

A Holistic Approach to **HVAC System Performance**

May 2, 2019

Russell Profile

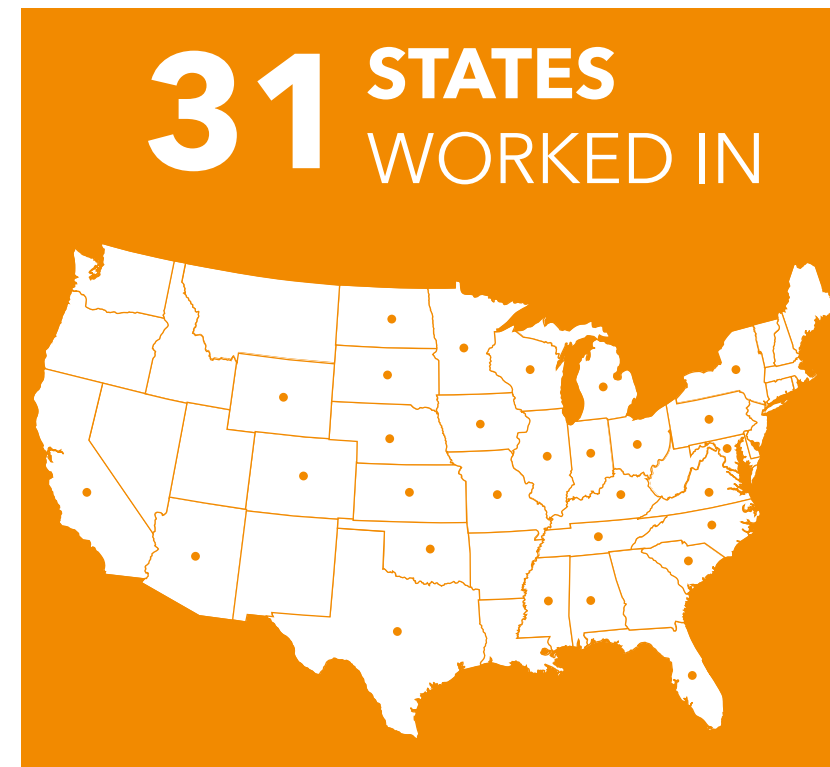
Headquartered in **Davenport, IA**

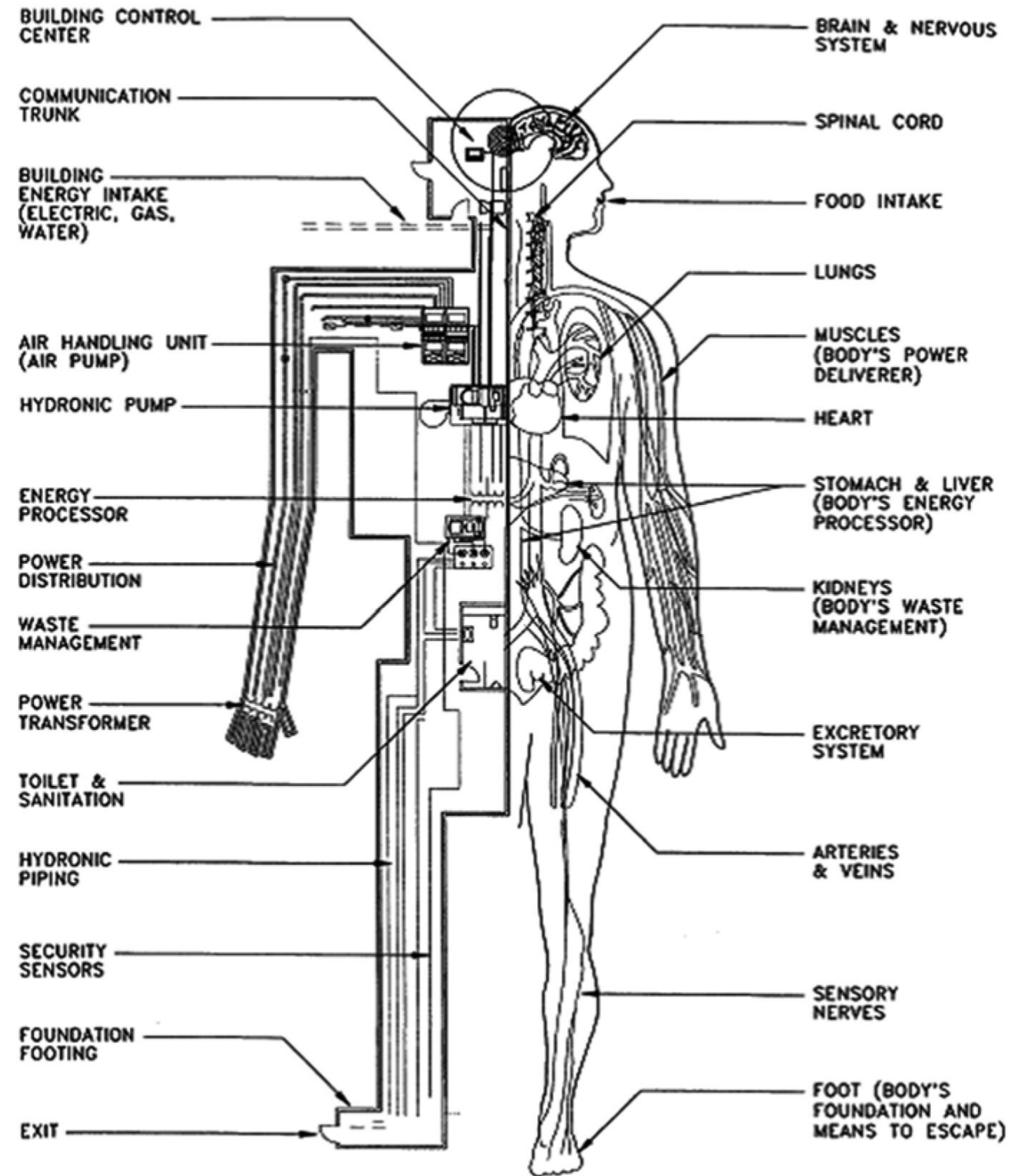
Core Services:

