



2023 Wrap-up

Life Sciences & Healthcare Business Unit

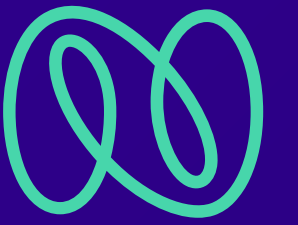
In 2023, we helped our clients reach new business milestone through relentless innovation and fluidity

In 2023 the emergence of the **Generative AI** put additional pressure on the **life sciences** and **healthcare industry**, intensifying the need for relentless innovation to address the myriad of challenges in delivering **personalized healthcare** to a broader population. The AI wave demands that the industry stakeholders find ways to reduce costs, increase accessibility, and maintain high-quality standards simultaneously. The convergence of generative AI with life sciences presented an exciting opportunity to **harness data-driven approaches, accelerating drug discovery, treatment optimization, and disease prediction**, making healthcare more efficient, affordable, and accessible for everyone. Nagarro is a trusted technology partner for many leading organizations in this transformative journey. We are committed to support our clients at every step as they navigate a complex landscape characterized by constant evolution.



Andrei Doibani

Head of Global Business Unit
Life Sciences & Healthcare



26+

years of experience

150+

clients globally

410+

projects delivered
successfully

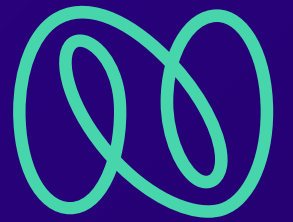
ISO13485

medical device quality
standard certified

Top clients

We work with 4 of the top 10
pharma companies and 2 of the
top 10 diagnostics companies

We created state-of-the-art solutions for our clients



AI in Healthcare

In 2023, Nagarro introduced its Fluidic Enterprise vision, enabling organizations to thrive on AI while maintaining human ingenuity. Our AI team has already delivered multiple solutions such as adverse effect mining, vaccine opinion mining, and medical image diagnostics. We are actively advancing innovations like Genome AI, Ginger AI, Forcastra AI, and Nagarro Enterprise AI (NIA), aiming to reshape the sector and deliver safer, more affordable healthcare.

MedTech: Connected Devices

Recognizing the complexities of medical device updates, Nagarro has developed solutions to assist MedTech companies in their Firmware Over-The-Air (FOTA) journey. Our FOTA solutions portfolio aims to deliver tangible outcomes through consulting, customized engineering solutions, quality management and off the shelf “FOTA accelerator” modules.

Labs of Future

Researchers boost innovation, productivity, and accuracy using AI/ML, Internet of Laboratory Things (IoLT), automation, and data analytics for a connected, self-monitoring, smart lab environment. This enhances real-time data insights, fostering new therapies and aiding scientific breakthroughs. It reduces costs and errors and promotes global collaboration. Meanwhile AR & VR enhance visualization, interaction, and knowledge sharing for an improved overall experience.

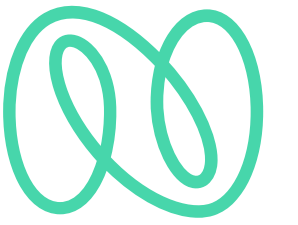
MES Configuration Wizard

The Manufacturing Execution System (MES) Configuration Wizard transforms manufacturing via a unified platform, streamlining workflow and ensuring quality assurance through meticulous documentation. It simplifies system configuration and expedites deployment, reducing errors. The MES Configuration Wizard is crucial for audits, compliance, and quality assurance, identifying, packaging, and compiling project data into a certificate format.

Hospital Process Optimization

Hospital process automation employs AI/ML, RPA, IoT, RFIDs, NLP, and blockchain to optimize administrative and clinical tasks. This includes patient registration, scheduling, medical records, billing, inventory management, and clinical tasks like medication dispensing and lab testing. Automation enhances operational efficiency, reduces errors, and improves patient care. It enables effective data collection and analysis, improving decision-making and patient outcomes.

