

COVID-19 caused businesses to adopt new practices, including moving many operations online and leading to a positive impact on CO₂ emission reductions. The clinical trials industry is no exception and must also be able to accommodate such change.

The timing is right to introduce additional carbon-efficient solutions to clinical trials. Let's focus on how we can improve eCOA trials carbon footprint.

Where do CO₂ emissions come from in eCOA projects

“We have calculated that roughly 70% of the carbon footprint at Kayentis is linked to the eCOA projects we conduct,” said the CSR manager @Kayentis, global provider of eCOA solutions.

Within this figure, a little over 75% is tied to the production of the smartphones and tablets that are provisioned to clinical sites. Shipping these devices amounts to less than 5% of the total. The remaining 20% is a result of travel undertaken for project management, including investigator meetings, User Acceptance Testing (UAT), client visits, and on-site training.

How to reduce CO₂ emissions in eCOA projects

1- Development of virtual meetings and training to address travel footprint



Despite the importance of keeping some face-to-face interactions, the pandemic has highlighted how easily travel-associated CO₂ emissions can be addressed, by replacing on-site training and face-to-face meetings with virtual ones, while respecting or even improving compliance with regulations thanks to digitalization:

- Electronic training can be developed so that it is self-completed by study patients and by site staff, whichever type of device is used (provisioned tablet, smartphone, BYOD). Training must be mandatory and audit-trailed so that all the details are documented.

For patients, a paper “Quick start user guide” can provide the essential start up support material only (how to charge, turn on the device etc.), with further information available electronically. At Kayentis, for example, we have developed an app, the Kayentis Media Player (KMP), to include different documents for patient engagement, related to the study, the therapeutic area, or training. Patients can use the app to easily access all the set up/training information directly and can refer to the information they need in their own time.

For sites, the support is provided through direct phone contact with the helpdesk as well as with the sponsor, CRO, or vendor team members if needed. Also, all training material must be made available for future reference. At Kayentis, this material is available on the Clin’form webportal that is dedicated to site and vendor team.

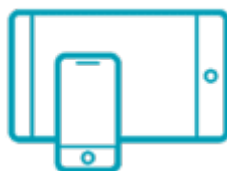
Interactions with sponsors have also changed. Kick off meetings have switched to virtual, User Acceptance Testings are also now performed remotely, and all the necessary follow-up actions are managed in a virtual manner.

2- Optimization of shipping policy



Shipping is another source of carbon emissions but is dependent on individual companies' shipping policies and processes. At Kayentis, we have already optimized the shipping process to ensure a low carbon footprint (5%). Shipments are at a country level as much as possible, so that the total number of shipments remains limited. Also, the size of the shipment boxes has been reduced to the minimum required, so that total weight is reduced and the total number of boxes per container is increased. And the cardboard we use is recyclable too!

3- Reduction of volume of new devices



In eCOA projects, devices are a key generator of CO₂ emissions. Introducing data collection techniques such as BYOD and WebCOA are likely to lead to carbon footprint reduction.

- **BYOD**, being usable as a hybrid strategy with provisioned devices still needed in a study, reduces the need to produce, ship and use extra devices

WebCOA

as a back-up strategy, using an online platform to directly enter patient data rather than stockpile spare devices at each site, or ship piles of paper diaries to patients, definitely makes a difference

Using refurbished devices is also an option: with an average lifespan of 4 years for a device, refurbishing is an option for either short-term studies, or for device replacement during the course of a study

On top of these developments, the recent acceleration of clinical trials decentralization, that aims to reduce the burden on patients through bringing the study to them rather than vice versa, may also have a positive impact on the environment: by using televisits to reduce patient travel, the carbon footprint of clinical trials should decrease.

“Faced with the threat of climate change, every company and each individual has a key role to play in reducing the global carbon footprint; I am really pleased with the considerable effort that the whole Kayentis team has made to actively take part,” added Mr. Juge.

How to go further towards carbon neutral eCOA projects

Given the importance of reducing the global carbon footprint, reducing emissions is key, but it's not enough: we also need to compensate for what we need to continue to produce.

The first step in moving towards carbon neutral projects is to assess the carbon impact of each eCOA project.

“At Kayentis, we always calculate the carbon impact of each eCOA project. And after having optimized carbon emissions for a project, we calculate the residual emissions of every eCOA project. This calculation uses standards and references such as device manufacturer carbon footprint, transportation company calculators, or the direct impact of flights reported by travel agencies” said the CSR manager @Kayentis.

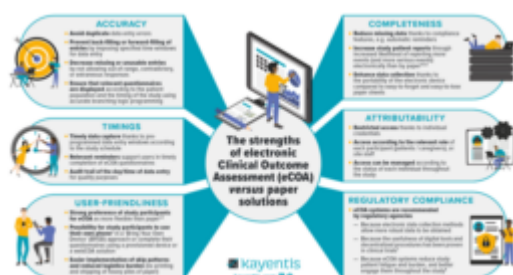
The second step is to offset the amount of carbon emissions that cannot be reduced. In its [carbon neutral eCOA project program](#), Kayentis offsets the amount calculated by making an equivalent monetary donation to the [carbon solidarity action program](#) at the GoodPlanet Foundation.

This foundation aims to combat climate change by developing sustainable and economically viable alternatives to polluting activities, to the benefit of the most disadvantaged groups.

Being responsible in our carbon emissions is possible, and driving sustainable growth is too. Through the comprehensive control of emissions, operational process optimization, and adapted compensation programs, the clinical trials industry can evolve towards implementing more eco-friendly eCOA projects, securing the quality of the data collected while at the same time respecting our environment.

[Learn more about our program for carbon-neutral clinical trials](#)

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