- Construction
- Development

Value Driven Organization

Community Engagement Focus





Today's Topics



Assessments:
When & Why



Commissioning



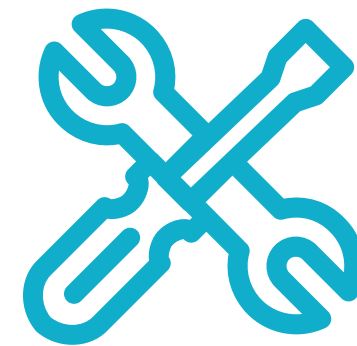
Warning Signs of
Ineffective Systems



Costs of Ineffective
Systems



Common
Unplanned Costs



Simple
Maintenance Tips



Assessments: **When & Why**

FACILITIES BUILDING ASSESSMENT PURPOSE

**Define Owner's
Goals & Objectives**

**Develop Current
Facilities Conditions
& Requirements**

**Assess Facility
Functionality &
Identify Areas of
Improvement**



Assessments: **When & Why**

WHEN SHOULD IT BE COMPLETED?

- Now is the time!!
- Information for next steps
- Large project planning
- Tracking system





Recommissioning / On-Going **Commissioning**

DEFINITION:

Periodic **mini re-commissioning** of critical systems in a pre-commissioned building.





Recommissioning / On-Going Commissioning

BENEFITS:

- Lowers lifecycle cost
- Maintains Owner's current facility requirements
- Promotes communication
- Promotes documentation





Retro Commissioning / Existing Building **Commissioning**

DEFINITION:

Commissioning a building that has not been commissioned before.





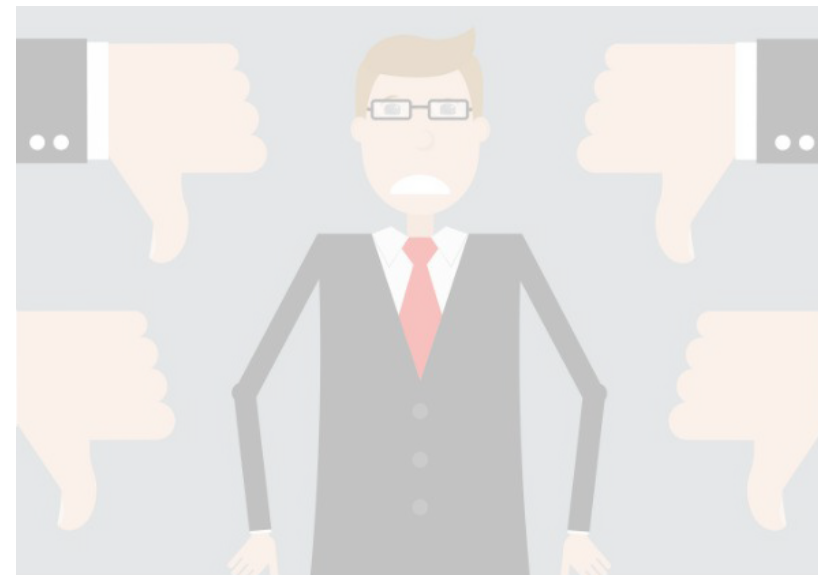
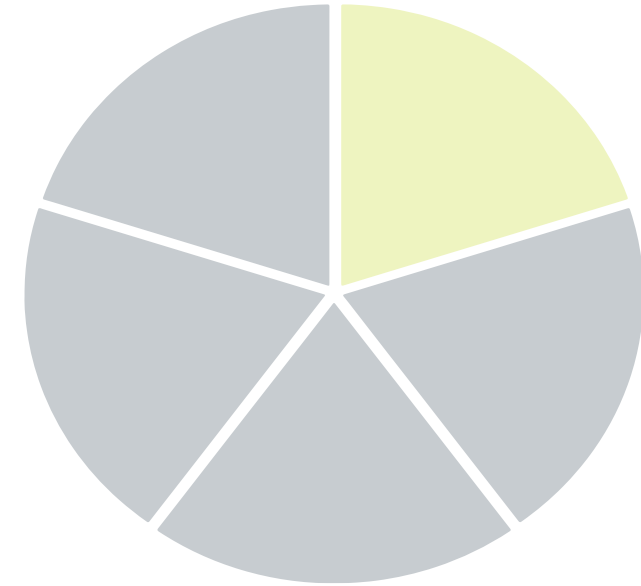
Retro Commissioning / Existing Building Commissioning

BENEFITS:

