

# Sanofi “all in” on artificial intelligence and data science to speed breakthroughs for patients



PUBLISHED JUN 13, 2023  
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Paris, June 13, 2023. Sanofi takes the next step in its company-wide digital transformation and rolls-out *plai* at scale. *plai*, Sanofi’s industry-leading app developed with artificial intelligence (AI) platform company Aily Labs, delivers real-time, reactive data interactions and gives an unprecedented 360° view across all Sanofi activities. The app aggregates available company internal data across functions and harnesses the power of AI to provide timely insights and personalized “what if” scenarios to support thousands of Sanofi teams decision makers to take informed decisions in a simple and modern digital user experience.

Our ambition is to become the first pharma company powered by artificial intelligence at scale, giving our people tools and technologies that focus on insights and allow them to make better everyday decisions. The use of artificial intelligence and data science already support our teams’ efforts in areas such as accelerating drug discovery, enhanced clinical trial design, and improving manufacturing and supply of medicines and vaccines. We have just scratched the surface as to how we embrace these disruptive technologies to achieve our ambition of transforming the practice of medicine.

*plai* is an essential enabler in the company-wide digital transformation and data democratisation journey. AI-powered tools help Sanofi teams make better and faster data-driven decisions, hence boosting productivity across the value chain: from research to clinical operations to manufacturing and supply to business analysis.

In Research, Sanofi has built multiple AI programs to slash research

times through improved predictive modelling and automate time-sink activities. As a result, AI enables R&D teams to scale and accelerate ground-breaking research processes from a matter of weeks to just hours and improve potential target identification in therapeutic areas like immunology, oncology or neurology by 20 to 30%.

AI also accelerates work on mRNA research. For an mRNA vaccine to reach its designated cells and produce disease-fighting proteins, it must be carried by a stable drug delivery system via a special particle, known as a lipid nanoparticle. While Sanofi owns a large library of lipid nanoparticles, R&D teams now use AI to create digital models to predict the strongest selection of particles. It increased the speed of the lipid nanoparticle prediction process from months to days.

In Clinical operations, the increasing digitization and leverage of plai's insights empower Sanofi teams to rethink how to run better clinical trials. For example, R&D teams can find and set up new, more convenient trial sites for their target groups, broadening opportunities for those from historically underrepresented communities to participate in clinical research. With improved representation, Sanofi continues its work toward a future where all trials reflect the diversity of the people most affected by the diseases studied.

In Manufacturing and Supply, Sanofi is digitizing quality assessment processes, moving from paper to Electronic Batch Records, leveraging digital and data to improve asset utilization and increase productivity by implementing new manufacturing 4.0 capabilities. Sanofi has also developed an in-house AI-enabled yield optimization solution which learns from past and current batch performance to enable consistently higher yield levels. This helps to optimize usage of raw materials, contributing to the company's environmental objectives, and supports improved cost efficiency. Also, recent plai adoption within Sanofi's biopharma Supply Chain has proven the ability to predict 80% of low inventory positions, allowing teams to take mitigating actions to secure supply, faster than ever before.

Best-in-class technological collaborations to speed scientific breakthroughs for patients

In 2022 Sanofi acquired Amunix Pharmaceuticals, which uses AI to tailor-deliver medicines that become active only in tumor tissues, while not harming normal ones. The same year, Sanofi joined forces in a collaboration with pioneering biotech Exscientia to explore new

treatments for cancer and diseases linked to the immune system. Using Exscientia's AI-based capabilities and personalized medicine platform, Sanofi's scientists can test drug candidates against actual human tissue models, years before a clinical trial. Also in 2022, Sanofi partnered with pharmaceutical companies Insilico Medicine and Atomwise to speed up medicine development using their AI-driven platforms. This comes on top of Sanofi's partnership with Owkin in 2021, whose AI-driven platform uses patient data from different medical centers to build models and predict patient responses to treatments.

Sanofi is a partner of VivaTech, Europe's largest tech and startup event, taking place in Paris from June 14 to June 17, 2023. This year, Sanofi's digital experts and 17 partner startups specializing in data and e-health will show how AI and Data can push the boundaries of science. Sanofi will notably present its new groundbreaking partnership with French startup Hillo to adapt its digital twin AI solution to Sanofi's connected insulin pens. With this digital twin, the influence of the diabetic patient's lifestyle or therapeutic habits can now be taken into account in an optimized way.

Sanofi's Consumer Healthcare business unit will present its recently launched Open Innovation Portal, which allows the wider supply chain community to submit their solutions to unmet challenges in consumer health. Startups, entrepreneurs, research institutions, accelerators, universities and more will now be able to respond online to challenge areas that have been identified by Sanofi Consumer Healthcare, from creating sustainable packaging to developing new products and technologies. The launch of the Sanofi Consumer Healthcare Open Innovation Portal will facilitate the innovation of the very best self-care solutions by uniting the boldest and brightest external ideas with Sanofi's expertise, infrastructure, scale and reach. Sanofi will continue to add new challenges to the Open Innovation Portal in the areas of digestive wellness, cough, cold and flu, physical and mental wellness, allergy, pain care, personal care and sustainability. Successful submissions will be given the opportunity to drive innovation forward together as collaborative partners on projects with Consumer Healthcare at Sanofi. Innovators can visit <https://www.innovation-sanofichc.com> to learn more and submit their ideas.

We are an innovative global healthcare company, driven by one purpose: we chase the miracles of science to improve people's lives.

Our team, across some 100 countries, is dedicated to transforming the practice of medicine by working to turn the impossible into the possible. We provide potentially life-changing treatment options and life-saving vaccine protection to millions of people globally, while putting sustainability and social responsibility at the center of our ambitions.

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*Press release distributed by Wire Association on behalf of Sanofi, on Jun 13, 2023. For more information subscribe and [follow](#) us.*

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