# THE MARKET FOR SUSTAINABILITY IN THE CLOUD IS HERE

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This report focuses on opportunities for businesses to address their sustainability goals, how leading organizations are selecting cloud providers committed to becoming a zero carbon cloud and the steps any business can follow to make the right cloud decisions on their road to sustainability.

Many businesses today have made a strong commitment to reduce carbon emissions and become more sustainable. They have identified that by moving more workloads to the Cloud, they can accelerate their journey towards becoming a zero-carbon organization while reducing internal costs, demands, and complexities.

A key factor in the commitments that these businesses are making is that it doesn't just impact their organization. While moving towards zero carbon, these organizations are also looking for technology partners that have made the same commitment.

If they partner with a cloud provider that hasn't made the same commitment to be green and carbon neutral (or even negative), organizations won't be able to meet their goals or achieve the expected benefits. And Aberdeen research has found that businesses with a sustainability commitment are taking these goals very seriously.

Rather than just being a line item, "looks good in a press release" announcement, these organizations have made heavy commitments to sustainability in all areas of IT and are even tracking cloud partners to ensure that they are meeting carbon reduction goals as well.

In this report we'll look at the focus of businesses with zero carbon commitments, how they are driven by both cost control and innovation, and the key strategies and technologies that they leverage. We'll analyze how cloud providers are working to meet the needs of the increasing number of sustainable organizations and how these customers are holding theses providers accountable. And we'll see how a zero-carbon commitment can not only benefit the planet, but also lead to increased gains for businesses.

**Definitions:**

▶ **Zero Carbon** – operations are powered by 100% renewable energy.

▶ **Net-zero and carbon neutral** – operations make no net generation of carbon emissions through the use of renewable energy and initiatives that mitigate the emissions of and/or sequester atmospheric carbon.

▶ **Carbon emissions** – a general term that applies to greenhouse gases generated from human activity that contribute to the warming of the Earth's atmosphere (for example, carbon dioxide, methane, nitrous oxide, chlorofluorocarbons).

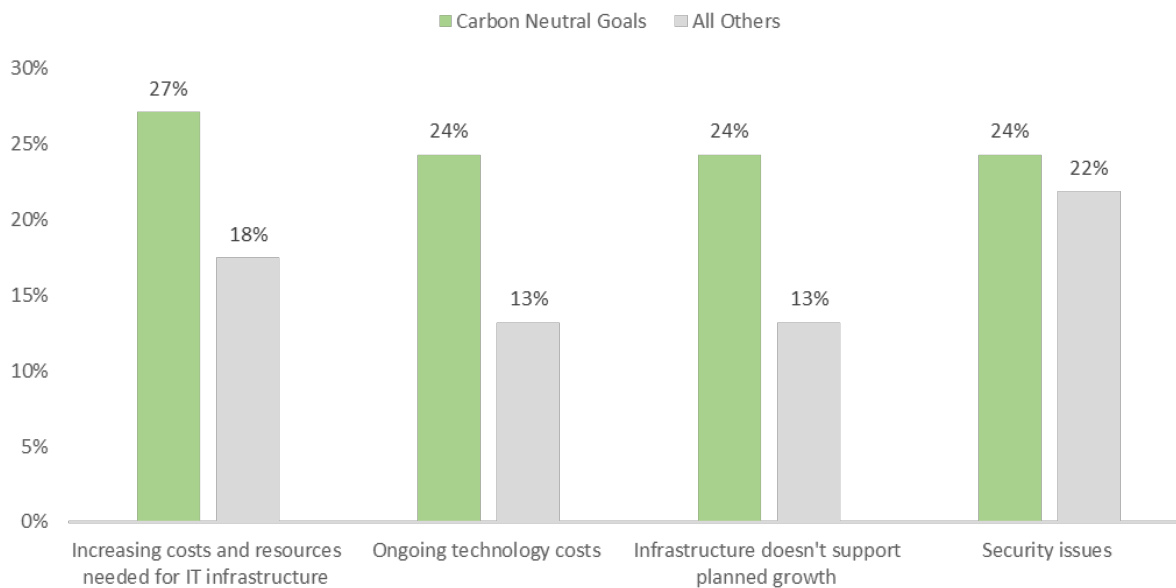## The Drive to Be Carbon Neutral and Achieve Sustainability

Any doubt that many organizations are committed to sustainability is quickly dispelled by the numbers. Recent Aberdeen research found that 36% of businesses have set sustainability or zero carbon goals and 24% plan to in the next year — meaning that in twelve months, over half of all organizations could have zero carbon commitments.

