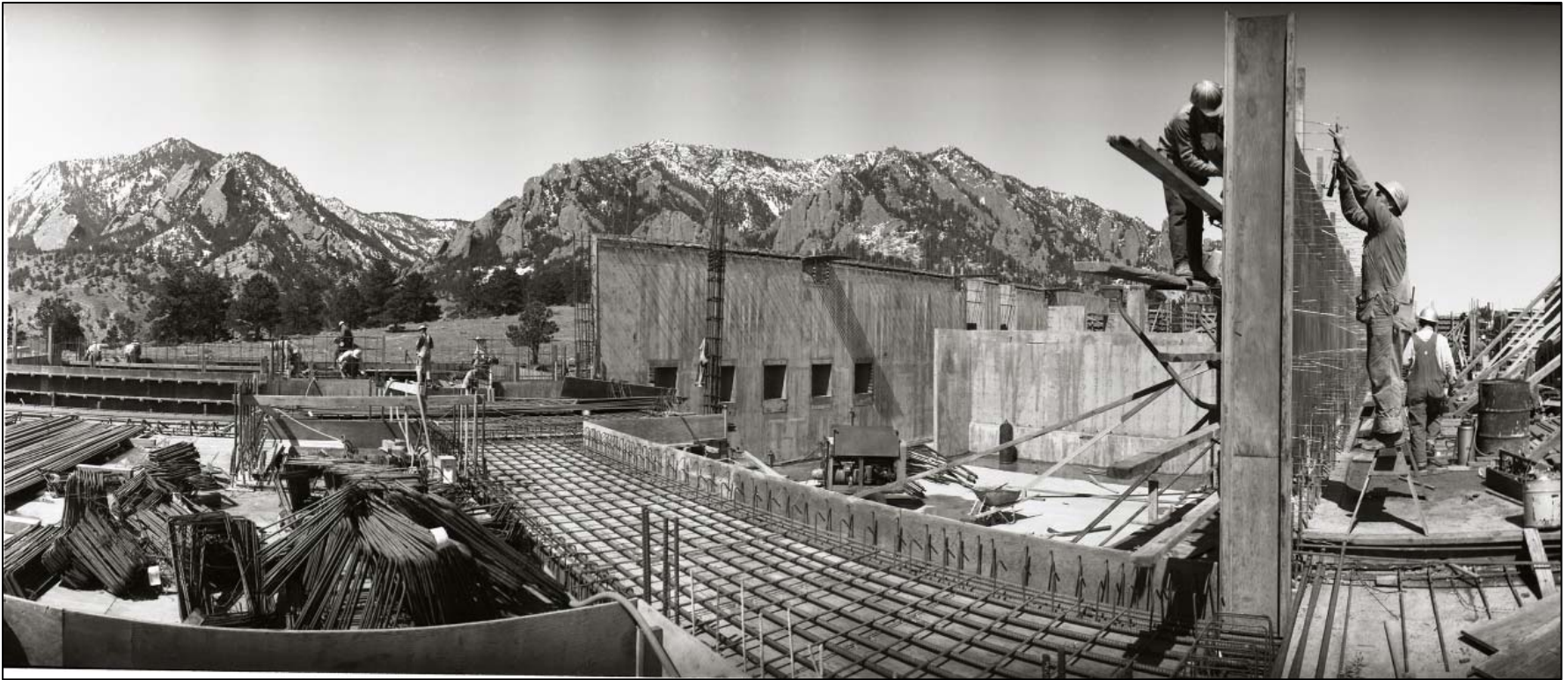
14 buildings

850,000 gsf



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Foundation



High Level Buy-In

- Do your key policy & decision makers buy-in and support sustainability?

Yes?
GO!



No?
Pause!

Culture at the Grassroots

- Have you addressed the paths of less resistance?

**Recycling &
Composting**

**Transportation
Options**

**New Hire
Orientation**

**Educational
Opportunities**

No?

Pause!

“Top of Mind Awareness”

- Can you express sustainability as an integral part of *your* organization?

Yes?
GO!



No?
Pause!

Planning

- Have you developed a sustainability action statement and business plan?

Yes?
GO!



No?
Pause!