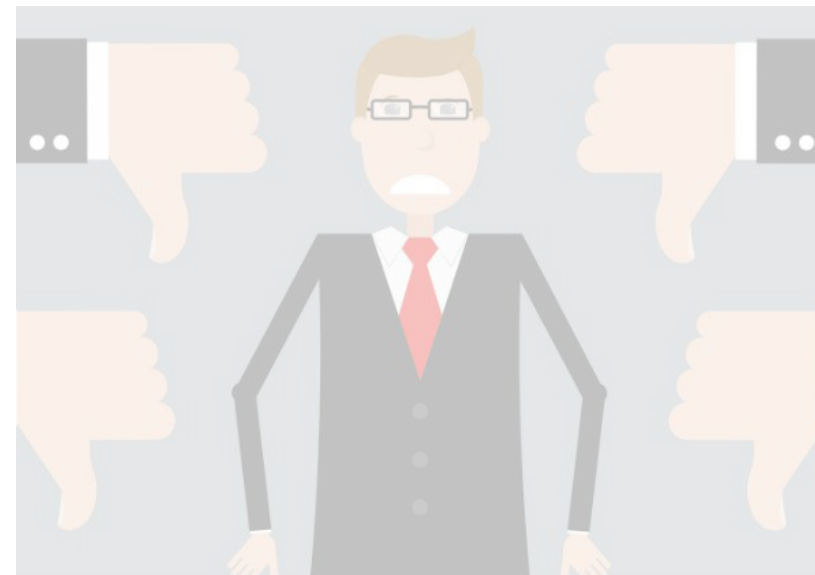
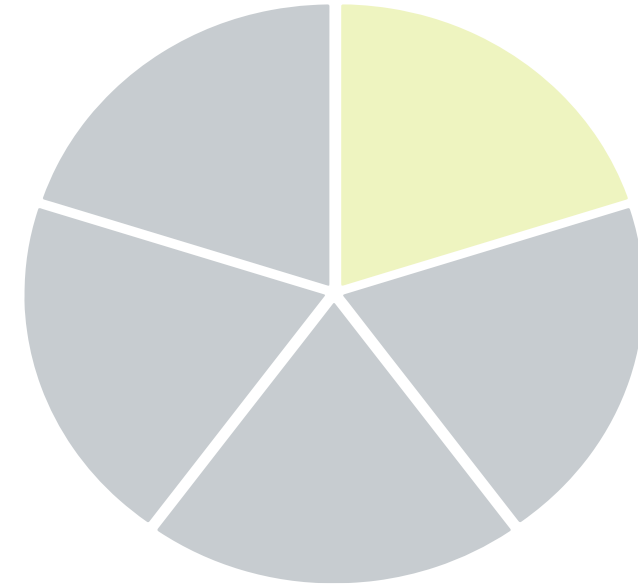
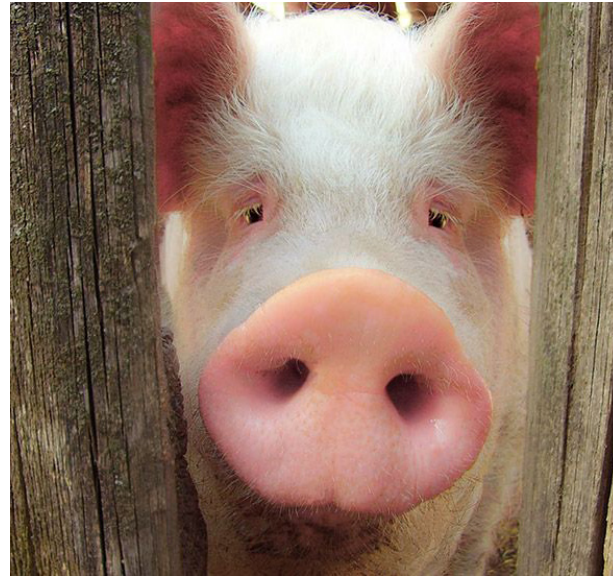
- Optimizes building performance
- Solves comfort and operation problems
- Reduces energy and operation costs
- Operation & Maintenance training
- Improves building documentation



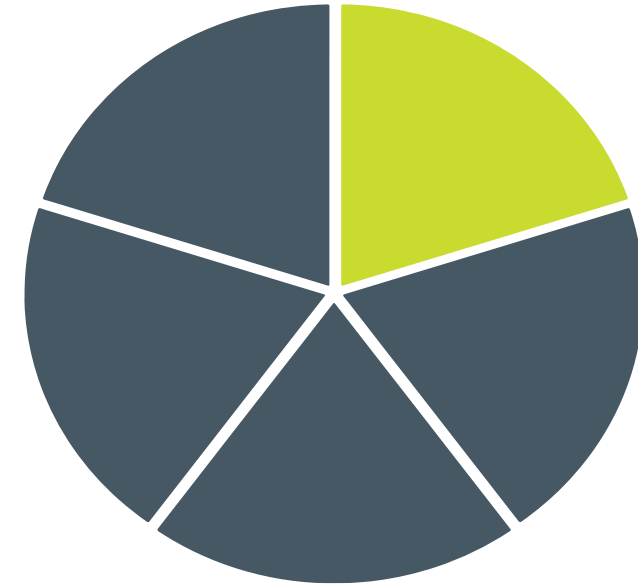
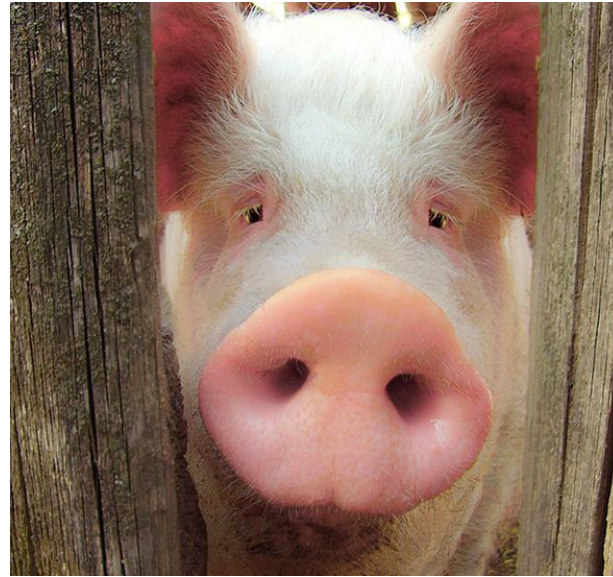
Warning Signs of Ineffective Systems



