



# WHEN BUILDINGS PERFORM SO DO BOTTOM LINES

HONEYWELL FORGE DIGITIZED MAINTENANCE  
HONEYWELL FORGE ENERGY OPTIMIZATION

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## Good buildings respond. Great ones anticipate.

### **Honeywell Forge Digitized Maintenance**

Proactive maintenance driven by analytics can change the way you maintain building equipment – optimizing uptime, comfort, and costs.

### **Honeywell Forge Energy Optimization**

Build on analytics with machine learning to automatically adjust HVAC settings throughout the day – optimizing energy savings without compromising comfort.



# Planned maintenance is reactive maintenance

So-called “planned” maintenance is the compromise we tolerate because common sense says it’s better than waiting for failures and complaints. Traditionally, when you can’t afford the cost, discomfort, disruption and complaints from a boiler breaking down, a regular schedule of maintenance is supposed to prevent that – hopefully.

The tradeoff? Your facility team spends a lot of labor servicing equipment at the wrong time – too soon, and too late. Because breakdowns don’t follow a schedule.

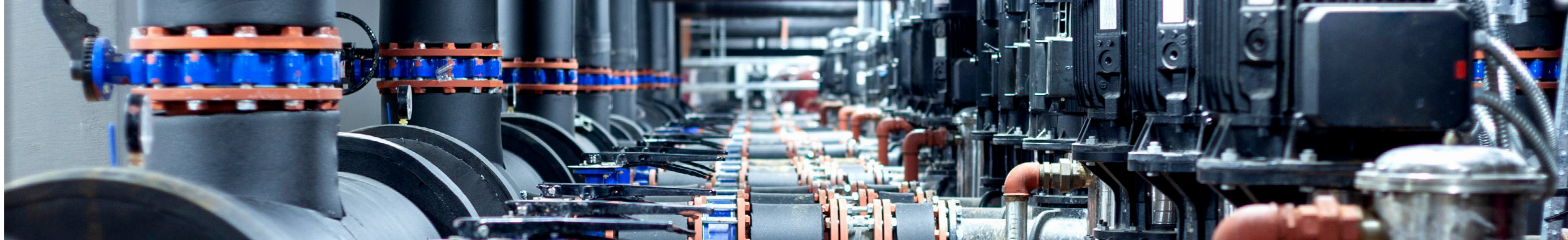
## **Let your building tell you what it needs.**

What if you could service equipment at just the right time, when it provides the most value – reducing both breakdowns and wasted labor? You can, with a deeper look into your building’s own data.

It’s called Digitized Maintenance, and it’s your foundation to get more value from labor, assets, and even budgeting and capital investments. It’s also a plan to protect occupant comfort – and therefore your reputation and revenue streams.







## **SENSORS, DATA, AND INTEGRATION**

# See every building system in context

**Buildings have come a long way since pneumatic controls.** Today, technology is redefining experiences for occupants and owners by increasing convenience, reducing energy use, and cutting operational costs.

Among these changes, a common thread stands out: the convergence of sensors, data, and connectivity. We have exponentially more ways to sense and analyze what's going on in virtually any environment.

This change is more than incremental – it's transformative. It paves the way for new capabilities, almost like having a “virtual facility engineer” to monitor all systems at all times.

1 Accenture, “Winning with the Industrial Internet of Things”  
2 IBM Marketing Cloud, “10 Key Marketing Trends For 2017”  
3 IBM X-Force, “Security Attacks on Industrial Control Systems”



## REDUCE THE GUESSWORK

# Reactive maintenance leads to complaints

When you rely on reactive maintenance, you are effectively accepting that there will be failures and hence complaints. You are waiting for that indicator – the failure or complaint – before you take action.

But when a complaint occurs, damage to your business is potentially occurring too. This could be brand damage, penalties, or loss of revenue.

### **Planned maintenance does not typically solve that problem.**

Scheduled maintenance may be the conventional wisdom for preventing faults, and it can be an improvement over purely reactive maintenance – yet it remains a fundamentally reactive approach.

It's costly. It's time-consuming. And it doesn't eliminate all breakdowns. When a boiler fails between service dates, a technician still has to be called out to fix the problem. Saying that you checked it last week doesn't help after it has failed and the facility is closed.

So what's the alternative? Get strategic:

**Use your data to help reduce the guesswork.**





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# HONEYWELL FORGE DIGITIZED MAINTENANCE

## Transform maintenance into strategy

Stop the cycles of guesswork and reaction. When you know where maintenance will deliver the most value, you can truly plan. Optimize comfort and uptime while simultaneously promoting energy savings and resource efficiency.

**Honeywell Forge Digitized Maintenance** is a cloud-based SaaS solution (Software as a Service). As part of our broader Honeywell Forge platform for data, analytics, and IoT capabilities, it uses sensors and system integration to analyze controllers and mechanical assets, tracking system performance throughout your building.

From this analysis, dashboards provide near-real-time insights and prioritized recommendations, while alerts and trends reveal potential issues – or opportunities – far earlier than via conventional maintenance.

