

# Shifting Organizational Culture

## Innovation for Energy Conservation

Jeni Cross





# Shifting Organizational Culture

How do we engage staff?

How do we get leaders on-board?

How do we engage resistors?

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# Poudre School District: Leader in Sustainability

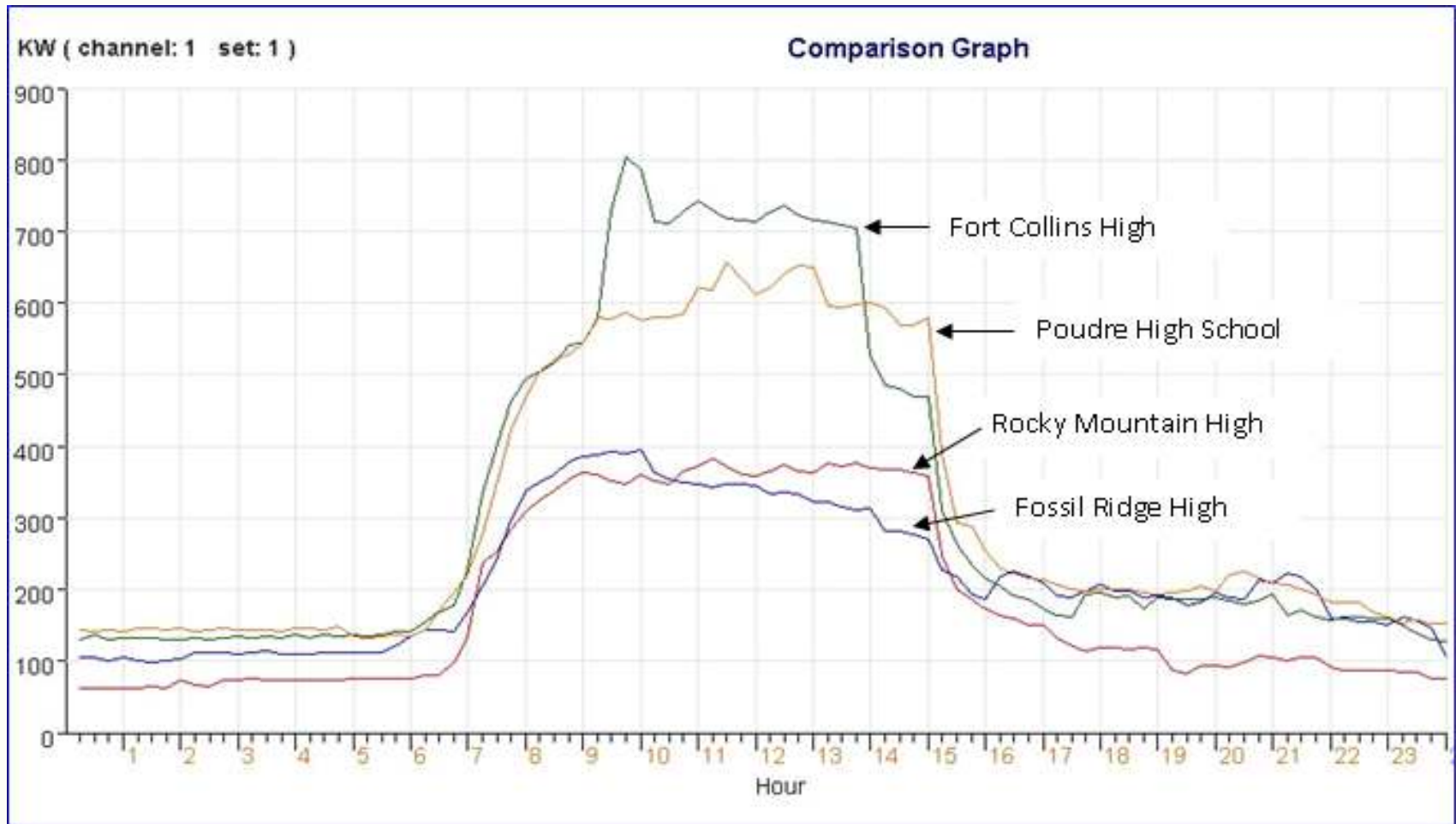
- 64% of buildings **ENERGY Star** 2009, 2010, 2011
- Rice Elementary **ENERGY Star 100**