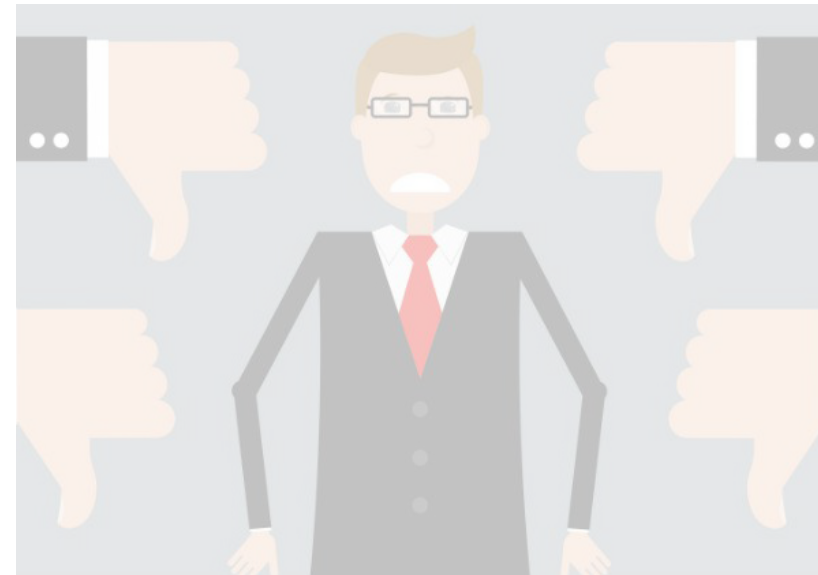
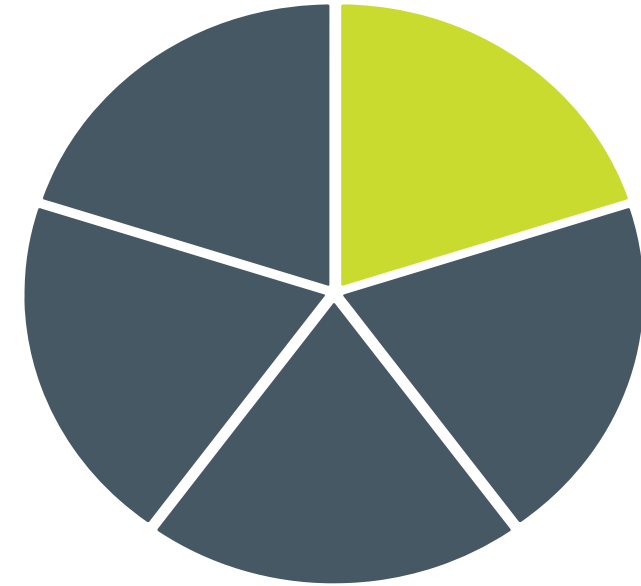
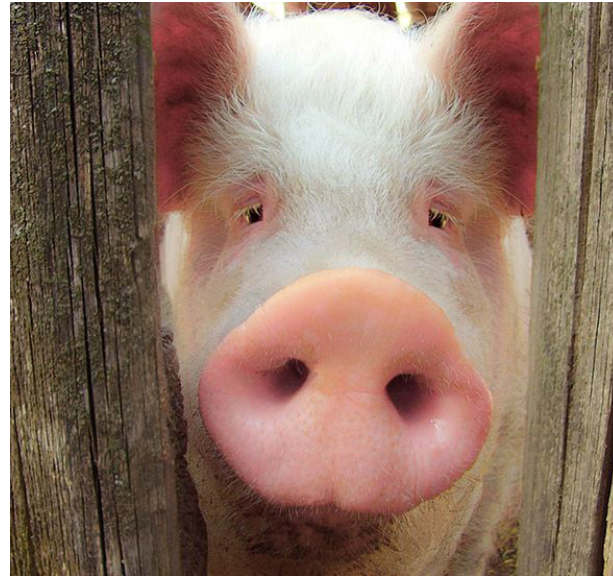
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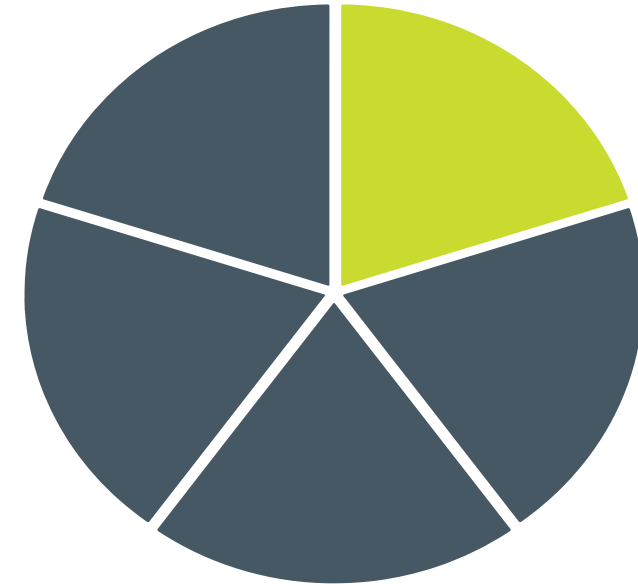
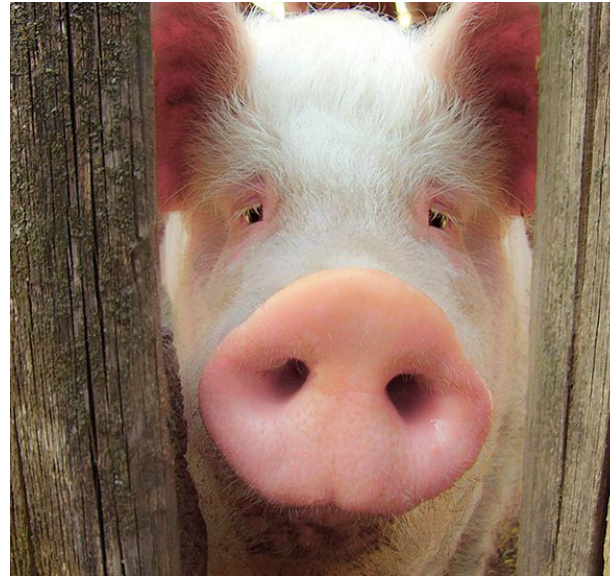
Warning Signs of Ineffective Systems



