

# WHY SUSTAINABILITY SHOULD BE YOUR COMPETITIVE EDGE

The Honeywell Sustainability Suite



Honeywell

# OVERVIEW

**Executives are increasingly turning to sustainability as a force multiplier for competitive advantage. In the past, this was typically not a competitive focus – simply a means of demonstrating responsible corporate citizenship – and so sustainability initiatives often became siloed within the enterprise.**

Today, sustainability has become central to business operations, emerging as an essential element of a successful strategy. CEOs are discovering that “sustainability” and “profitability” have become synonymous ideas, making sustainably managed companies increasingly attractive to investors and customers.

Investment funds focused on sustainability or “ESG” criteria (environmental, social and governance) are seeing noteworthy growth, with U.S. assets managed under ESG-investing strategies jumping to \$17 trillion in 2020, up from \$12 trillion in 2018.<sup>1</sup> And 25% of CEOs now strongly agree that investing in climate-change initiatives could lead to significant new product and service opportunities for their businesses. That’s up 13% from ten years ago, according to a 2020 survey of more than 1,500 CEOs by PricewaterhouseCoopers.<sup>2</sup>

That momentum will increase as sustainability continues to gain prominence in business and public life. For instance, the U.S. recommitment to the Paris Agreement on climate change increases the likelihood of policies and incentives as part of government plans to address climate change and environmental issues.

## WHAT IS CORPORATE SUSTAINABILITY?

“Meeting the needs of the present without compromising the ability of future generations to meet their needs. The concept of sustainability is composed of three pillars: economic, environmental and social – also known informally as profits, planet and people.”

—Investopedia<sup>3</sup>

Environmental care is perhaps the most familiar pillar of sustainability, but healthy financial strategies that keep a corporation viable are equally important. Resilience is another vital element of sustainability: An organization’s readiness to adapt and recover in the face of an external challenge such as a global pandemic, cyberattack or natural disaster.



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# CHARTING YOUR SUSTAINABILITY JOURNEY

Although sustainability is gaining broad appeal among executives, the right path to get there depends on where your journey begins. Business leaders can identify the strategy that best fits their company by answering three critical questions: “What’s my objective? What are my opportunities? And what will be my approach?”

## 1 WHAT BUSINESS OBJECTIVE AM I TRYING TO ACHIEVE?

In 2015, the United Nations agreed to 17 development goals<sup>4</sup> that have become a generally accepted blueprint for designing a corporate sustainability agenda. Based on that framework, we’ve found that most organizations typically approach sustainability with one of these five objectives as their starting focus.



Decarbonize operations and achieve carbon neutrality, primarily through the reduction or elimination of greenhouse gases (GHG) and carbon emissions (CO2)<sup>5</sup>



Business strategies that maximize revenue or minimize costs



Software, technologies and services that pay for themselves over a reasonable time frame



Operational strategies that mitigate and ultimately eliminate business disruptions



Compliance with changing local, national and multinational regulations



ESG investing topped \$1T in 2020<sup>6</sup> and

**95%**

**of millennials** consider sustainability when investing<sup>7</sup>

## 2 WHAT ARE THE BIGGEST OPPORTUNITIES IN MY PORTFOLIO?

Identify the largest sustainability levers in your enterprise:

Opportunities where the right integrated technologies will help you achieve results toward interim goals and an ultimate objective.

For most organizations, the two largest energy-consuming assets are commercial buildings and fleet vehicles – making these their largest sources of Scope 1 and Scope 2 emissions.<sup>5</sup> (See endnotes for a definition of the three categories or “scopes” of emissions.)

Buildings and construction together account for more than 36% of global energy consumption, and nearly 40% of total direct and indirect greenhouse gas emissions such as CO<sub>2</sub>.<sup>8</sup> Within buildings, 62% of energy consumption is electricity, with heating, ventilation, air conditioning (HVAC) and lighting accounting for nearly two thirds of that.<sup>9</sup> In fact, HVAC often presents the largest opportunity for energy savings in a commercial building.

Fossil-fueled fleet vehicles can also rank at or near the top of an organization’s sources of Scope 1 emissions.

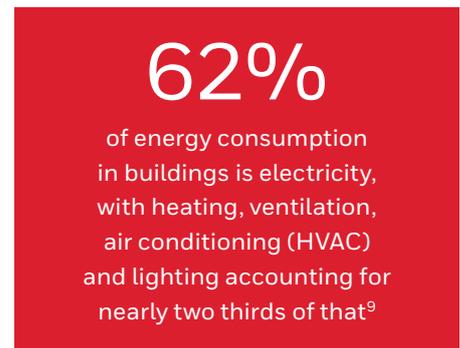


## 3 HOW DO I BUILD MY APPROACH?

Determining the approach that’s right for your enterprise is often the most complex and challenging aspect of sustainability, in part because the market for solutions is a fragmented one. Energy service companies (ESCOs), facilities-management companies, software and service companies, utilities and energy companies – myriad providers offer incomplete products and services limited to their areas of expertise.