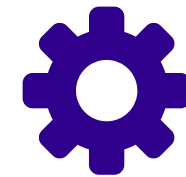
And we enhanced our offerings to create next-gen healthcare



MedTech

- Diagnostics
- Assays development
- Medical devices software /as a software
- Remote solutions

Discover offering



Manufacturing Execution System

- Operational excellence
- Recipe management
- Rollouts to multiple plants

Discover offering



Quality as a Service

- E2E project compliance
- User experience & usability engineering
- Verification & validation
- Computerized system validation
- QMS consultancy & implementation

Discover offering



Hospitals & Lab Informatics

- Smart Hospitals Integrated Systems
- Connected Experiences for Doctors and Patients
- Healthcare Providers and Public Health Integration
- LIMS, ELN, CDS, and SDMS implementations
- Operational Efficiency & Process Optimization



Biostatistics

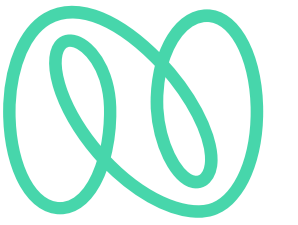
- Data analysis
- Data modelling
- Data management
- Statistical analysis
- Data standardization



BioPharma & Digital Health

- Clinical data management
- Real world evidence
- Commercialization & Digital Social Insights (DSI)
- Digital health

We leveraged our tech wizardry to help our clients advance



A personalized omnichannel platform for better HCPs engagement

A multinational pharmaceutical company partnered with Nagarro to revamp its existing content platform, enhance engagement, and empower its internal teams with better content control. We used Sitecore and Microservices architecture to create a progressive web-based app that sets a new standard. The client experiences seamless UX, tailored content for every doctor, and better client and medical fraternity engagement.



Streamlining case intake for a global pharma giant

We helped a global pharma company automate its case intake processes through an AI and ML-powered AWS-based SaaS platform. The solution delivered substantial business value by streamlining operations, enhancing data accuracy, fortifying data security, and improving efficiency, compliance, and client satisfaction.



Regulatory-compliant environment for medical devices

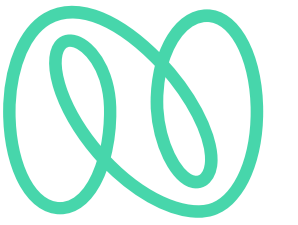
Nagarro developed a solution for distributed device integration with enterprise back-end services for a global biotech company. The platform is built on modular technology and can accommodate more than 100,000 connected devices globally. It ensures cybersecurity and higher efficiency by automating information exchange between machines, sensors, systems, and users.



Efficient patient management and interoperability

We delivered an end-to-end development and verification of medical software after augmenting the client's quality management with Nagarro's certified (ISO 13485:2016) quality management system. We built a solution for managing fluid and body composition patients and treatment information for dialysis patients, enabling efficient patient management and interoperable data.

And explored new ways of building the future of healthcare



PHI data exchange registry

We developed a secure cloud registry and web portal PoC for efficient, protected health information (PHI) data exchange among laboratories, hospital professionals, and the Health Care Authority. This tool offers real-time notification updates and aids in combating multi-drug resistant organisms (MDROs) while allowing the authority to generate reports and track the spread. Adhering to PHI, HIPAA and HITECH standards, our solution supports FHIR messaging for standardized and secure HIEEMR data exchange.



In vitro diagnostic software

We delivered full software life-cycle quality and compliance consultancy and technical documentation, including verification and validation, usability engineering, and risk management for a genomic IVD software tool of a European precision oncology company. Our contribution has been critical for compliance with the regulatory pathways to commercialize the product in Europe.



Market-Ready solution for dialysis care

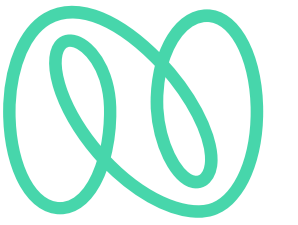
Nagarro developed compliant software for a leading global healthcare company specializing in dialysis. During our nine-year-long partnership with the client, we built a market-ready compliant software product for dialysis medical devices. We integrated best-suitable practices to ensure compliance with ISO and other standards. Our solutions helped the client achieve agility, optimize costs, and enhance customer satisfaction.