- **LEED Silver High School**
- **LEED Gold Elementary**



# KW Use in a Typical Day (2007) at Four High Schools



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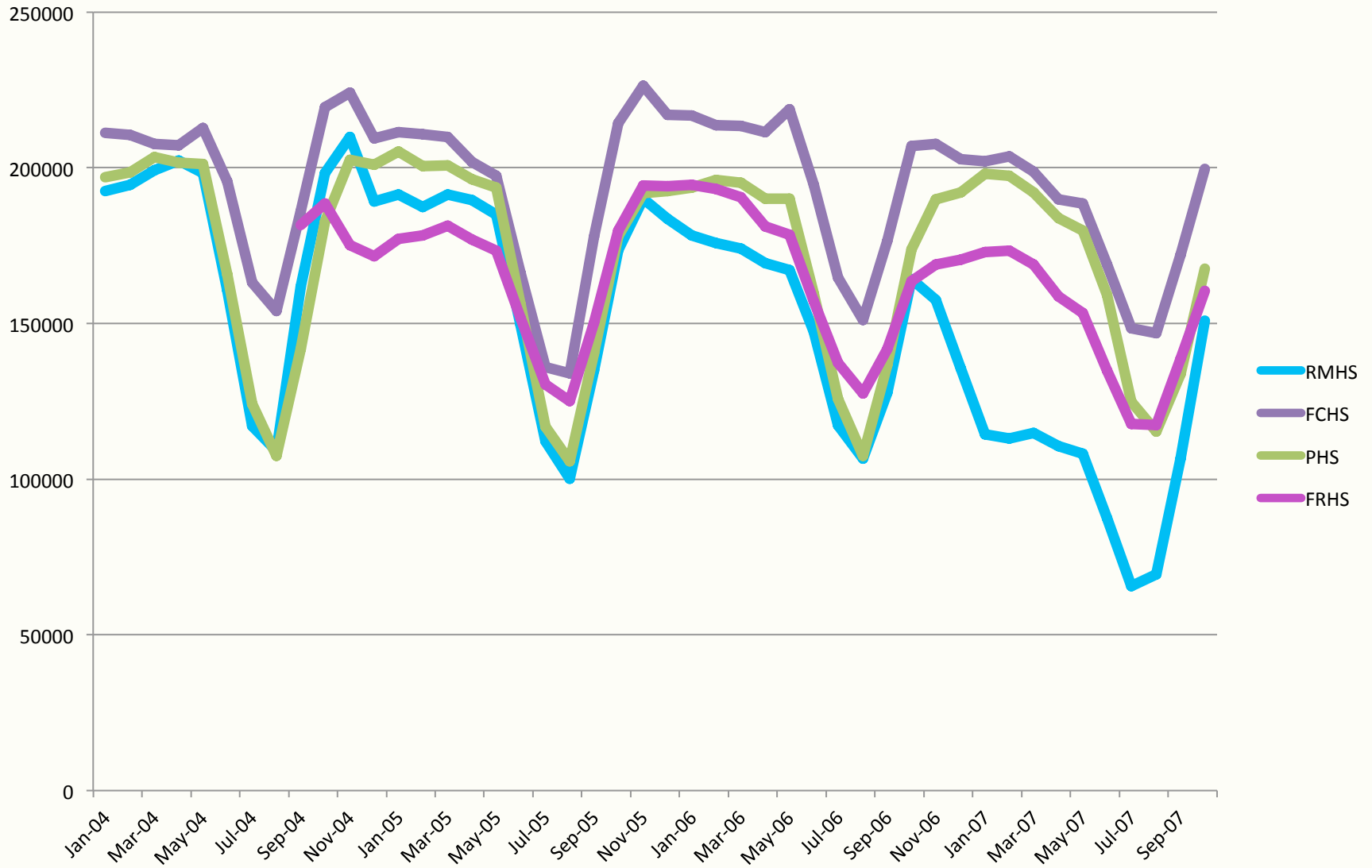
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# Poudre School District

