Reduced Carbon Consumption With Google Active Assist And Other Tools Of The Carbon Sense Suite
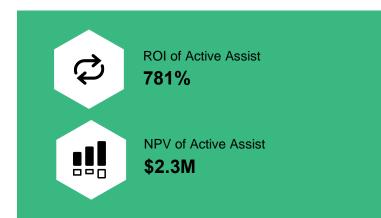
Organizations focused on increasing revenue, reducing costs, and avoiding unexpected downtime or security breaches are now facing a new challenge: increasing the sustainability of their business. Cultural, legal, and financial realities will force every business to do their due diligence in reducing carbon dioxide emissions. If organizations don't react quickly to regulations, they often become more costly. But for industries without obvious CO2 contributors, knowing where to start can be difficult.

Google Cloud Active Assist is a portfolio of tools that helps organizations optimize cloud operations with recommendations to reduce costs, increase performance, and improve security. It also includes features that can track and reduce CO2 emissions, as part of Google's new Carbon Sense Suite.

To better understand the benefits, costs, and risks associated with Google Active Assist, Google commissioned Forrester Consulting to interview four representatives and conduct a Total Economic Impact™ (TEI) study. As a follow-up to that study, Google also commissioned this spotlight to focus on Google's Carbon Sense Suite with Active Assist's impact on organizational sustainability goals. For the purposes of analyzing this impact, Forrester interviewed three additional representatives for this sustainability spotlight:

- A staff security software for Uber who looks after cloud infrastructure optimization.

- The director of R&D at a cosmetics organization who chooses to remain anonymous due to the early state of their sustainability efforts.

ROI of Active Assist
781%

NPV of Active Assist
$2.3M

This abstract will focus on these two organizations' use of Google's Carbon Sense Suite with Active Assist and their sustainability goals.

SUSTAINABILITY DRIVERS

The interviewees' organizations sought Google's Carbon Sense Suite Active Assist and Carbon Footprint features to help meet their sustainability goals. Specifically, the organizations struggled with:

- **Lack of visibility into CO2 emissions.** Interviewees told Forrester that prior to using Carbon Sense Suite, they were either tracking emissions associated with their data centers but lacked consistency in how this information was collected or used, or had no visibility at all. The director of R&D told Forrester that before, they had to rely on imprecise estimates from consultants on emissions: "They could never really give us any type of value … they could give us a hand-wave estimate depending on the size of organization you are, the type of activities you do … but that's not good enough."

- **Commitment and urgency to meet sustainability goals.** Uber told Forrester that they had made public commitments into reducing

their carbon footprint, and were eager to make good on those commitments by partnering with other organizations. The interviewee from Uber stated: "[Sustainability] has been prioritized across organizations within the company to identify where we can improve. It's the right thing to do."

- **General immaturity on sustainability issues.** Despite the urgency to meet public sustainability goals for marketing, resilience, and compliance purposes, the cosmetics organization told Forrester that their organization was in an early state around considering and acting on sustainability. The director of R&D explained how vital maturity on this front was for organizations that operate globally: "You actually have to have documentation on your sustainability situation because there are regulations around what your carbon footprint looks like, what carbon generation looks like, for all the different components and aspects of your business."

> **"Google is literally the first one to come out onto the market that can actually do this for real. Not only do they know how to do this, they will give you official documentation as to what your carbon footprint is from your activity [and] what kind of reductions you've made. It's good enough to be certified [for compliance with government regulations around sustainability]. That's the key thing."**
>
> *Director of R&D, cosmetics*

CARBON SENSE SUITE WITH ACTIVE ASSIST FEATURES

The interviewees' organizations chose to invest in the Active Assist features of Google's Carbon Sense Suite for the following reasons:

- **Fast and easy way to begin sustainability journey.** For IT organizations on their sustainability journey, Google's Carbon Sense Suite was sought out. To quote one of the interviewees from Uber: "The product and APIs were quite easy to communicate with. We already used Active Assist APIs [to establish and maintain least privileged access to our cloud resources]. So, we added this functionality on top, and it allowed us to quickly enhance and broaden our tool suite to include sustainability as one of the conditions we monitor."

KEY RESULTS

The main sustainability outcomes for the interviewees' organizations include:

Improved visibility into CO2 use.

