SDIA Open Data Hub

The Sustainable Digital Infrastructure Alliance (SDIA) Open Data Hub is a transparency register for the digital industry, collecting and aggregating industry data on the metrics of our Roadmap to Sustainable Digital infrastructure by 2030. This allows for benchmarking and performance evaluation, which accelerates innovation that comes from the research community through democratized data. See the full announcement here and visit the landing page for more information.

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What is the Open Data Hub modeled after?

It is inspired by and modeled after similar open data hubs used in other industries, such as the European Network of Transmission System Operators for Electricity (ENTSO-E), the UN Environment Programme's (UNEP) Climate Action Note, electricityMap, and Climate TRACE.

Why do we need the Open Data Hub?

In order to reduce the environmental impact of the digital economy without compromising its growth, we need to decouple digital growth from energy and resource consumption. In order to achieve this, we have developed our Roadmap to Sustainable Digital Infrastructure by 2030. The Roadmap illustrates a set of initiatives based on six essential metrics (CO_2 Emissions, Electricity Consumption, Waste from Electrical and Electronic Equipment (WEEE) Generation, Resource Consumption, Pollution, and Socioeconomic Costs) aiming to move the industry toward sustainability. In order to track our progress, however, we need a central reporting framework that continuously collects data on the status quo. The Open Data Hub acts as the reporting vehicle that provides transparency and allows for industry-wide innovation through its open-access data that paves the way for a sustainable digital industry.

When will the Open Data Hub be available?

The launch of the first version of the Open Data Hub is scheduled 2022, which will entail testing its functionality by only collecting and storing data. In the meantime, you can reach out to us to stay updated or become a Sponsor of the Open Data Hub, supporting its development financially.

Can I contribute to the Open Data Hub's development?

Yes. As a Sponsor, you will provide the financial resources for the development of the Open Data Hub. By funding this initiative, you ensure increased quality and robustness for the first version since it allows us to put more resources into its development.

How do I become a Sponsor of the Open Data Hub?

In order to become a Sponsor, your organization is required to have at least a Supporter membership with SDIA. Depending on your desired level of sponsorship, you can either sign up for a Supporter membership (€20,000/year or €40,000/year for energy utilities) or for a Sponsor membership (€40,000/year or €80,000/year for energy utilities). For additional information on memberships, reach out to: external.relations@sdialliance.org.

Why would I as a company contribute as a Sponsor before the product is developed?

As a non-member of SDIA, you can contribute as a Sponsor of the Open Data Hub, supporting the development financially. With increased funds, your support will increase the richness and robustness of the platform, while also speeding up its development. This will grant you and the whole industry earlier access to a higher-quality platform.

Additionally, you will gain reputation since your brand will be highlighted in any Open Data Hub related publications and articles.

What data will be collected?

Within the Open Data Hub, we will only collect the data that the participants are able and willing to share. By design, the Open Data hub will protect business-critical data, anonymizing and aggregating data instead of revealing single actors as the source of the data. This way, even if products or infrastructure may not yet be sustainable, companies can still contribute their data, knowing their identity is protected.

Our goal is to measure at least those metrics that we have defined within our Roadmap. Therefore, we have developed a data model that accumulates and illustrates the relevant data that we want to collect. This data model will be refined by discussions with participating members of the Open Data Hub.

Basically, the data can be divided into three categories: **collected data** (e.g., kilowatt-hours (kWh) from the various energy-related systems within the data center or temperature from sensors), **assessment data** (e.g., embedded emissions), and **calculated data** (e.g., carbon dioxide equivalent (CO2eq) of energy consumption).

The definite set of metrics is not final yet, however all relevant metrics from past years have been taken into account and are aimed to be analyzed within the Open Data Hub steering group.

How will the data be collected?

The collection of that data depends on the time-sensitivity of the respective metric. Time-critical data will be collected in near real-time (e.g., energy consumption), while non-volatile data (e.g., WEEE generation) will be collected periodically. The real-time collection of data could be done via data center infrastructure management (DCIM) software as well as other infrastructure software such as virtualization hypervisors, ID-Rack, or IT monitoring software. We also plan to consult our members about this to help devise how.

What data will be published?