## High School Energy Use kWh/ft.<sup>2</sup>





# Most Energy Efficient in Colorado

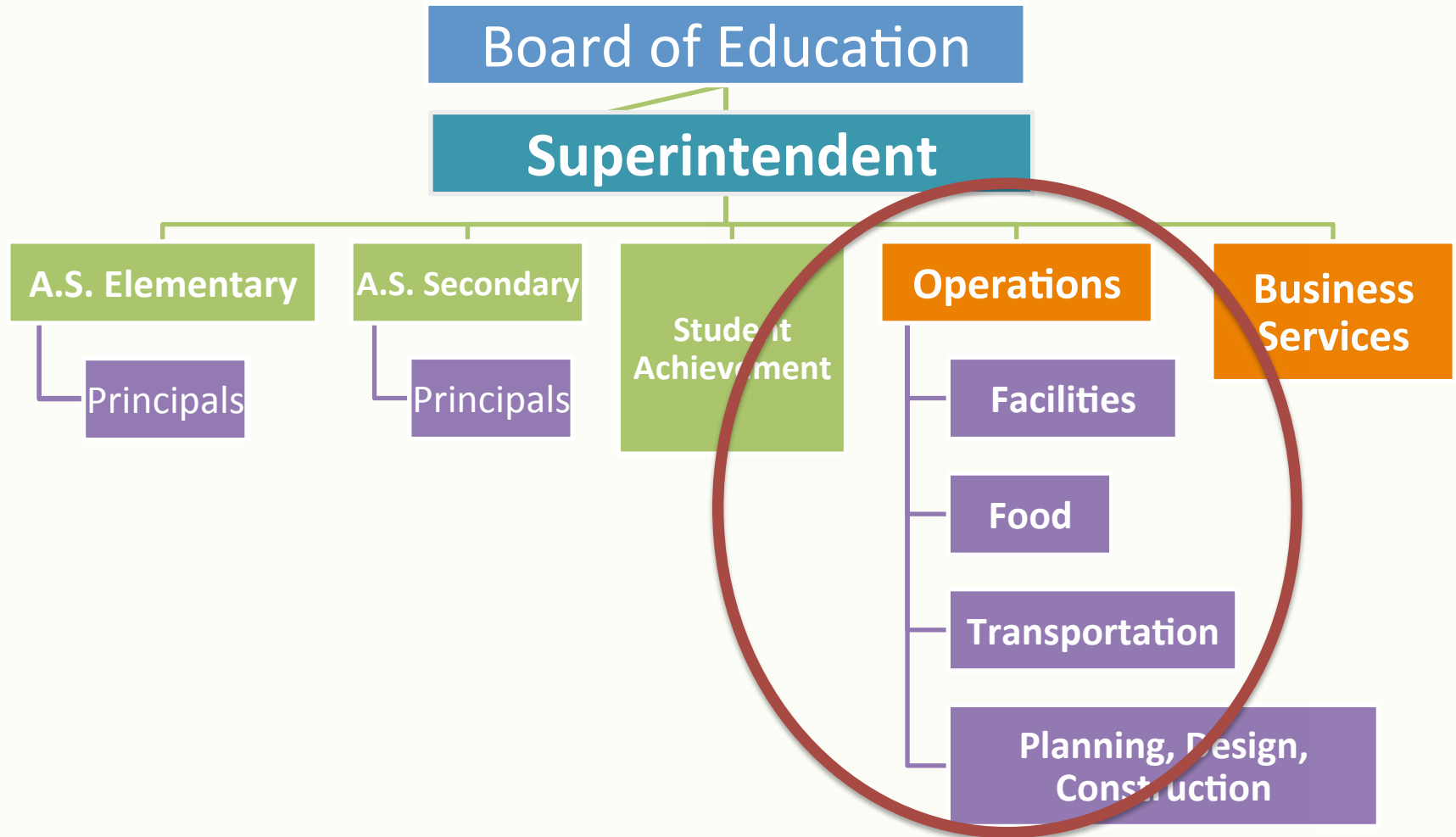
25% less kBtu/square foot/year

33% less kWh/square foot/year

37% less \$/square foot/year



# Organizational Structure



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# Organizational Change (Kotter 1995)

1. Urgency for Change
2. Create Team of Change Agents
3. Create a Vision
4. Communicate the Change
5. Remove Barriers
6. Create Short Term Wins
7. Build on Change: New Processes
8. Anchor the Change in Organizational Culture

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# 1. Urgency

\$

**Bad Design**

**Uncomfortable Buildings  
Environmental Concerns**





## 2. Change Agents: Original Green Team





# 3. VISION: When “Green” is a 4 Letter Word

Solution = “High Performance Buildings”



- Teach
- Cost Effective
- Energy Efficient
- Responsible:
  - public \$
  - natural resources
- Healthy Environment

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# Resistance to “Green Buildings”

## Presumed associations

Green = environmental extremists

## Mythical fixed pie

Energy efficient is uncomfortable

“I remember we had problems with the lexicon. We said ‘green buildings’ and folks thought that this meant we had something to do with Greenpeace and saving whales... back then, there were green parties and the radical elements that used the word green, and we were just talking about doing something that again was a better building...” (Leader in Operations Dept.)



Fire at Vail Resort





# What is wrong now?

## Diagnostic Frames



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## 4. Communicate Change



“We want a building that is light on the environment, using recycled materials, doesn’t smell like a new car when you walk in, is non-toxic to people, has delightful interiors, is day-lit, is energy-efficient, is acoustically well-designed, is a place where people want to be, uses less water – all this great stuff... Actually, saving money is a consequence, is an outcome of designing this high-performance building. And isn’t that wonderful?” (Leader in Operations Dept.)



# 5. Remove Barriers

## Obstacles to Green Building

- Individual obstacles
  - choosing cheapest initial costs
  - believing green costs much more
- Organizational obstacles
  - lack of information feedback
  - inertia
  - lack of understanding the “green” language

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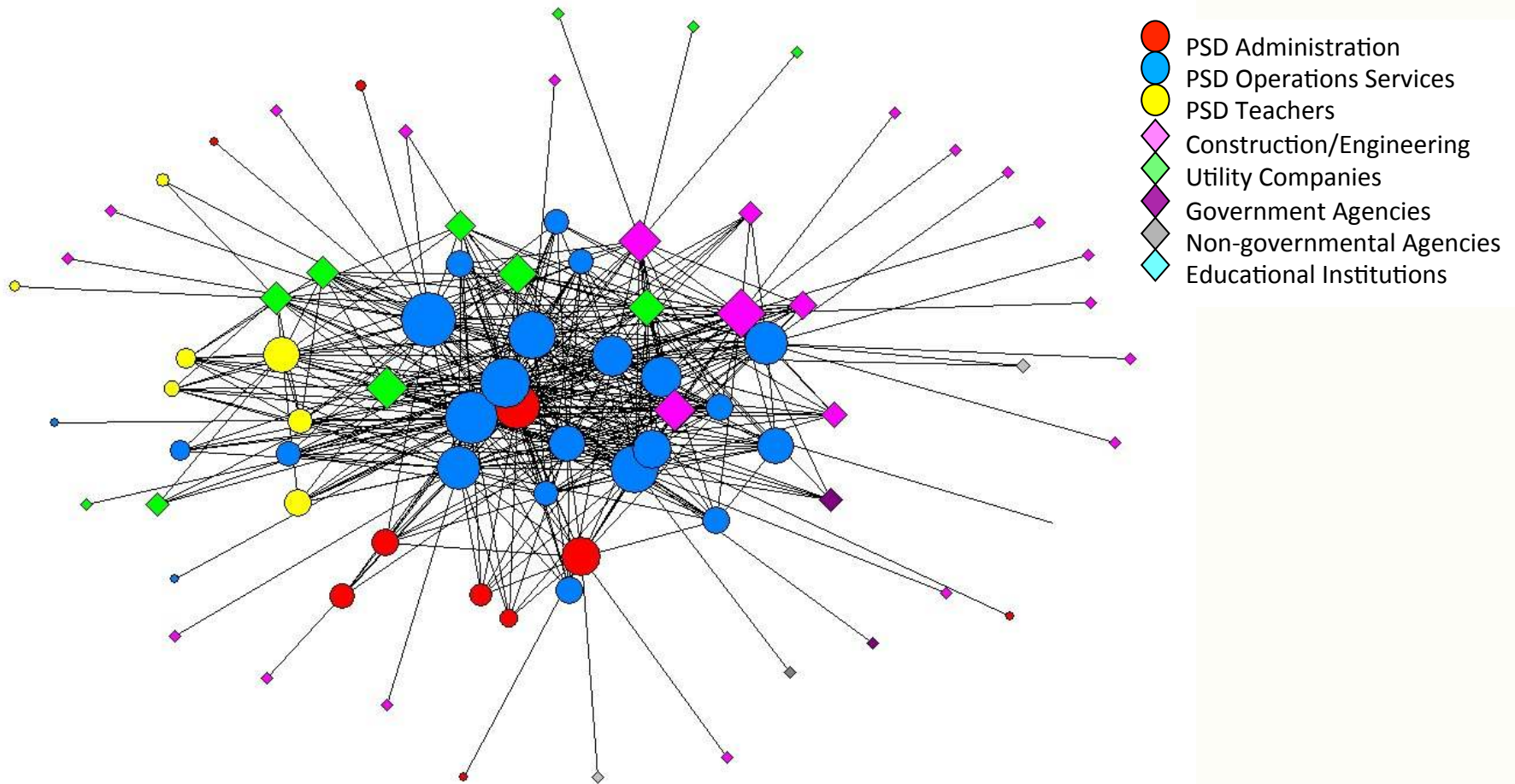
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# Learning Network