Similar growth is seen in the businesses that work with these organizations. For example, the Science Based Targets Initiative has seen a 225% increase in the number of businesses that have committed to take action to reduce emissions since 2019 — clearly indicating a large and growing push towards sustainability. But what drives these organizations? What are their challenges and what strategies do they follow to not only ensure zero carbon, but also improve and modernize their IT infrastructure?

To understand these trends, Aberdeen analyzed a recent survey on IT Infrastructure and Cloud Modernization in order to compare businesses with zero carbon commitments to their peers and competitors. Interestingly, we found a great many differences between these organizations; from their strategic focus, to capabilities, to innovations, to the challenges that they face — as shown in Figure 1.

**36% of businesses have set zero carbon goals and 24% plan to in the next year**

**Figure 1: Top Cloud Modernization Challenges for Carbon Neutral Businesses**



■ Carbon Neutral Goals ■ All Others

| | Carbon Neutral Goals | All Others |
|---|---|---|
| Increasing costs and resources needed for IT infrastructure | 27% | 18% |
| Ongoing technology costs | 24% | 13% |
| Infrastructure doesn't support planned growth | 24% | 13% |
| Security issues | 24% | 22% |

Source: Aberdeen Strategy & Research, April 2021    n=184

Critics of sustainability commitments often point to potential additional costs and that businesses focused on zero carbon are probably less focused on costs.

But the opposite is true. The data proves that organizations with zero carbon goals tend to be more challenged and driven by the need to bring costs under control, both when it comes to their infrastructure and for ongoing costs that are typical in cloud implementations. Despite their commitment to sustainability, these businesses often see benefits in reduced costs and resource demands.

And for these organizations, sustainability is more than a means to reduce costs. They want a cloud infrastructure that can grow to be more modernized and innovative, meaning cost savings are often transferred to transformative technologies.

**Top Strategies for Businesses and Cloud-providers to Become Carbon Neutral**

There's an old saying that goes, "you can talk the talk, but can you walk the walk?" which applies in cases of businesses talking about the importance of green initiatives but not actually doing much. But looking at our research, this definitely does not appear to be the case for businesses that have made carbon neutral commitments.
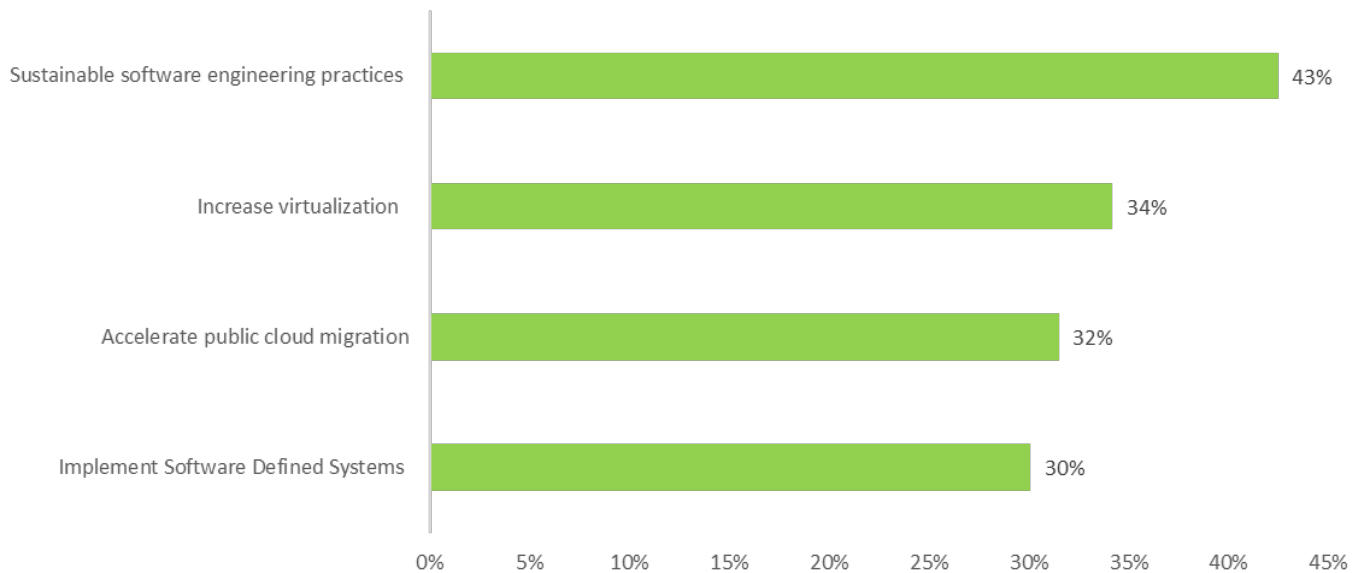
Instead, these organizations have prioritized green initiatives and doing business with like-minded sustainable partners — in addition to other strategies that can lead to zero carbon — as core parts of their infrastructure and cloud modernization efforts. Aberdeen asked the same businesses about the key strategies they were following as part of their modernization (Figure 2). As we can see, the top strategy for organizations with a zero carbon commitment (again, not to reach sustainability but number one overall for IT infrastructure modernization) was to implement sustainable software engineering practices.