Warning Signs of Ineffective Systems



Warning Signs of Ineffective Systems





Costs of Ineffective Systems

- Increased utility costs
- Repair costs
- Unplanned costs take money away from where it was originally intended



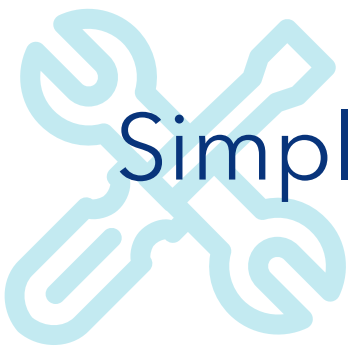


Common Unplanned Costs

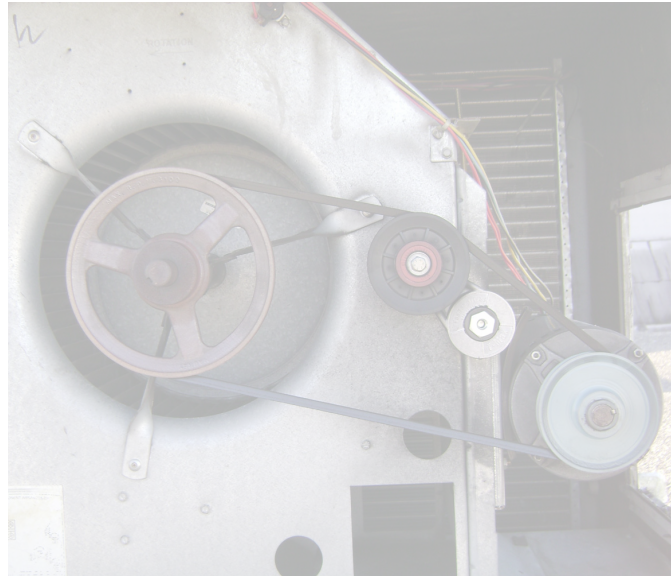
For Repair and Replacements

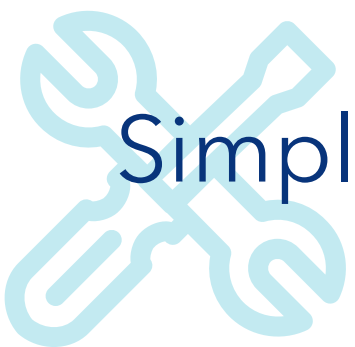
Motors & Controllers	\$1,200 - \$15,000
Fan Wheels	\$500 - \$750
Coils	\$4,500 - \$30,000
Pumps	\$ 750 - \$34,500
Water Heaters	\$15,000 - \$85,000