**The result:** A data-driven strategy to help reduce the risks of planned and unplanned maintenance, giving you better insight into building performance and a better experience for your occupants.



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# FOR FACILITY MANAGERS

## Amplify the value of your assets

Our customers can now find and fix issues much **earlier with Honeywell Forge** than they did via planned maintenance.

Think about how that could change the way you operate: An end to the dual burdens of calendar-based maintenance and surprise disruptions. The opportunity to plan ahead, servicing equipment when it's most convenient for you and least disruptive to your occupants.

And with a holistic view of performance throughout your building and across systems, you can bring a new level of optimization to daily operations.

Increase energy efficiency. Maintain compliance more easily. Extend the life and value of your assets. These are just some of the potential capabilities you can tap into when your maintenance is driven by your data.

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## **FOR BUILDING OWNERS**

# Comprehensive insights for planning and investments

With Honeywell Forge Digitized Maintenance, you finally have the data for more precise, in-depth analysis of your building's operations and equipment – across brands, systems, and technologies. You'll be able to make more accurate assessments and comparisons, even among different properties.

Specific, reliable information is the bedrock for better business decisions, such as investments in equipment and upgrades.

Uncover opportunities for bigger savings in your daily operations. Weigh options to repair or replace assets. Compare alternatives. Then track how results match goals to quantify the return on your investments.





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**FOR YOUR OCCUPANTS**

# Build business by delighting occupants

Whether you're looking to delight visitors and occupants or win new tenants, a reputation for a dependable building and reliable comfort can be valuable tools for building your business – especially when you can meet the needs of the people on site while also keeping your costs efficient and predictable.

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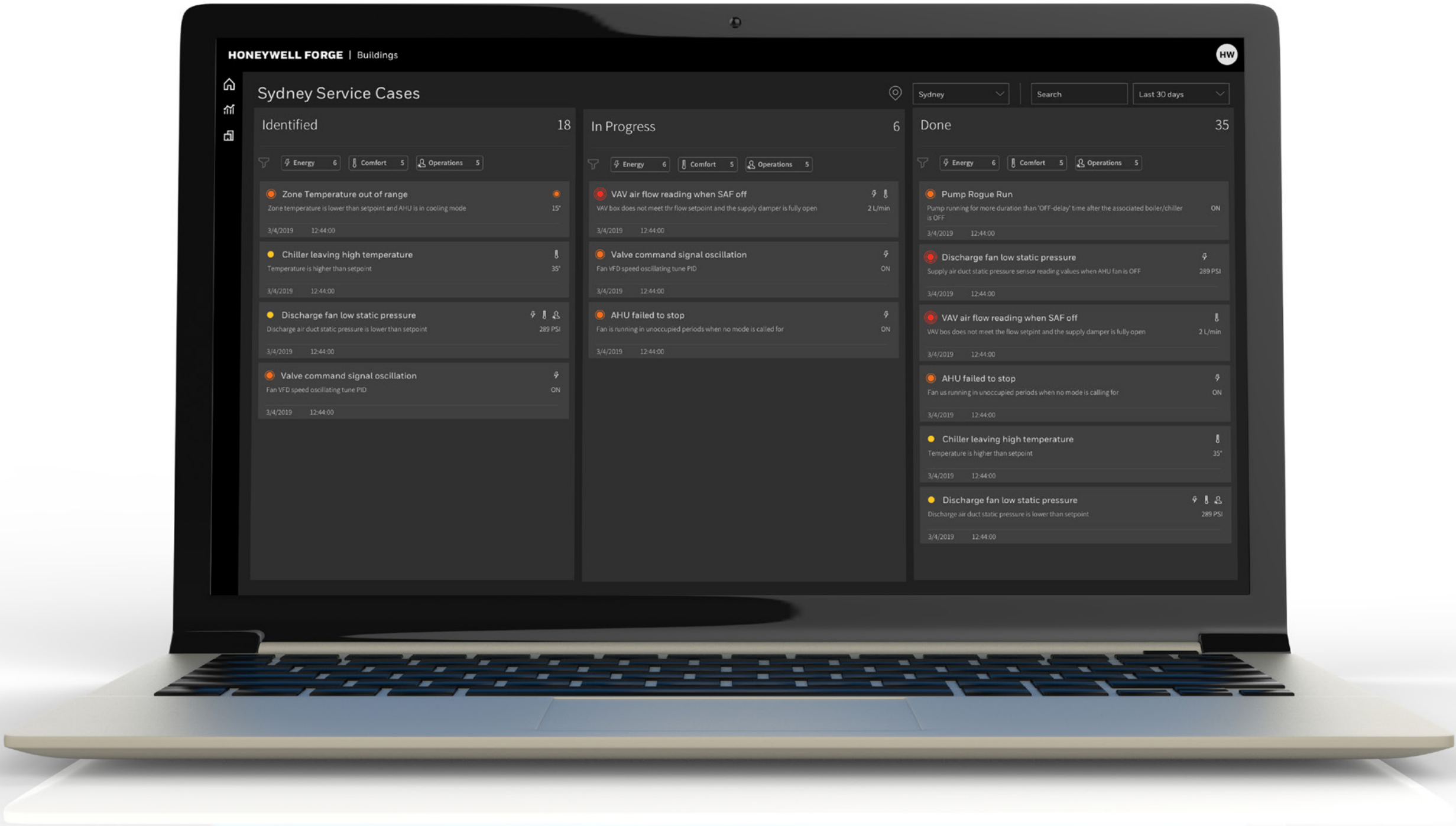
# ANALYTICS DASHBOARDS