These practices (also followed by many cloud providers) are designed to ensure that developers and software engineers are building and deploying applications that are efficient in every way possible. That they use power efficiently, consume compute resources efficiently, even that they control the demands that they make on networks and the Internet.

When engineers build and deploy applications in this way, they create services that are not only green, but agile, flexible, and provide cost savings.

The average annual revenue of businesses with zero carbon commitments is over $225 million.

**Figure 2: Top Modernization Strategies of Zero Carbon Focused Organizations**



| Strategy | Percentage |
| --- | --- |
| Sustainable software engineering practices | 43% |
| Increase virtualization | 34% |
| Accelerate public cloud migration | 32% |
| Implement Software Defined Systems | 30% |

Source: Aberdeen Strategy & Research, April 2021  n=180

Rounding out these strategies, we also note that businesses with zero carbon commitments are boosting their use of virtualization, accelerating cloud migration, and investing in software defined systems. Looking at this, we see that these organizations are also very focused on innovation and on lowering their own hardware and power usage.

But with 43% of these businesses saying that sustainable software engineering practices is their top strategy, cloud providers need to pay attention. Because in order to get the most out of these practices, these organizations will be looking for cloud partners that will enable them to get the most out of sustainable software engineering.

## The Importance of Picking the Right Sustainable Cloud Provider

There are many reasons and criteria that businesses use to choose a cloud provider — reputation, software support, locations, costs, etc. But whether or not that cloud provider is effectively following green and sustainable commitments is growing rapidly in importance.

In our research, we found that 40% of all businesses say that sustainability goals are driving their public cloud and virtualization

initiatives and plans. And when we look at businesses that have currently set sustainability goals, this number jumps to 87%.

When this group of zero carbon committed organizations is choosing between cloud providers, the commitment to reduce carbon emissions is a vital differentiator. In fact, they are 2.5x more likely than other businesses to say that being a sustainable cloud provider is a top criterion when choosing cloud solutions.

Just what makes a sustainable cloud provider? Typically, a cloud provider with these goals is focused on using software defined systems to ensure the efficiency of their server and compute resources, the energy usage and efficiency of their data centers, and, most visibly, if the power driving their data centers comes from renewable sources.

But the effectiveness of these initiatives isn't always clear. Some cloud providers claim to be carbon neutral; not from green power, but by purchasing unbundled renewable energy credits that aren't always tied to renewable energy usage (meaning that much of their power might still come from fossil fuels).