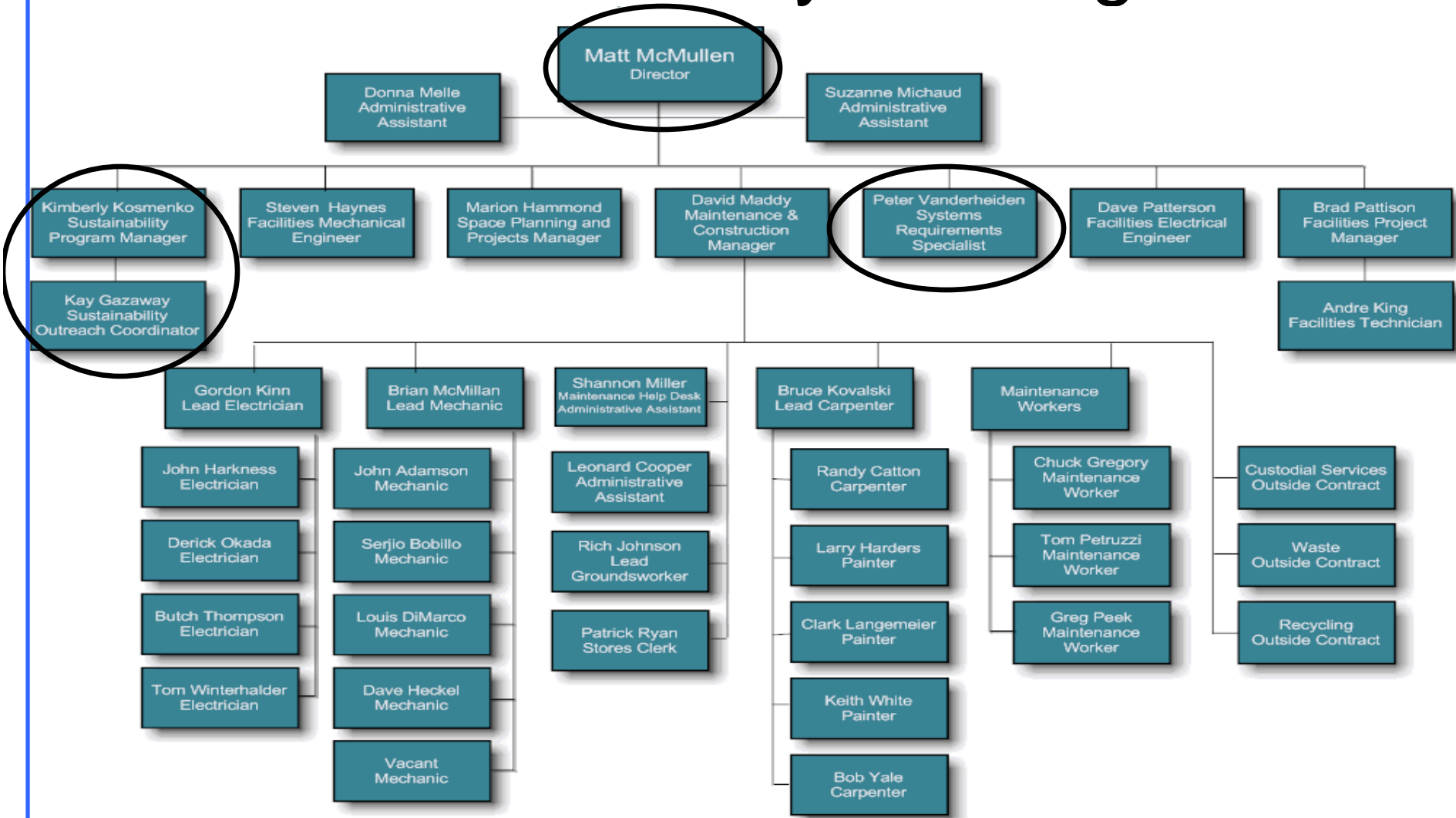
Architecture



Areas of Influence

- Energy
- Greenhouse Gas Emissions
- Water
- Waste / Recycling
- Renewable energy
- Operations & Maintenance
- Reporting
- Employee Engagement

Facilities Management & Sustainability Staffing



Staff Training

- Formal Opportunities:
 - LEED Accredited Professional (LEED AP)
 - Trade associations
- Informal and Free Resources:
 - Webinars from FEMP and trade orgs.
 - External collaborations: University of Colorado, City of Boulder, Boulder County, Boulder Community Hospital, NREL, Natural Capitalism Solutions, TMA Wind, Research Applications Lab

Metrics



Executive Orders 13514/13423

- **GHG Emissions:** Set reduction target approved by OMB
- **Energy Use:** Reduce 30% by FY2015
- **Renewables:** 7.5% energy from renewables by FY2013
- **Water Efficiency:** 25% reduction by FY2020
- **Waste reduction:** Divert 50% non-construction waste by FY2020

- Website for more information:
www1.eere.energy.gov/femp/regulations/eo13514.html

Greenhouse Gas Inventory

- EPA Climate Leaders
 - We anticipate EPA could be future enforcement arm for GHG emissions management
 - Extensive technical resources and tools
 - Free consulting help
 - Free positive PR



Federal Energy Management Program (FEMP)

- Tools & calculators
 - i.e. Building Life Cycle Cost Analysis
- Webinars (First Thursdays)
- Policy & financing information
- *Don't miss this resource!*

Website: <http://www1.eere.energy.gov/femp>

Building Energy Use

- DOE/EPA EnergyStar
 - Annual operations tracking
 - Computer systems tracking
 - Save time on potential LEED buildings – Energy Star is a prerequisite.

