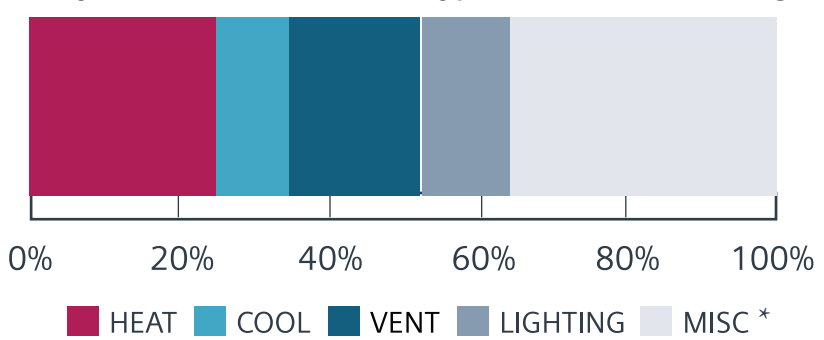


Your building and its ventilation system present complex problems – now they're easy to solve

Your HVAC system may account for more than **50%** of energy use for your building.

Utility End Use Breakdown for Typical U.S. Office Building



Matching building demand with heating or cooling output is too complex a problem for typical BAS controls to solve – though many have tried.

Buildings are designed to meet **worst-case conditions**, but at part load, systems operate inefficiently.



Trim & respond

works reasonably well when all air handling units (AHUs) and other devices are in perfect working condition.

But all devices are rarely in working condition.

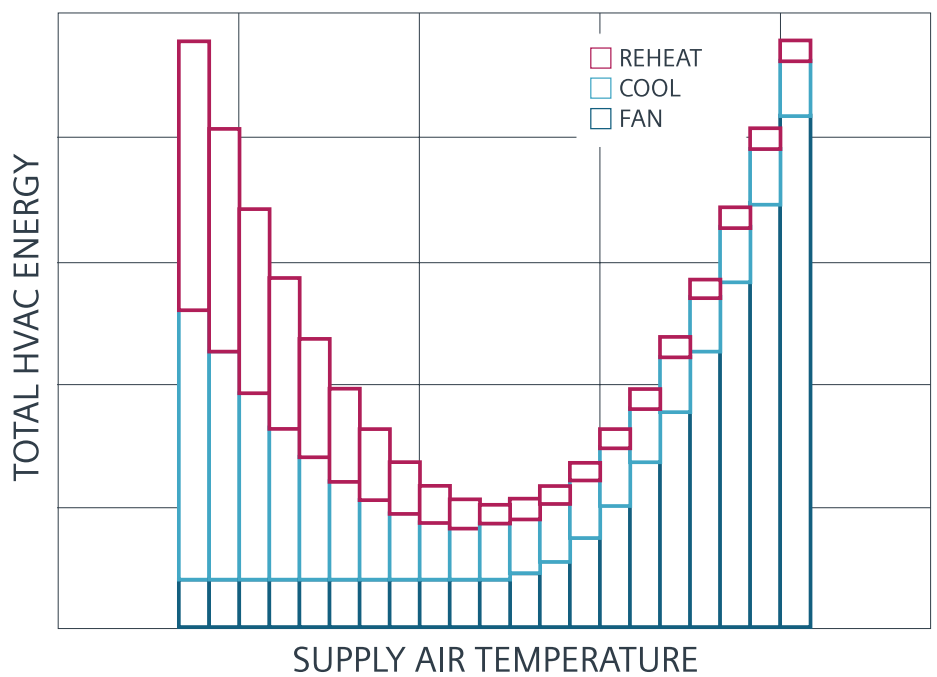
*Adapted from 2012 Commercial Buildings Energy Consumption Survey, available at eia.gov

The Optimization Challenge

If the air is too **warm**, you're wasting fan energy.

If the air is too **cold**, you're wasting heating + cooling energy.

The right temperature keeps occupants comfortable with the least possible energy.

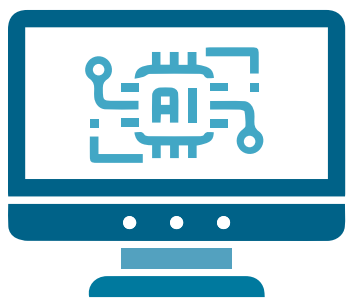


This is **exactly** the type of problem that **artificial intelligence** and **machine learning** algorithms were invented for.

Intelligently optimize AHUs with AI-powered strategy

Siemens **Dynamic VAV Optimization (DVO)** is an easily-deployed AHU optimization strategy that relies on a cloud-based, artificial intelligence (AI) powered strategy to control AHU fan speed and temperature.

Learning your building



DVO collects temperature data from throughout your building and **learns** how your system responds to changes in load throughout the day.

The AI engine sends back static pressure and supply air temperature setpoints to your HVAC system to ...

- Improve occupant comfort, health, and well being
- Identify broken equipment
- Reduce hot/cold calls
- Minimize operating costs

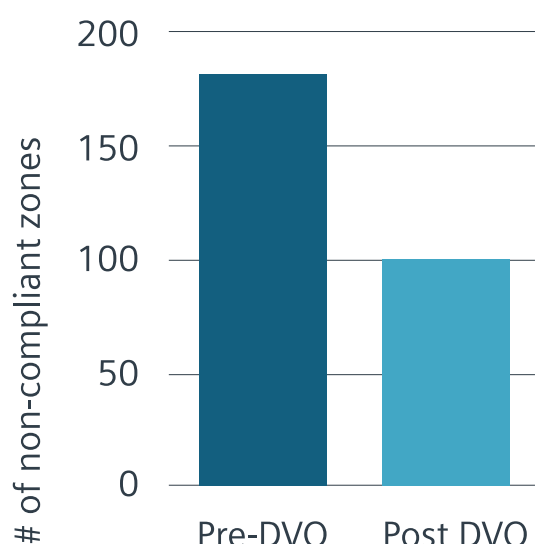
Energy Savings



*Source – Siemens customer data

In a review of Siemens customer data, Dynamic VAV Optimization generated an average HVAC savings of approximately 25% in facilities with no existing reset. In facilities that had reset strategies in place, savings of 10% were still achieved.

... while resolving **rogue zone** behavior



*Source – Siemens customer data