One of the ways that businesses ensure that a cloud provider is green is by checking to see if they are members or if they've signed on to sustainability initiatives that work to ensure compliance. And our research shows that many of these zero carbon committed organizations are also proactively checking and monitoring their cloud providers to see just how green they are.
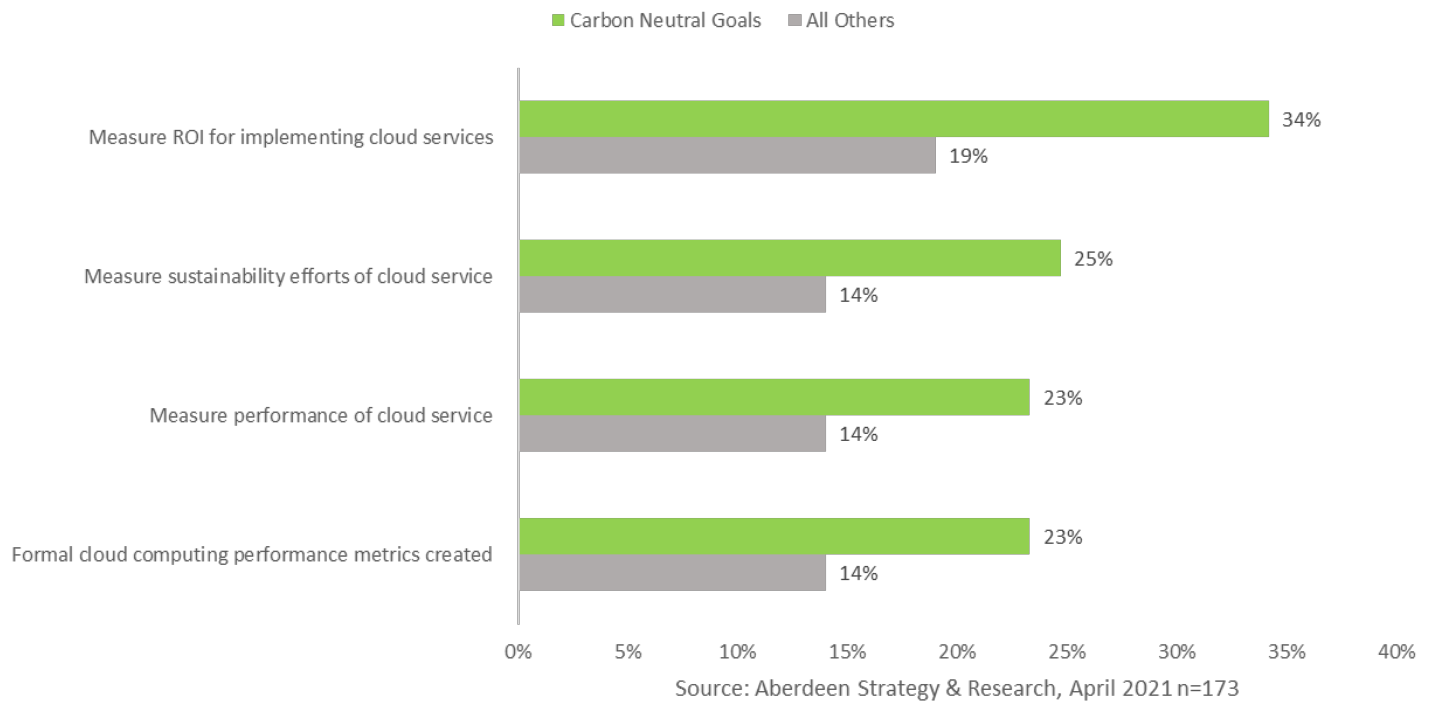
These businesses use everything at their disposal, including publicly available cloud metrics and their own dashboard and monitoring tools. And increasingly, they are turning to open offerings that are specifically designed to monitor the efficiency and sustainability of cloud providers.

Figure 3 illustrates Aberdeen's analysis of the differences between how businesses with zero carbon commitments monitor their cloud providers compared to other organizations. We found that, overall, these businesses are very thorough in their monitoring of their cloud provider.

Besides checking the sustainability of their cloud provider, which they do at twice the rate of other businesses, these zero carbon committed companies are also making sure that their cloud provider is delivering on their return on investment, which often ties directly to the efficiency of the cloud provider.

40% of all businesses say that sustainability goals are driving their public cloud and virtualization initiatives.