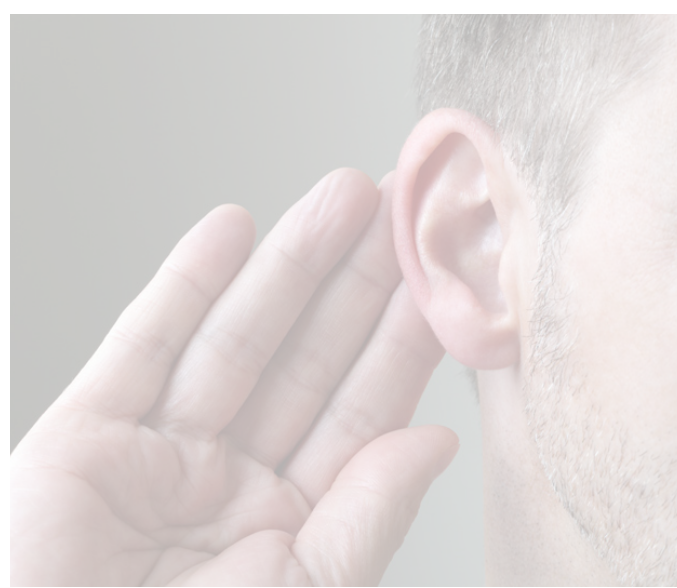
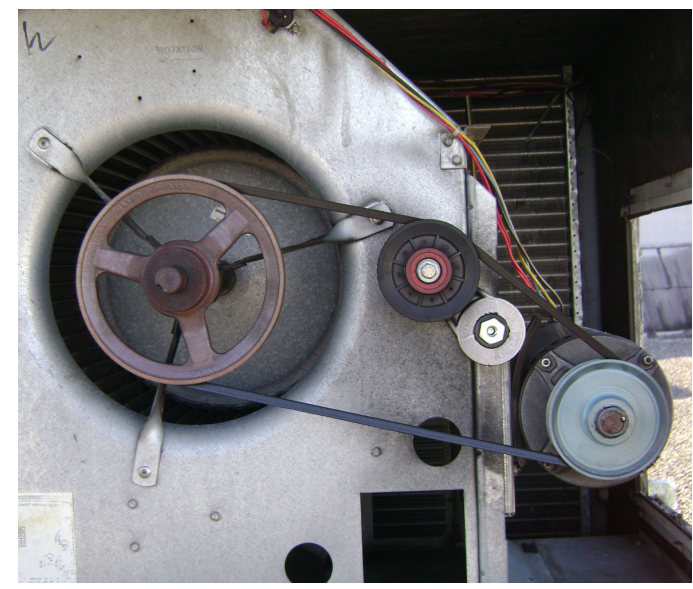


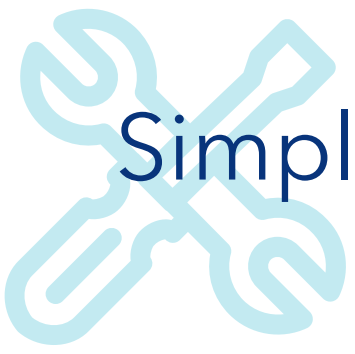
Simple Maintenance Tips



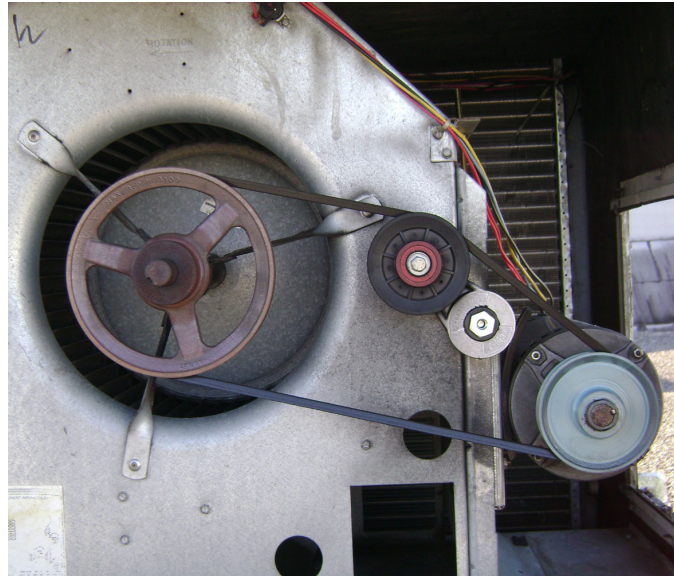


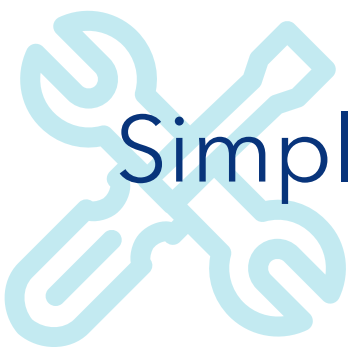
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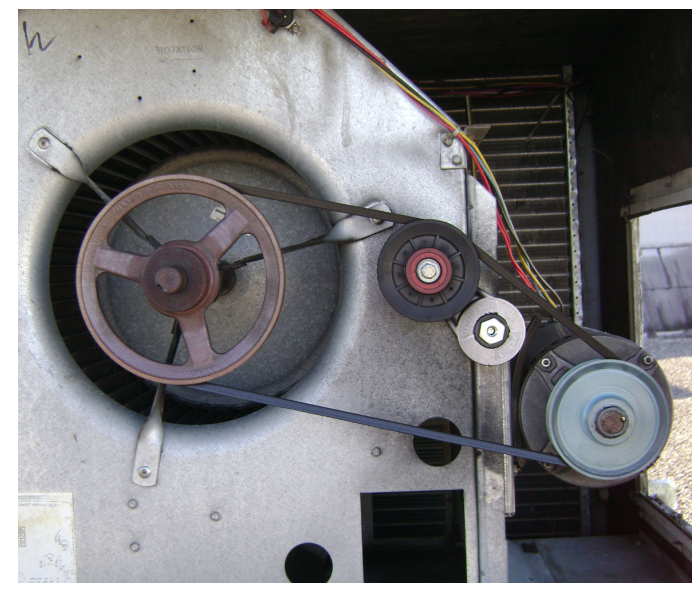