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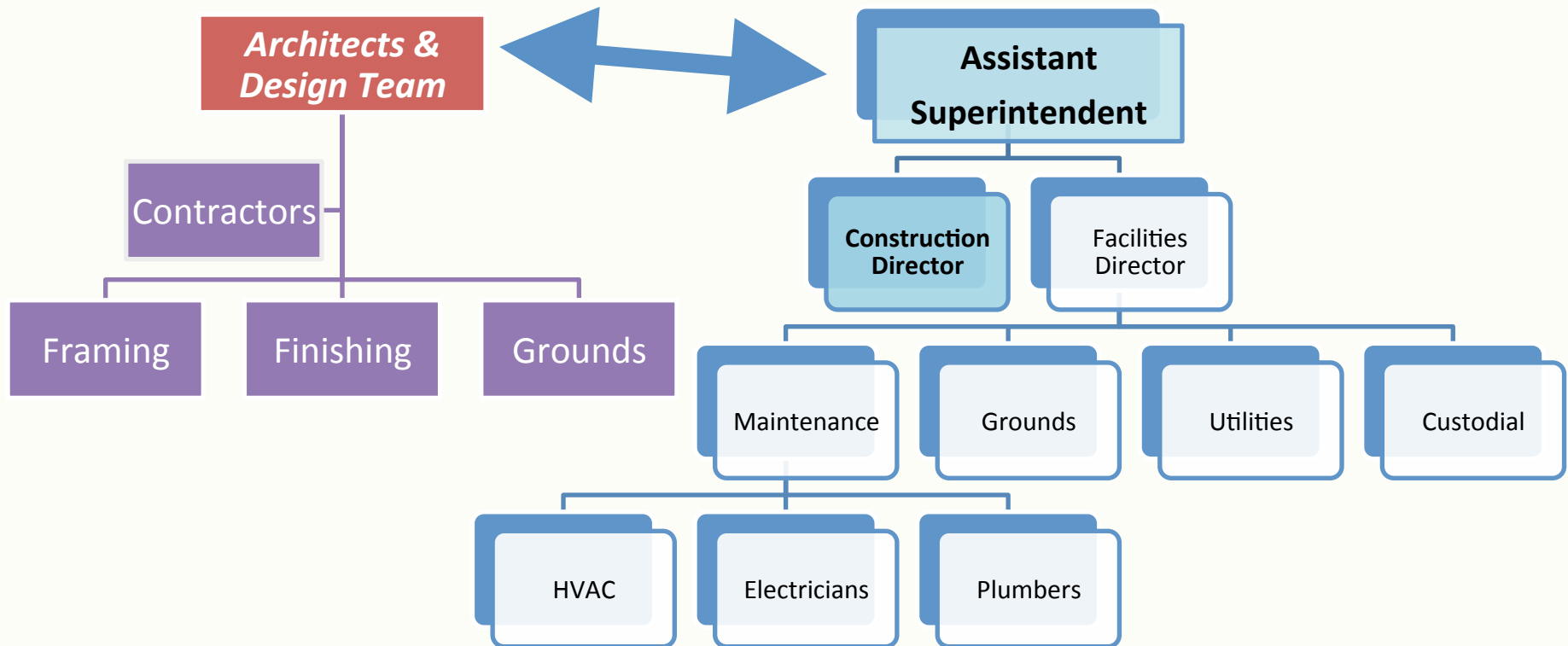
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# PREVIOUS Construction Relationships