These partial solutions can make it challenging and costly to develop a comprehensive, standardized approach to sustainability across a global portfolio of assets. Too often, enterprises find that the results still fall short of their goals.

For organizations that do meet their sustainability goals, they typically find that an integrated approach is most effective: A customized plan to combine complementary solutions in ways that create synergies. This avoids the pitfalls of a piecemeal approach, such as costly inefficiencies, performance drift, compatibility hassles or disruptive obsolescence of components.



# SUSTAINABILITY STREAMLINED

Solving these types of complex, multifaceted challenges is in our DNA. For more than a century, Honeywell has helped businesses of virtually every type overcome the most difficult problems of their era – and today, we're helping organizations like yours realize the social and economic benefits of operating more sustainably.

With enterprise sustainability, we take an outcome-based approach. First, we consult with you to define your key goals and challenges. Together, we specify your performance targets – such as carbon neutrality, cost savings, off-balance-sheet carbon reduction, regulatory compliance, or energy resilience and business continuity. Then we design a comprehensive integrated solution with performance guarantees for the results you'll achieve.

This holistic approach ensures that the strategies and technologies selected will work together seamlessly, and it optimizes your operational and financial synergies.

## THE HONEYWELL SUSTAINABILITY SUITE

Decarbonization is a keystone of any successful sustainability strategy. This is done through the reduction or elimination of GHG emissions, usually with a focus on Scope 1 and 2 emissions. And in just the past five years, the Honeywell Sustainability Suite has helped more than 700 organizations significantly reduce GHG emissions, in sectors ranging from education and government to healthcare, commercial, industrial and transportation.

These same 700 clients have also achieved average energy savings of 10–20% using integrated energy management and our outcome-based approach to design, deployment, service and financing – because ultimately, a successful strategy must also be economically sustainable.



The Honeywell Sustainability Suite includes a modular array of energy-demand and supply-management capabilities. Any of these capabilities can be used alone or integrated as part of a broader enterprise strategy for optimizing energy use and reducing Scope 1 and 2 emissions. Here are a few examples of how this can work.

## 1 ENERGY-DEMAND MANAGEMENT

**Honeywell Forge Measurement and Verification** is the starting point for our outcome-driven approach. This cloud-based set of energy and sustainability applications establishes precise initial baselines of energy use across your enterprise.

Next, the Measurement and Verification system uses data, analytics, insights and controls to monitor your Honeywell sustainability solution in real time, providing visual representations and actionable recommendations to improve your building performance and keep your energy and sustainability goals on track.

For streamlining HVAC performance, **Honeywell Forge Energy Optimization** is a cloud-based, closed-loop system that uses machine learning to autonomously and continuously optimize your building's internal set points, making adjustments to hundreds of assets every 15 minutes. It evaluates whether the HVAC system is running at peak efficiency, then modifies settings to optimize efficiency without compromising environmental conditions inside the building.

Factors such as real-time utility rates, time of day, weather, occupancy levels, and dozens of other data points are analyzed to determine optimal settings for each building. The Energy Optimization system can deliver substantial energy savings while decreasing a building's carbon footprint, and it can be implemented without significant upfront capital expenses or changes to the building's operational processes.

The **Honeywell Lighting Controls Solution** uses smart scheduling along with sensors to detect light levels and determine whether people are in the area, and then adjust lighting as needed – for instance, turning off lights in areas that are vacant or which have plenty of natural light.

This combination of daylight harvesting, occupancy sensing and extended lamp life lowers your overall lighting costs. And a comprehensive energy-management plan that incorporates these capabilities with Honeywell LED Lighting, HVAC solutions and building automation can yield even greater energy efficiencies.

Finally, to ensure that your installed sustainability solution continues to deliver peak results without performance drift or maintenance issues, we offer a complete range of managed services, from remote 24/7 monitoring to scheduled predictive maintenance and emergency repair.

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## 2 ENERGY SUPPLY MANAGEMENT

Energy-demand management analyzes how energy is consumed to help organizations find efficiencies in usage. The counterpart, energy-supply management, focuses on energy sources to find efficiencies in more sustainable generation and storage.

To this end, the **Honeywell Energy Supply Management Solution** supports a broad range of advanced applications.