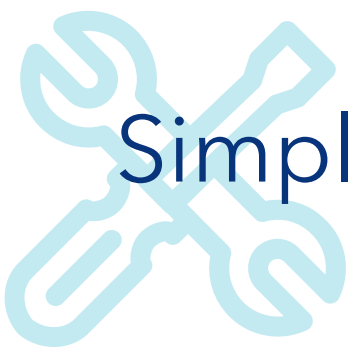
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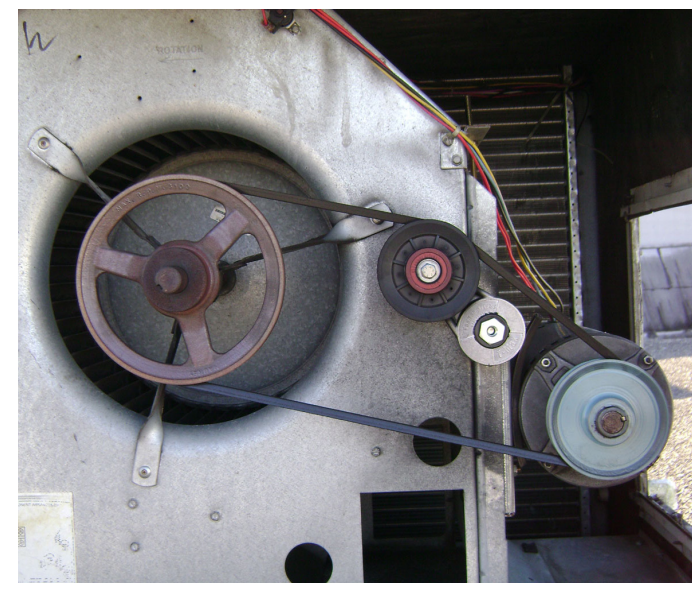


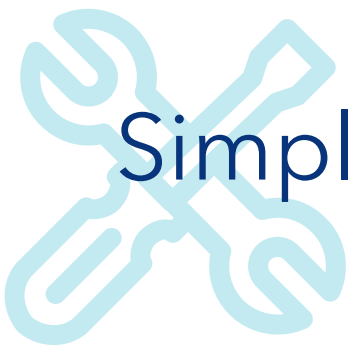
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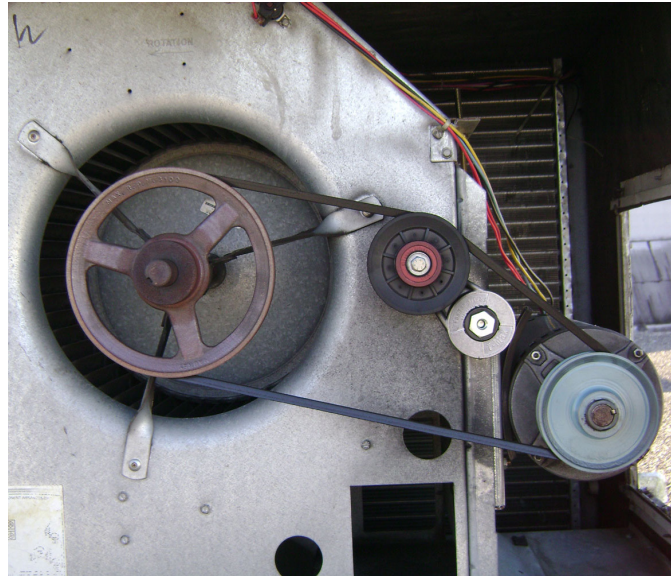