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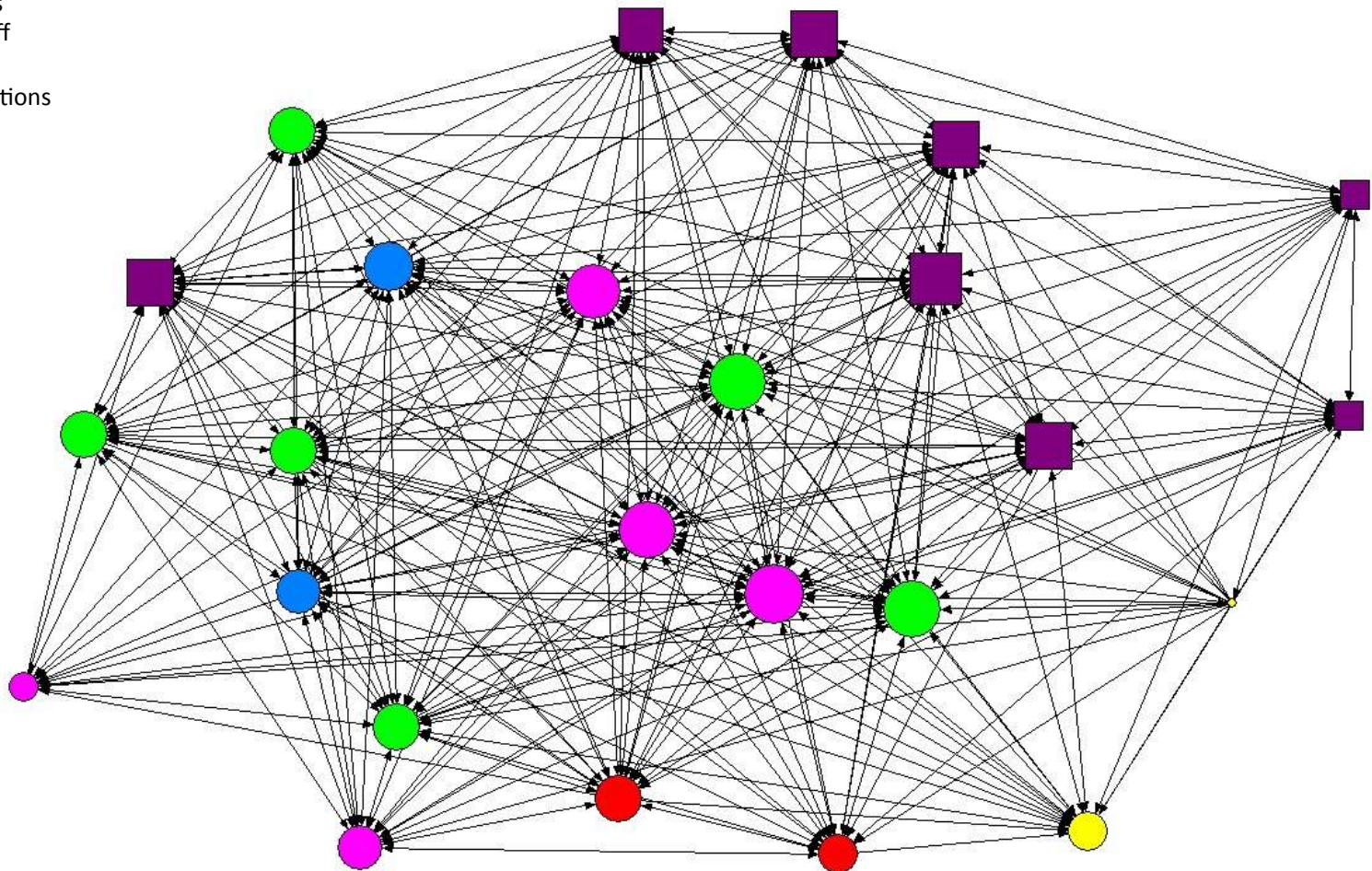
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# Dense Inter-Organizational Network

- PSD Administrators
- PSD Directors
- PSD Coordinators
- PSD Facilities Staff
- PSD Teachers
- Outside Organizations





## 6. Create Short Term Wins

“One school, and they immediately got a big national award for the design of that school. Energy Star gave 10 of our schools their highest rating, and that’s a big presentation. Those are national presentations. ... The one that they really started getting a lot of recognition on was Zach.”