- **Uber was able to better and more specifically track emissions associated with their infrastructure running on public cloud.** Before Google's Carbon Sense Suite, the interviewee from Uber said, "We did not have a good way of tracking specifics, and [Active Assist] is what allowed us to start tracking … it provided us with the metrics." With Google's Carbon Sense Suite, Uber was able to dive deeper into the emissions they already tracked.

- **The cosmetics organization gained valuable insight into the carbon intensity of different applications.** Prior to Google's Carbon Sense Suite, the Director of R&D for the cosmetics organization was forced to rely on imprecise estimates for information on CO2 emissions. With Google's help, the organization gained much more accurate data: "You actually get quantitative evaluations, [e.g.,] these projects are the most intense, these are sort of moderate, and these are fairly light to almost nothing. So, in the

future, if you start doing this, now you have an idea of what to do, [or] a benchmark."

Emissions savings from deactivating idle and unattended resources.

- **Uber was able to eliminate idle and unattended projects, saving hundreds of thousands of kilograms of CO2 per year.** The Active Assist features of Google's Carbon Sense Suite let Uber see the projects which were idle or unattended and what the associated CO2 emissions of those projects were. This enabled quick, immediate reductions of CO2 without impacting productivity. The Uber interviewee stated: "We were able to identify a ballpark of 11,500 kilograms of CO2 of monthly emissions as currently not being used and eliminate them." This amount of CO2 emissions saved per month equates to a yearly reduction of 138,000 kilograms of CO2, or roughly the same impact as preserving an acre of forest from conversion to cropland.

- **The cosmetics organization was able to reduce its CO2 output while keeping projects online.** In addition to letting organizations take idle projects offline, Google's Carbon Sense Suite can help organizations reduce the CO2 output of their projects without completely taking them offline, accomplishing the identification and rightsizing of overallocated resources. The Director of R&D said: "What can we do to improve this thing? We can clean it up. We can basically cut it in half. It'll be better than it was before. That's how you use this as an evaluation tool."

Improved company culture around sustainability and meeting goals.

- **Uber was able to double-down on their focus on sustainability.** The ability to track CO2 emissions changed how Uber trained new engineers and how teams communicated with each other. CO2 usage became a common metric and consideration that was discussed when starting new projects or examining old ones. The Uber interviewee said: "This is part of our much bigger effort of pushing towards sustainability. It's increased awareness and [demonstrated] what the right thing to do is."

- **The cosmetics organization was able to back up its marketing with action.** Many organizations are broadcasting their sustainability goals outside of the organization, and the interviewee from the cosmetics organization appreciated that Google enabled them to begin to publicly promote their culture of sustainability with concrete, effective action: "Everyone wants to brand themselves as being sustainable. Now we have a leverage tool to say, 'Here's where we're improving, here's our carbon footprint reduction, [and] here's how we're contributing to the reduction of global warming.'"

KEY TAKEAWAYS

- **Sustainability is important.** Enterprise-level organizations are increasingly viewing sustainability as top-of-mind, making public commitments for regulatory, marketing, and ethical purposes.

- **Sustainability has organization-wide implications, including workloads on public cloud infrastructure.** In addition to reducing reliance on fossil fuel transportation and general energy needs, organizations must consider the energy consumption — and CO2 emissions — of back-office activities, including running workloads.

- **Emerging suites of sustainability tools can help organizations meet their goals.** Public cloud providers are investing in visibility and actionable reductions in CO2 emissions for their customers. Whether it's Google's Carbon Sense Suite with Active Assist or another vendor's solution, it's easier

than ever for organizations to begin or progress their sustainability journey.

TOTAL ECONOMIC IMPACT ANALYSIS

For more information, download the full study: "The Total Economic Impact™ of Google Active Assist," a commissioned study conducted by Forrester Consulting on behalf of Google, September 2022. For more information from Google on Active Assist and the rest of their Carbon Sense Suite, visit their product website.

STUDY FINDINGS

Forrester interviewed four representatives at organizations with experience using the Active Assist and combined the results into a three-year composite organization financial analysis. Risk-adjusted present value (PV) quantified benefits for the composite organization include:

- Optimized cloud consumption.

- Enhanced security posture.

- Streamlined privileged access management.

- Reduced network downtime.

Return on investment (ROI)

781%

Net present value (NPV)

$2.3M

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