Simple Maintenance Tips





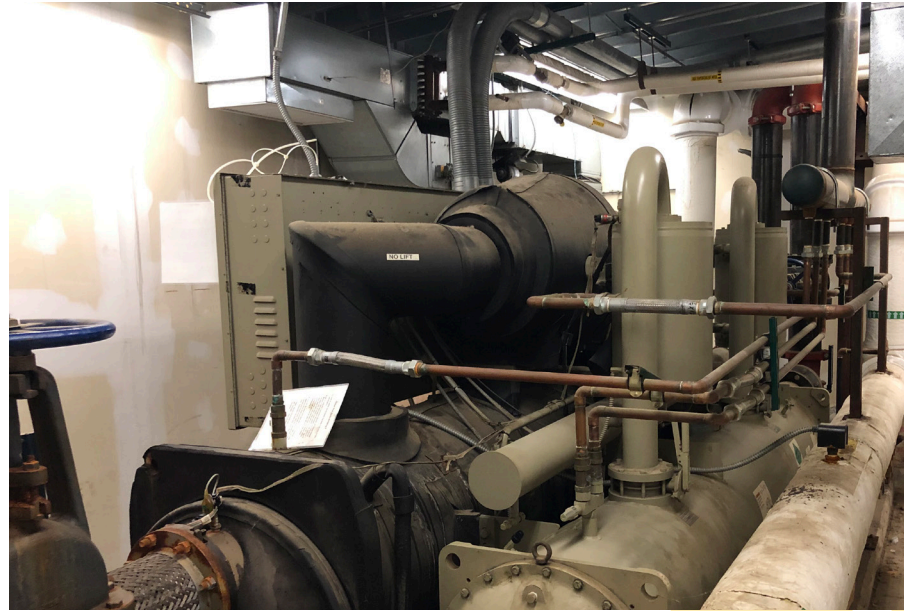
Simple Maintenance Tips



Planning for **EFFICIENCY**

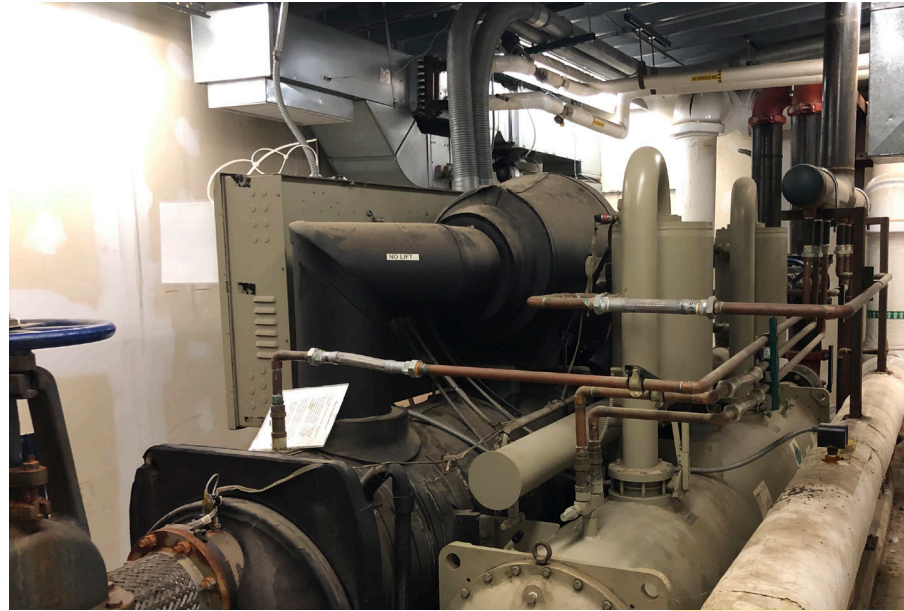


Planning for **EFFICIENCY**



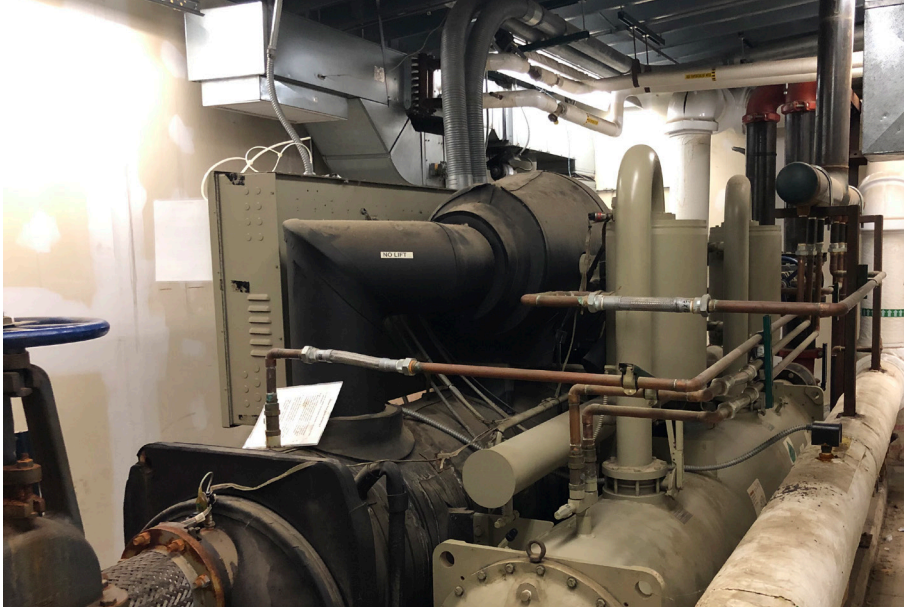
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Hawk College

Planning for **EFFICIENCY**



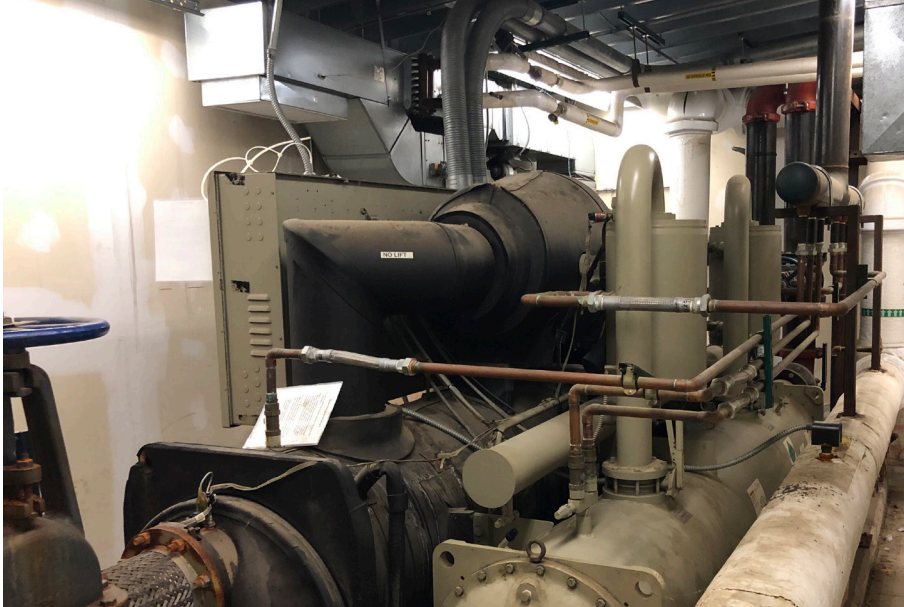
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Planning for **EFFICIENCY**



College

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Thank You!