For instance, renewable drop-in diesel and jet fuels produced by **Honeywell Ecofining™** technology reduce lifecycle GHG emissions by 60–85% and also reduce conventional pollutants (such as particulate matter and NOx) – while delivering equal combustion-energy content and cold-flow properties, better stability (i.e., storage life) and the same handling and maintenance requirements as conventional petroleum fuels.

Hydrogen is also projected to be a significant part of the transition to a decarbonized energy infrastructure. We offer a versatile range of hydrogen-combustion capabilities, such as hydrogen-capable burners, fuel-supply products and controls. Our hydrogen-ready technologies help operators reduce emissions, drive operational efficiency, and comply with emerging industry and government standards for safety and performance.

Energy storage is another path to decarbonization, particularly when paired with renewable sources such as wind and solar. The non-lithium batteries used in **Honeywell Battery Energy Storage Systems (BESS)** provide capabilities beyond more familiar technologies like lithium-ion batteries, resolving challenges that utilities and other organizations typically face with those technologies – such as safety, reliability, longevity, maintenance and environmental concerns.

Honeywell BESS is a modular, scalable, plug-and-play technology for long-duration storage applications above 4 hours of discharge, such as capacity peak power, energy shifting and microgrid integration. By providing operation and maintenance services – and leveraging remote-operations technology from Honeywell Process Solutions and its advanced Experion energy management system – this battery system can be a robust part of a complete end-to-end energy storage solution.

Renewable biofuels produced by Honeywell Ecofining technology reduce lifecycle GHG emissions<sup>10</sup> by

60–85%



### 3 WASTE REDUCTION, CIRCULARITY AND CLIMATE ACTION

Numerous companies from e-commerce to manufacturing need high-quality, high-performance plastic materials for a wide range of applications – yet left unmanaged, demand for this resource also risks increasing waste.

Such plastic pollution can be mitigated by recycling, but these efforts must go beyond mere mechanical recycling – which is limited in handling films, colored plastics, multi-layer and multi-material structures, and other low-value plastics that are prone to contamination. Advanced recycling methods can significantly increase plastic-recycling rates by processing materials that are not suitable for mechanical recycling.

**Honeywell STS Advanced Plastics Recycling** fills a critical gap in the plastics-circularity value chain, providing technology that can transform 90% of convertible plastic waste into a feedstock – recycled polymer oil (RPO) – which helps generate new value from used plastics. This is important both for lowering operational costs, and for meeting sustainability goals.

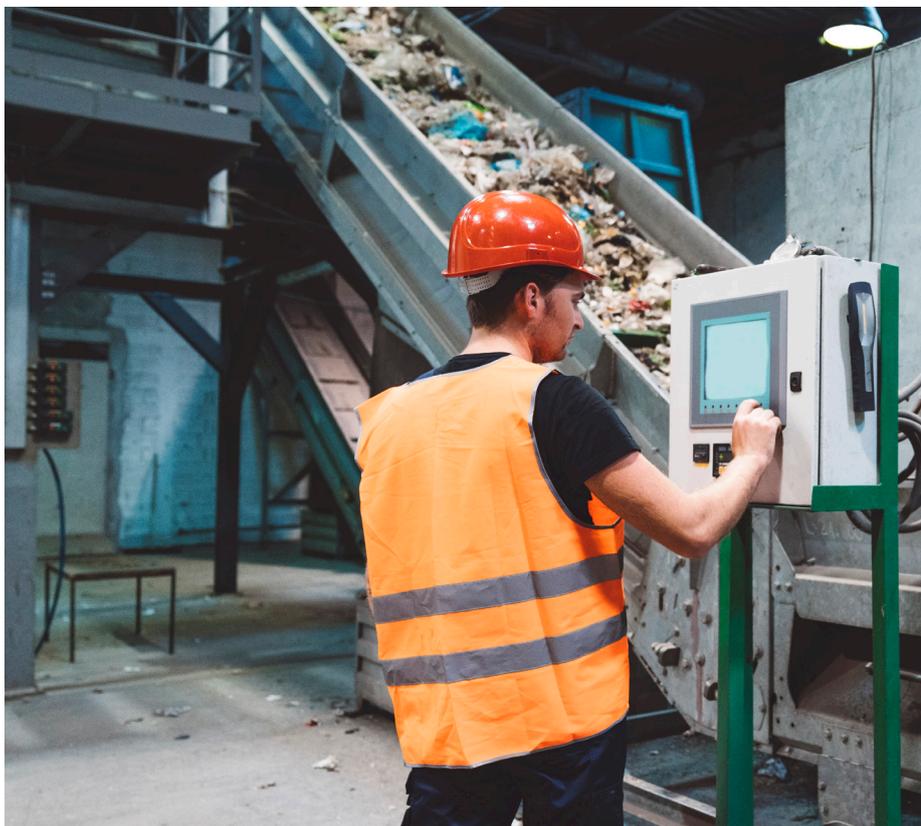
Honeywell has been partnering across the plastics value chain to deploy our commercial-scale modular pyrolysis units, which produce stable RPO that can serve as a drop-in replacement feedstock in existing facilities. Petrochemical producers then use this feedstock to generate new polymers and plastics, helping drive circularity.