Cybersecurity compliance platform for a top tech innovator

We conceptualized a cybersecurity compliance platform tailored specifically for medical device manufacturers and healthcare providers contemplating FDA cybersecurity requirements. Our approach centered around three key pillars: establishing a 'trusted foundation,' ensuring continuous connectivity,' and offering proactive support through AI-based solutions. Additionally, the platform provides the evidence and assistance required for a seamless FDA submission process.

Dive Deeper: from insights to action



Webinar: Garaje digital health: Building better healthcare with digital social insights

Luciana Dinu, Nagarro expert, sheds light on the delicate interplay between technology and human nature. We reveal the key role of Digital Insights in navigating data chaos, leveraging social media for partnerships, and understanding cultural nuances for a holistic patient experience.

[Watch it here](#)

Blog: Simplifying MES configuration with the MES Configuration Wizard

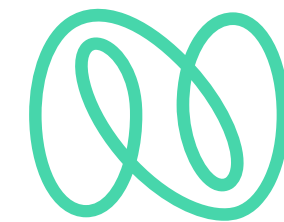
Healthcare interoperability isn't just a technical challenge; it's a profound transformation journey towards patient-centered care. Dive into our blog to explore the benefits of interoperability and discover how it's shaping the healthcare sector with real-life examples like FHIR-based solutions, telehealth, and AI chatbots.

[Read more](#)

Blog: Interoperability, a gateway to data-driven healthcare

Explore our blog to see how the Configuration Wizard transforms healthcare manufacturing. From streamlining processes to enhancing accuracy and ensuring compliance, this tool guarantees compliance and fosters seamless technology integration.

[Read more](#)



Been there, done that!

Catching up with our peers from the healthcare community at leading trade fairs and conferences

NTK Fair AP/PD March 28, 2023

Nagarro and Roche hosted an interactive session at the NTK Fair AD/PD™ 2023 in Gothenburg, Sweden. NTKApp is a collaborative project by Roche, ADDI, Aridhia, and Nagarro. NTKApp is a user-friendly platform for data harmonization that simplifies researchers' data exploration and analysis process.

HIMSS US April 17-21, 2023

At HIMSS US 2023 we highlighted our **cutting-edge technologies and solutions** and connected with industry peers. The event offered insights into the industry's current state and fostered meaningful collaborations that will shape our healthcare insights and capabilities.

Medical Fair India April 27-29, 2023

We deep-dived into how **Metaverse, web 3.0, blockchain, and mixed reality** are redefining customer experiences in the life sciences sector. And how organizations can leverage them to craft personalized, immersive, interactive virtual experiences and create cost-effective healthcare delivery channels.

Pistoia Alliance Boston November 14-16, 2023

The conference was the right platform to delve into the impact of **digital twins** and **Gen AI** in the life sciences & healthcare sector. We focused on **R&D** and collaborative efforts to accelerate the use of **AI, real world data** sciences and evidence at scale.

Other events we have attended

Pharma MES USA
March 20-22, 2023

Pistoia Alliance UK
Annual Spring
Conference
April 18, 2023

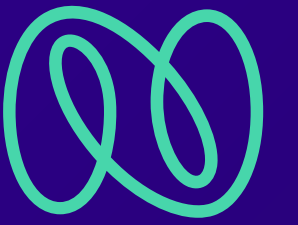
Bio-IT World
Conference & Expo
May 16-18, 2023

VivaTech
June 14-17, 2023

LevelUP Health & Life
Sciences Accelerator
September 18, 2023

Pharma Customer
Engagement & Digital
Health Europe UK
November 9-10, 2023

Gartner CIO
December 4, 2023





Want to kick-off a new project in 2024?

Contact us at lifesciences@nagarro.com

About Nagarro

Nagarro is a global digital engineering and consulting leader with a full-service offering. Harnessing the power of our Fluidic Enterprise vision and thinking breakthroughs framework, we help our clients become human-centric, digital-first organizations, augmenting their ability to be responsive, efficient, intimate, creative, and sustainable. We have a broad and long-standing international customer base, which includes many global blue-chip companies, leading independent software vendors (ISVs), and many other market and industry leaders. With over 19,000 experts across 36 countries, we are helping our partners succeed today.

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