## 7. Build on Change: New Processes



Green Team 2009

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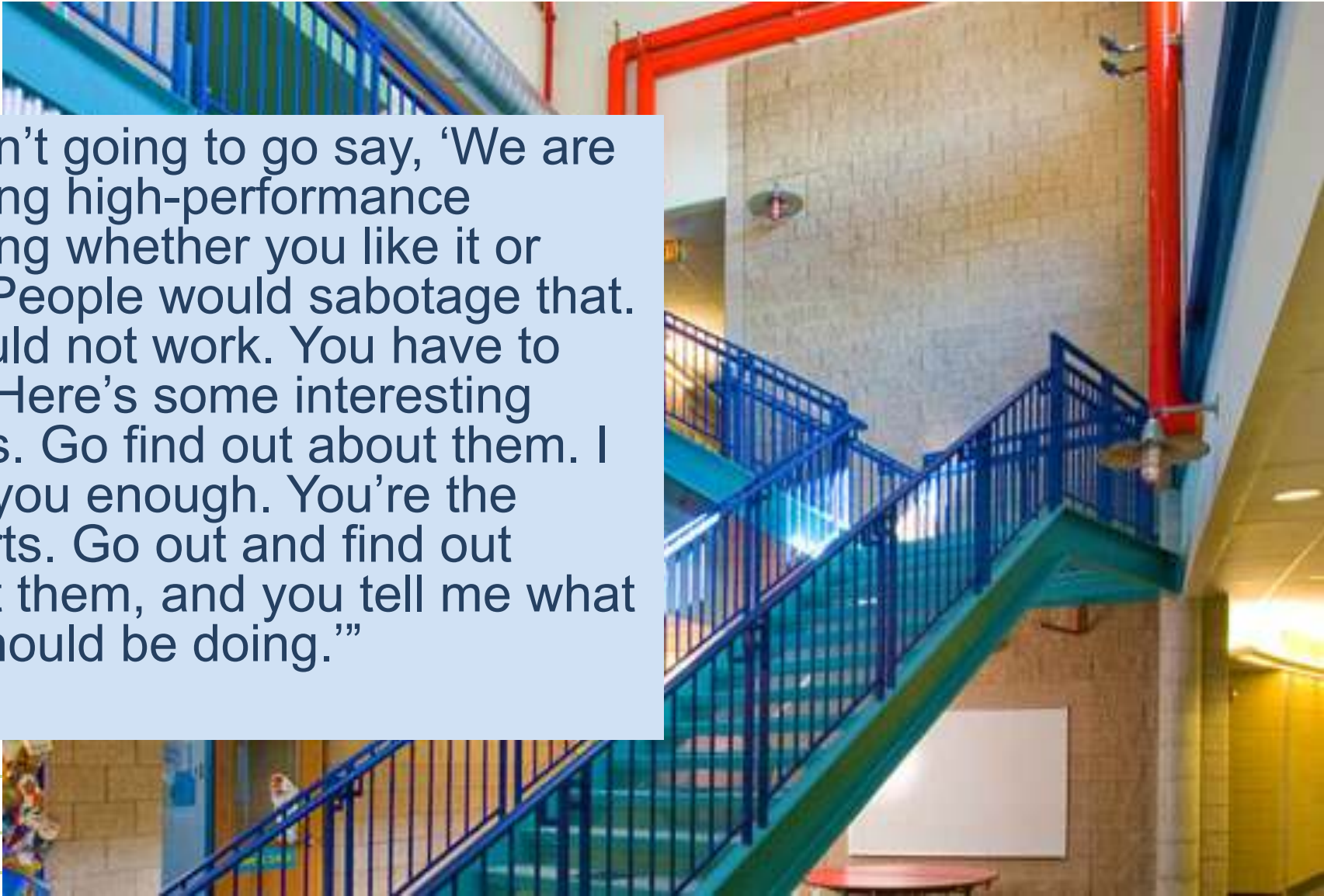
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# Team

I wasn't going to go say, 'We are building high-performance building whether you like it or not.' People would sabotage that. It would not work. You have to say, 'Here's some interesting things. Go find out about them. I trust you enough. You're the experts. Go out and find out about them, and you tell me what we should be doing.'"







# Mutual Learning



“It was a learning experience for me. If I’m gonna find something, I can’t just say, ‘I know.’ I’ve got to have facts and numbers. Everybody here’s smart enough, if they look at the facts and the numbers, they’re gonna go the right way... I’ve had to back off, too, because I see the numbers and I’ve had to go [with others’ ideas], too. It sort of goes both ways.” (Operations employee)

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# Mutual Support

“We were able to do what we did because we had all these great partners from Utilities, Energy Star, architects, consultants, everyone helped us, and we learned from them.”



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# Energy Management: Three Approaches