## When you can visualize the data, you'll see results

Raw data can be a resource or a burden – information overload, or actionable insights. What you need is a way to put your data to work.

Honeywell Forge Digitized Maintenance helps you mine your data in two key ways: Through in-depth analysis that leads to alerts and guidance. And through clear dashboards that help you quickly see the state of things, in near real-time, or across any span of time.

Because when you can finally see the opportunities that were hidden in your data, you can take action – and pursue results.







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## **BALANCING COSTS AND COMFORT**

# Buildings need a new energy strategy

Heating and cooling your building to create a comfortable environment is essential for productivity and occupant satisfaction. It's also typically a building's largest energy cost.

What's more, balancing comfort against energy budgets isn't the same challenge from one year to the next. As costs rise and expectations evolve, this balance is in flux – and for most buildings, it just gets more laborious, requiring greater effort to achieve progressively smaller gains.

But some businesses have a distinct advantage: Those that have adopted the power of predictive analysis and data-driven maintenance can leverage these capabilities for **AI-driven energy optimization**.

It's an entirely new way to manage your HVAC systems – and the savings typically show it.





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## HONEYWELL FORGE ENERGY OPTIMIZATION

# Reduce energy use without compromising comfort

Save energy and money, without occupants even noticing. If anything, their comfort may improve. It's hard to think of a better win-win arrangement for your operations – yet it's a real capability that buildings are now using.

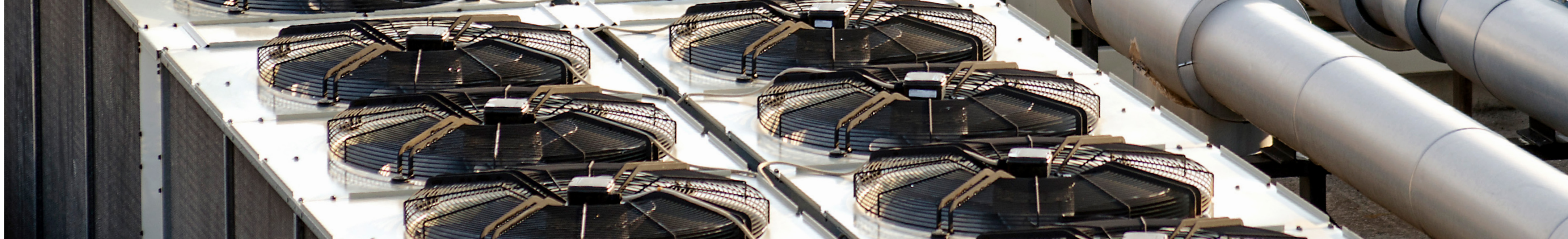
Honeywell Forge Energy Optimization is a cloud-based SaaS solution (Software as a Service) that builds on the comprehensive system analysis of Honeywell Forge Digitized Maintenance to incorporate machine learning and automated control. With this self-learning system, your HVAC settings are fine-tuned dozens of times per day to better meet current needs and conditions.

And unlike labor-intensive traditional methods of energy optimization, customers who rely on Honeywell Forge Energy Optimization have increased **HVAC energy savings by 10–20%.**

This solution is also typically very cost-effective to implement, relying primarily on your existing systems and integration.







## **AUTOMATE YOUR OPTIMIZATION**

# A building that manages its own energy spends less

HVAC systems are typically managed to put occupant comfort first, applying presets based on expectations about occupancy and weather. These conservative best guesses prioritize comfort over energy efficiency and may not adapt well to unexpected conditions.

Honeywell Forge Energy Optimization collects data every 15 minutes, comparing conditions and demand in your building to current weather and utility pricing. Then it computes and applies the optimal equipment settings – and does it all again in 15 minutes.





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## CLIENT RESULTS

# Good collaborations write great success stories

We have decades of experience helping buildings balance occupant comfort, automation, and operational costs. Honeywell Forge is the result and these are just a few of the stories about what our customers have achieved.





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# When buildings perform, so do bottom lines.

## **HONEYWELL FORGE DIGITIZED MAINTENANCE HONEYWELL FORGE ENERGY OPTIMIZATION**

Let's end the cycles of costly guesswork with maintenance and energy use.

It's time for your building data and your capital investments to do more –  
with Honeywell Forge.

[BuildingSolutions.Honeywell.com](https://BuildingSolutions.Honeywell.com)