**Figure 3: How Zero Carbon Businesses Monitor Cloud Providers**



Legend: ■ Carbon Neutral Goals   ■ All Others

| | Carbon Neutral Goals | All Others |
|---|---|---|
| Measure ROI for implementing cloud services | 34% | 19% |
| Measure sustainability efforts of cloud service | 25% | 14% |
| Measure performance of cloud service | 23% | 14% |
| Formal cloud computing performance metrics created | 23% | 14% |

Source: Aberdeen Strategy & Research, April 2021 n=173

Along with these metrics, zero carbon committed organizations are also very focused on the performance they are getting from their cloud provider. We see that they set performance metrics for their cloud resources and measure if the cloud service meets that performance at twice the rate of other organizations.

Clearly, these are dedicated and capable businesses. And a cloud provider who thinks they can be put off with press releases and "green washing" should reconsider that position. In order to gain the trust of these zero carbon committed organizations and keep their business, cloud providers need to be transparent about their efforts and their success at being sustainable and carbon neutral.

### Reaching Carbon Neutral Goals and Selecting Sustainable Clouds Leads to Real Benefits

For many businesses, becoming sustainable and carbon neutral is a clear win and benefit all in itself. They understand that climate change hurts

everyone, including their business, and that being green and sustainable is part of being a good corporate citizen.

But Aberdeen research shows that these organizations are gaining even more from their commitment to sustainability. In fact, their zero carbon goals aren't limiting their innovation or productivity, it's actually a driver for improvement.

For example, our research shows that these zero carbon businesses are more innovative and leveraging key new cloud technologies at a much higher rate than competitors. They are:

- ▶ 50% more likely to use Hybrid cloud
- ▶ 3x more likely to develop Microservices and use containers
- ▶ 2x more likely to have a Multicloud strategy

When it comes to bottom-line benefits, the sustainability commitments of these organizations are also paying off and helping them overcome cloud modernization challenges, as seen in Table 1.

**Table 1: Focusing on Efficiency Helps Zero Carbon Businesses Achieve Benefits**

**When compared to other businesses, organizations with a zero carbon commitment are:**

| | |
|---|---|
| **2x** | more likely to see improved application agility |
| **24%** | more likely to see increased security |
| **50%** | more likely to report high management satisfaction |
| **60%** | more likely to have increased ability to optimize infrastructure costs |

Looking at this data, we see that businesses committed to sustainability see increased application agility. This is no surprise given their likelihood to leverage sustainable software engineering, which enables them to get the most out of their cloud applications.

We also see that these businesses, with their increased focus on efficient deployments and monitoring, are more likely to see improved security. Rather than leading to increased costs, businesses with zero carbon commitments are actually much more likely to report that they have optimized their infrastructure and reduced costs — ultimately leading to high satisfaction amongst management.

Along with meeting their critical goals to be sustainable and carbon neutral, these businesses are also more agile, more innovative, and more efficient in their infrastructure and in costs.

**Key Takeaways**

Sustainability goals can't be achieved one person or one business at a time. Successfully reaching zero (or negative) carbon requires commitments from all stakeholders.

This is especially true for the cloud infrastructure ecosystem. Many businesses are doing their part by building efficient virtual and cloud-based applications and services that not only reduce hardware and data center usage, but are also making sure that their use of cloud resources is controlled and cost effective.

Similarly, these organizations need the same high level of commitment from their cloud providers. They are looking for cloud partners that are just as committed to sustainability, building efficient data centers, and powering their cloud with renewable energy.

By meeting these needs, cloud providers will not only meet their own sustainability goals, but become the preferred provider of the growing number of businesses committed to zero carbon.

And remember: they'll be watching and monitoring to make sure cloud providers are really delivering on their green promises.

## About Aberdeen

Since 1988, Aberdeen has published research that helps businesses worldwide to improve their performance. Our analysts derive fact-based, vendor-neutral insights from a proprietary analytical framework, which identifies Best-in-Class organizations from primary research conducted with industry practitioners. The resulting research content is used by hundreds of thousands of business professionals to drive smarter decision-making and improve business strategies. Aberdeen is headquartered in Waltham, Massachusetts, USA.

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