FROM ON-SITE TO ONLINE:
HOW ONE HEALTHCARE ORGANIZATION CONDUCTED A CLINICAL TRIAL AND REDUCED EMISSIONS

Is it possible to monitor over 15,000 patients in a clinical trial while reducing greenhouse gas emissions? One organization achieved it — and Dassault Systèmes helped make it happen.

DASSAULT SYSTEMES

> *“Decentralized clinical trials remove geographic barriers for patients, reducing travel and carbon emissions while improving engagement and the overall study experience.”*
>
> - Senior Vice President

The healthcare sector is undergoing a transformative decarbonization process in every aspect of its operations. One key pillar of this sector involves clinical trials, where hundreds (if not thousands) of participants are monitored and tracked over a specific time period.

Clinical trials require tremendous resources. In addition to the online systems needed to keep track of sensitive medical information, there are also stumbling blocks inherent to such an exercise — excessive on-site visits for participants and extensive travel times.

Is it possible to streamline this process? A global medical organization looked for a way to eliminate these stumbling blocks as it embarked on one of its largest clinical trials to date — tracking and monitoring the progress of more than15,000 participants over a period of more than two years.

While looking for a solution, the organization recognized the potential to solve an even bigger challenge. By deploying a digital solution to enable decentralized clinical trials (DCT), the organization could **reduce greenhouse gas emissions** through a reduction of on-site visits and travel for participants.

Discover how this organization implemented a more sustainable methodology for clinical trials, powered by Dassault Systèmes’ innovative solutions.

About the customer

Industry:
Life sciences & healthcare

Company size:
Approximately 26,000 full-time employees

Location:
United States

Use case:
The implementation of MEDIDATA on the **3D**EXPERIENCE® platform enabled over 15,000 clinical trial patients to make only one on-site follow-up visit instead of seven visits during the course of the trial. This greatly reduced the travel requirements of the patients, leading to significant emission reductions.

The EU Taxonomy

This case study focuses on the estimated contribution to the objectives of **Climate Change Mitigation.**

Results

0.048tCO2e
avoided[1] per patient

7,598,304 km
total travel distance reduced

IN A NUTSHELL

The challenge

The customer's key challenges stemmed directly from its:

I. Business needs

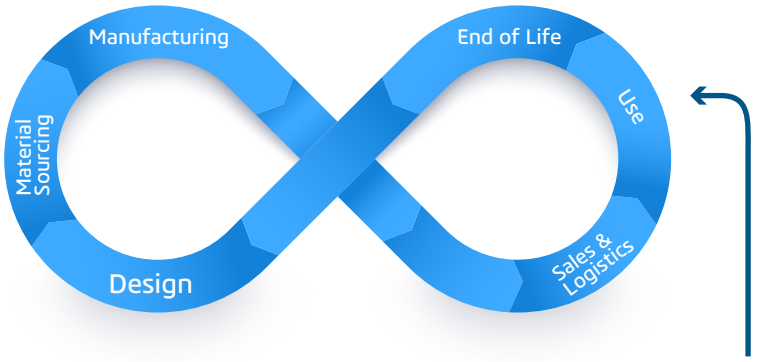
To track and monitor the progress of over 15,000 participants in a clinical trial while reducing greenhouse gas emissions

II. Operational requirements

A digital solution to enable DCT that can reduce emissions by minimizing on-site visits and travel for participants

The solution

Dassault Systèmes' approach addressed one crucial part of the environmental footprint reduction objective:



Software usage and **impact** were observed during the **Use** phase

The outcome

The clinical team tracked and monitored over 15,000 patients through MEDIDATA for the entire duration of the trial. MEDIDATA allowed the clinical team to interact with the patients and collect all relevant data, preserving data quality. By implementing a Bring Your Own Device (BYOD) policy, patients used their own mobile devices — smartphones, tablets and computers — to upload the necessary medical data onto the platform without compromising the user experience

The implementation of MEDIDATA reduced on-site visits for the patients. As a result, they required only one on-site follow-up visit instead of seven during the entire 26-month trial. The virtual nature of the study also allowed patient representation to be more inclusive, allowing individuals who wouldn't normally participate in clinical trials because of location or convenience to become part of the study.

[1]Emissions avoided/reduced have been estimated following EU Taxonomy (Regulation Guideline), ISO 14067, 11044 and Guidance of WBCSD Net Zero Initiative Guidelines. Dassault Systèmes' approach and calculations, along with the allocated contribution of the software have been certified by an independent third party. External View URD 2023, Chapter 2.

OUR RECOMMENDATIONS AND METHODS

Adoption of Dassault Systèmes' **DCT** solution on the **3D**EXPERIENCE platform.

The **avoided emission estimation** was estimated following the:

EU Taxonomy (Regulation Guideline), ISO 14067, 11044 and Guidance of WBCSD Net Zero Initiative Guidelines

Methodology based on the comparison of two scenarios for one given functional unit (ISO 14067:2018 and ISO 14064-2:2019)

Dassault Systèmes' methodology has been certified by an independent third party and elaborated in compliance with the EU Taxonomy (Regulation Guideline), ISO 14067, 11044 and Guidance of WBCSD Net Zero Initiative Guidelines. The end result expressed in tCO2e remains an estimation.

THE END RESULT

Reduction in transportation

7,598,304 km

total travel distance reduced

Climate change mitigation

73%

reduction in emissions

Patient burden impact

219,000

patient hours saved

To learn more, visit our website