## OPERATIONS

- Automation
- Procurement
- Peak Demand Management
- Custodial Practice

## FACILITIES

- Engineering
- Design
- Equipment Maintenance
- Facility Upgrades

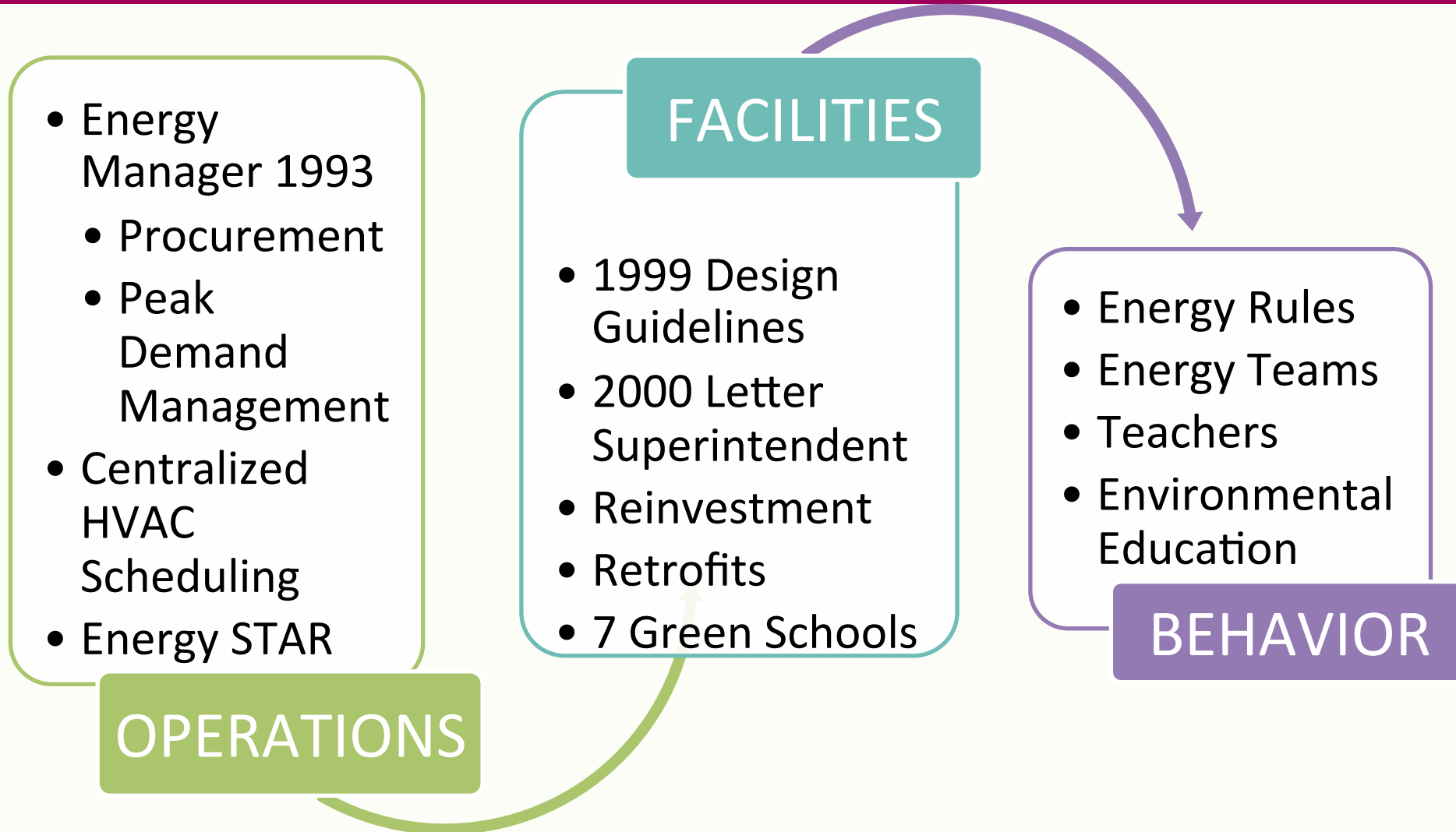
## BEHAVIOR

- Routine Behaviors
- Behavior Audits
- Communication
  - Norms
  - Goals
- Feedback