Publishing the data will be a key element of the Open Data Hub since it will catalyze innovation toward a sustainable digital economy, support researchers, and help governments craft effective, inclusive, and data-driven regulation and policy. The shared data, however, will be aggregated and anonymized before it is being published to prevent sensitive data from being leaked. Therefore, we will develop a detailed privacy policy together with participating members.

Additionally, in order to access the data sets, consumers have to be either part of a research organization, a university or governmental organization. Apart from that, our members can access the data. Either way, the consumer needs to be registered within the SDIA system to ensure traceability of the data.

What will the data be used for?

The collected data enables a variety of activities. It will be used for benchmarking, evaluating the performance of contributors, and also as a source of information for researchers, innovators, and governments. The data can even be used for new services that optimize the energy efficiency of IT and the facility.

What benefits do I get from contributing my data?

A contribution to the Open Data Hub brings several benefits:

First, momentum is growing among governments to make the digital sector more transparent about their power and resource consumption as well as consider the wider impact of IT and digitalization on the environment and climate targets. By doing it via the Open Data Hub, we can focus on aggregate data and protect business-critical data while creating a new precedent for regulators and policymakers by facilitating inclusive, data-driven policy-making.

Second, the Open Data Hub allows you to compare your key sustainability metrics to industry benchmarks and other contributors, helping you to focus on potential weak points in your sustainability strategy or to advertise your exemplary sustainability effort.

Third, by better understanding how metrics like power consumption are being used by IT providers and its underlying infrastructure, the focus can switch from the data center buildings to the owners of IT infrastructure that ultimately account for the biggest use of energy. In turn, if data center tenants, for instance, are being pressured to be more sustainable and reduce power consumption, they could enlist the help of the data center operator and buy "energy optimization" or "sustainability" as a service – a new business pathway for the data center that turns a potential threat into an exciting opportunity.

Fourth, the Open Data Hub will catalyze industry-wide innovation by providing critically needed data to researchers who can, in turn, help further develop the sector as a whole.

Fifth, Open Data Hub partners will be eligible for a new Transparency Certification (similar to other industry standards such as the EPEAT ecolabel), which will signal to industry, society, and your customers that you are serious about transparency.

Sixth, you will be able to evaluate your company's performance with automated compliance tools and personalized dashboards that show and rate your real-time operational data, including your server/data center idle coefficients (SIC/DIC) – two key sustainability and efficiency metrics.

Seventh, the Open Data Hub gives you access to new products and services that will be built with the platform's data and infrastructure, optimizing your operations, and saving energy by improving IT efficiency or other metrics.

Lastly, SDIA's experts, including our members and Research and Innovation Labs, will provide sustainability recommendations to help you progress with our Roadmap to a sustainable digital economy.

My company is already collecting all this data. Why would I want to share it?

Sharing your data with the Open Data Hub makes your company a catalyst for industry-wide innovation. The SDIA will acknowledge your contribution with its own Transparency Certification badge and give you access to benchmarking data.

Additionally, while public and governmental interest in the digital infrastructure and its environmental impact is rising, taking part in an industry initiative like the Open Data Hub could preempt governmental regulatory scrutiny.

Can someone reverse engineer commercially sensitive information from the data I provide?

No. By anonymizing and aggregating the data that you submit, it will not be possible to trace this data back to your business.

Am I actually able to collect and deliver the data you want?

The participants and SDIA will discuss which data will be collected and how it will be possible to collect it. This ensures that our demands regarding data collection remain realistic and that the process can be implemented easily and in-line with established data protection guidelines.

How do you expect the Open Data Hub to grow, and what features will the Open Data Hub grow to include?

As for every software development project, the functionality will increase with the maturity of the product. In the beginning, the Open Data Hub will be tested via its functionality. This means that it will have very basic features (e.g., collecting and storing the data safely from a DCIM system on the Open Data Hub, a simple dashboard with the data that you selected, etc.).

With time, the dashboard will be improved, which will enable you to see your real-time performance and receive benchmarking data. We will include anonymized and aggregated datasets for the research community as well, which will catalyze innovation.

As a final improvement, we see the data management and compliance tools. Those tools automatically generate compliance reports and benchmark against industry averages, allowing you to plan your strategy based on numbers. Out of this final improvement, it is likely that new service and business models for co-location operators and IT service providers will emerge.

Who can I contact for more information?

You can get in touch with our External Relations team at: external.relations@sdialliance.org