To address pollutants that could harm the climate, **Honeywell Solstice®** refrigerants, blowing agents, propellants, and solvents provide low- and reduced-GWP (global warming potential) alternatives to flammable hydrocarbons and traditional high-GWP hydrofluorocarbons. Solstice molecules have 99.9% lower global warming potential than the products they replace. Global adoption of Solstice products has already helped avoid the release of more than 175 million metric tons of carbon dioxide equivalent (CO<sub>2</sub>e).

Honeywell STS Advanced Plastics Recycling technology fills a critical gap in the plastics-circularity value chain, providing technology that can transform

90%

of convertible plastic waste into a feedstock for reuse



Honeywell has pioneered a new generation of low-GWP HFO refrigerants with

1000x  
reduction in global  
warming potential<sup>11</sup>

# THE HONEYWELL COMMITMENT TO SUSTAINABILITY

We have built sustainability directly into our operating system. This ensures sustainability is an integrated and essential part of the Honeywell work experience every day.

Our commitment to be more efficient and responsible is reflected in the extensive work we do to make our businesses more environmentally friendly, safer and more sustainable.

**>90%**

reduction in Scope 1 and Scope 2 greenhouse gas intensity since 2004

**128 million gallons**

of water saved in water-stressed regions since 2013 from over 150 projects

**~70%**

energy efficiency improvement since 2004

We focus approximately

**50%**

of our new product R&D on solutions that improve environmental and social outcomes for our customers

**5700**

greenhouse gas and energy efficiency projects completed since 2010,

**saving an annualized \$90M**

Global adoption of Solstice products has helped avoid the release of more than

**200 million metric tons**

of carbon dioxide equivalent (CO<sub>2</sub>e)



# FAST-TRACK YOUR SUSTAINABILITY JOURNEY

Becoming a sustainably managed and operated company is increasingly becoming a business and social imperative. Employees, supply-chain partners, customers, investors and regulators expect it. Some demand it.

Our experience ranges from single-building civic installations to multi-regional projects with the world's most complex and prestigious enterprises – making us uniquely qualified to help you chart your path to sustainability using comprehensive, outcome-based strategies that reduce complexity and optimize your results.

With Honeywell as your guide, we can help your organization take its first steps on the path to sustainability, and we can provide a step-by-step framework to help you hit each of your targets along the way.

We've proved this approach repeatedly through the successes of our clients, big and small. Their route to tangible results can be summarized in these six steps.

## 1 BASELINE

Understand where you are, what you're consuming and where it's coming from

## 4 WALK THE WALK

Commit to the project, secure the funding and execute on the plan

## 2 DEFINE YOUR TARGET

Where do you want to be by when

## 5 CONTINUOUSLY MEASURE

Demonstrate auditable progress

## 3 BUILD YOUR WALK

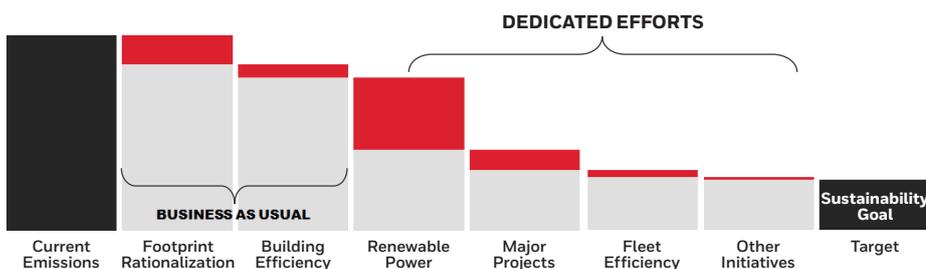
Identify key initiatives to meet your targets within a timeline

## 6 MONITOR

Mitigate the risk to sustain the level of performance

## THE JOURNEY TO NET ZERO

The journey to net-zero can seem daunting, but by following a proven plan and committing to dedicated efforts for change, your organization can be well on the way to meeting its defined sustainability goals.



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THE  
FUTURE  
IS  
WHAT  
WE  
MAKE IT

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