Energy Metering

- Began in 2003 – prepare for potential regulation and better understand loads
- Tracking actual energy usage vs. making assumptions
- Save big \$\$ on computer equipment
- Building Information Modeling (BIM)
- Building Automation Systems (BAS)

Finance



Spend \$ on Better Facilities, Not on Energy Waste

- ROI calculation
 - Remember to include the cost of business-as-usual *and* the ROI if a measure is taken
- Utility company tools
- 3rd party financing
- Choose the right order for projects

- Pitching to management
 - Save vs. Waste

Utility Company Tools

- Ask your account representative what your utility offers
- Look for rebates on energy conservation measures
- Look for energy planning assistance opportunities
- Does your state have a Renewable Portfolio Standard (RPS)?

3rd Party Financing

- Energy Service Companies (ESCO)
- Energy Savings Performance Contract (ESPC)
- Utility Energy Service Contracts (UESC)
- Power Purchase Agreement (PPA)

Wrapping it Up



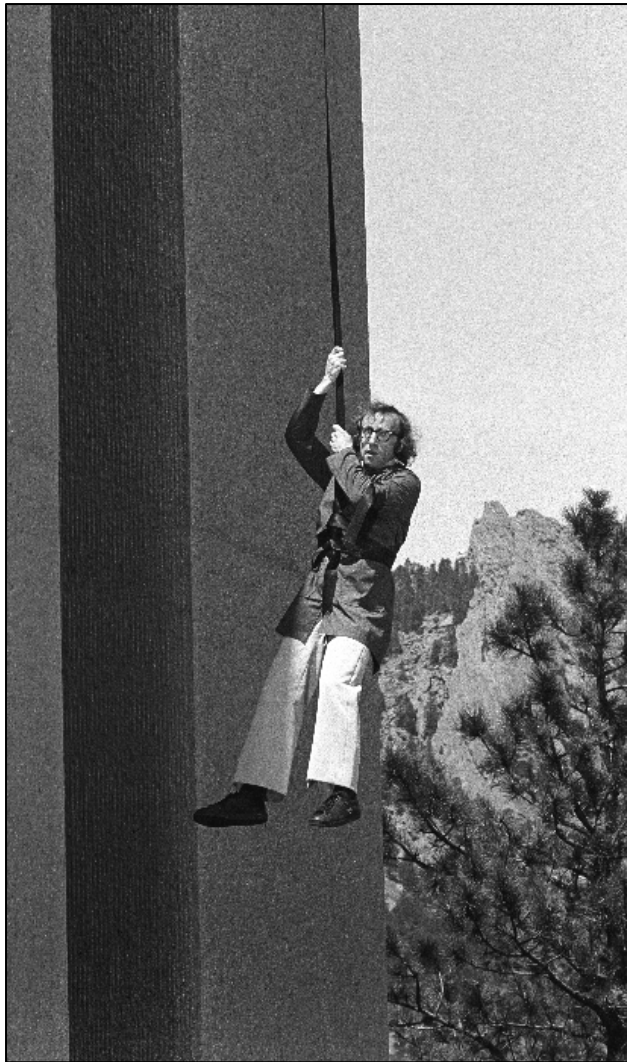
Sustainability Benefits to Your Organization

- Reduce the cost of doing business day-to-day
- Improve the quality of your indoor spaces
- Improve employee morale
- Attract the best employees

Final Points

- Sustainability is a process, not a destination
- Joint venture
- Numerous low to no cost resources with the government and utility companies
- Measurement is key
- Sustainability needs to be fully integrated, not a stand alone effort/individual

Questions?



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Resources

- **FEMP:** www1.eere.energy.gov/femp
- **Executive Order 13514:**
www1.eere.energy.gov/femp/regulations/eo13514.html
- **Climate Leaders:** <http://www.epa.gov/stateply/>
- **U.S. Green Building Council:** www.usgbc.org
- **Green Building Certification Institute (LEED AP):**
www.gbci.org
- **Energy Star:** www.energystar.gov
- **Renewable Portfolio Standards:**
http://www.epa.gov/chp/state-policy/renewable_fs.html