# Poudre School District



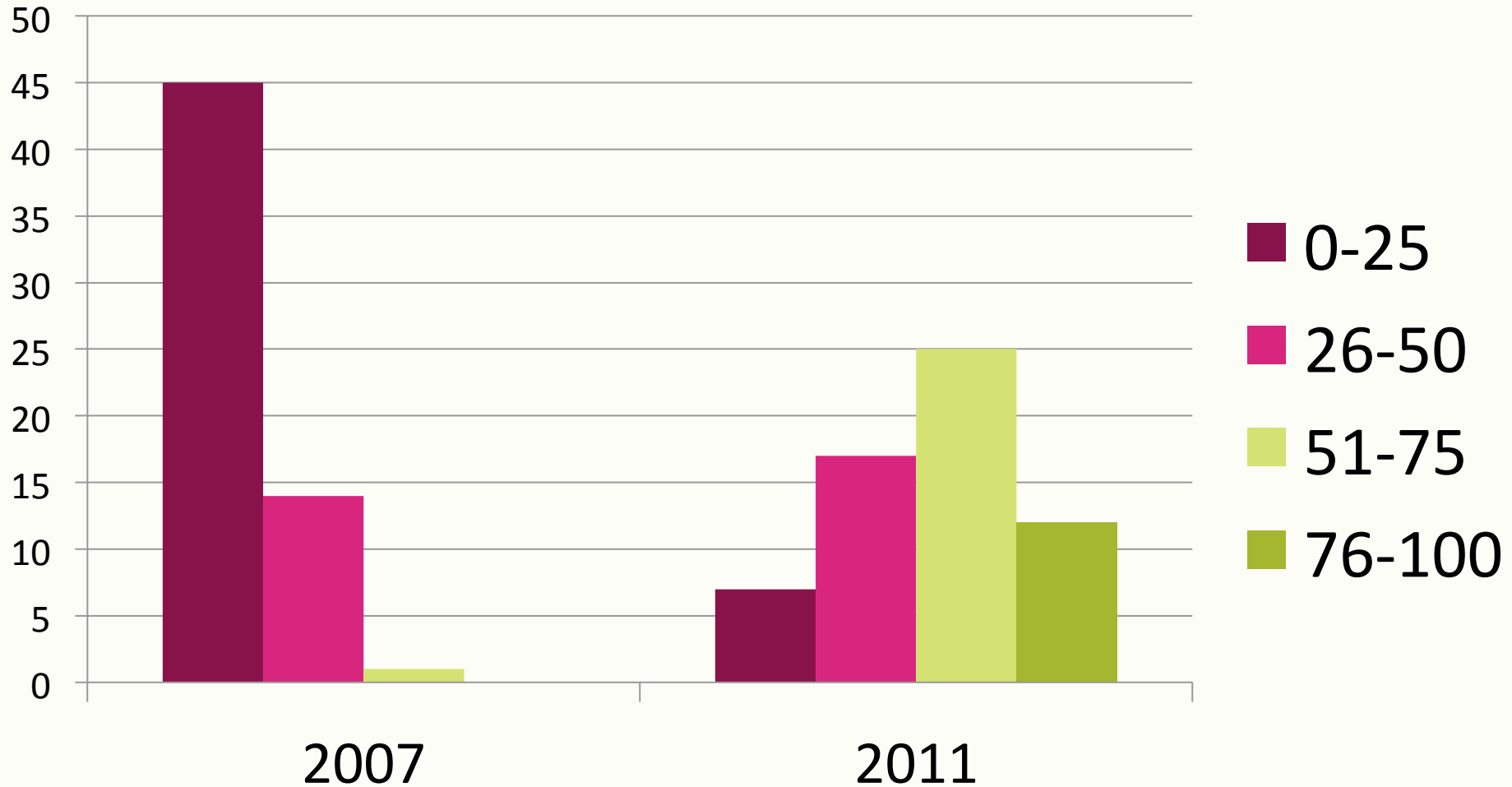


# Douglas County Schools



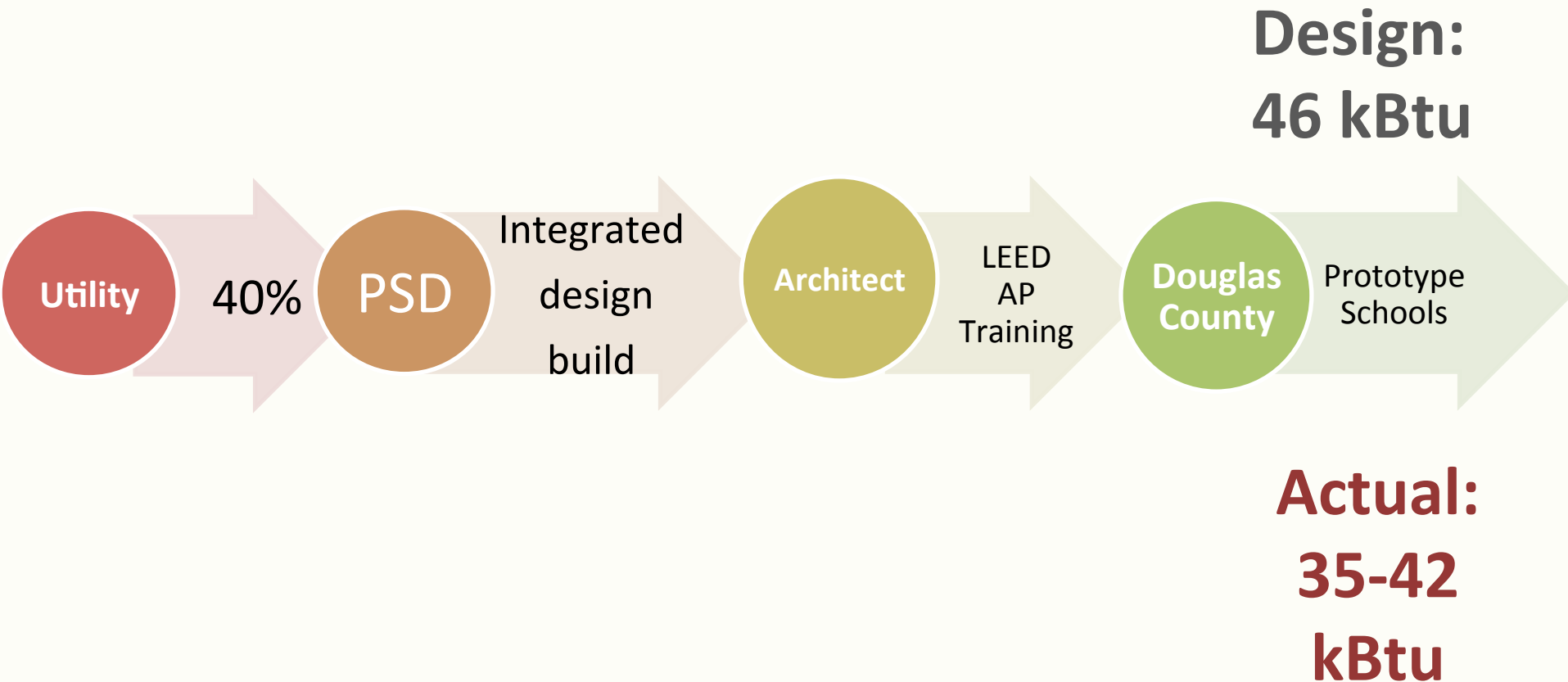


# ENERGY Star Scores 2007, 2011





# Spreading Change



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# FORMAL Leaders

1. Articulate vision
2. Empower staff
3. Give decision-making power
4. Provide individual support
5. Set high performance standards



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# INFORMAL Leaders



- Inspire others
- Model expected behavior
- Communicate expectations
- Encourage & Empower

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# Average Energy (natural gas and electricity combined) Costs Per Square Foot

- Education \$1.14
- Food sales \$4.17
- Food service \$4.08
- Health care \$2.51
- Lodging \$1.43
- Retail \$1.34
- Office \$1.58
- Public assembly \$1.25
- Religious Worship \$0.62
- Service \$1.28
- Warehouse/Storage \$0.77

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