

Julius Center achieves data management maturity thanks to Mendix

The Julius Center at Utrecht University Medical Centre recently developed an advanced, flexible Electronic Data Capture (EDC) system. The validated system – referred to as Research Online – allows researchers to conduct clinical studies quickly and easily, using flexible approaches. The system was developed on the Mendix platform.



Towards a new system

The previous EDC system in place at the Julius Center was not ideal. The system had been developed using a traditional approach, requiring new code to be written for each and every function. That made the system rigid, time-consuming, and expensive to develop and adapt. Frank Leus, Head of Data Management & Project Support at the Julius Center, decided to abandon this system. The new system needed to facilitate faster builds and continued development. It also had to be flexible and user-friendly, as well as compliant with modern laws and regulations.

Mendix

The Julius Center addressed these needs by building the new system on the Mendix platform. According to Leus, “Mendix makes it possible to work extremely quickly and flexibly by using model-driven development and validated ‘building blocks’. This development method is also much more cost-effective than programming it ourselves or hiring someone else to do it. We came to the conclusion that we had found the right technology

in Mendix. The collaboration with Mansystems, our implementation partner, and Mendix has also been very positive. The consultants helped us consider how our preferences could be implemented in Research Online. Within six months, the Mendix-based application was already better than the previous system, which was based on five years of work. We have been able to develop three entirely new applications in the past year, making Research Online a complete suite of software. Thanks to Mendix, innovation at Julius Center has been kicked into high gear.”

More self-service and re-use

Research Online gives the user more control. Leus notes: “Thanks to how simple and user-friendly the new system is, the user can now implement all the components of a complex trial in the system. This self-service concept drastically cuts down on time-to-market. And users no longer have to keep reinventing the wheel; in the new system, components from a study can be re-used very effectively, saving even more time and money.”

Compliance

The parameters that the Julius Center demanded for the system to ensure compliance with the laws and regulations governing clinical trials more than meet the required standards. Research Online runs on a fully certified Mendix Cloud environment, and thus conforms to the International Standard on Assurance Engagements (ISAE) 3402 Type II certification. This provides sufficient assurance of role-based access to the system and a complete electronic audit trail. Leus elaborates: “By providing full electronic support for research, we have made great strides towards compliance. Data quality and data security have been improved, and all data edits are properly logged. This means that we are in full compliance with GCP guidelines for research data. Moreover, everything built in Mendix is OData-ready. Using open data as a standard makes it possible to support data exchange between different systems. This also makes things easier for researchers, allowing them to focus completely on research rather than worrying about compliance and technology.”

Many more studies and researchers

The new system makes it far easier for the Julius Center to set up a study – and therefore also much faster. According to Leus, “A study can go live within a few weeks. It used to take much longer. The options offered by Mendix contribute to our current ability to facilitate many more research studies, and the number of researchers using our system has increased proportionately.”

Future prospects

Leus is extremely positive about the future potential for Research Online and Mendix. “We have

embraced the Mendix philosophy and see the added value of combining business and IT. We want to offer others the powerful Research Online solution for optimizing clinical trials. Mendix will remain our reliable partner in those endeavours.”

Research Online facts

- 120 clinical trials and cohorts
- 160,000 subjects, with more than 30,000 filling out online surveys themselves
- Studies in 40 countries involving over 1,000 hospitals, family doctors’ offices and healthcare institutions.
- More than 2,000 end-users, including researchers, research nurses and monitors.
- More than 100,000 forms filled out annually for clinical trial purposes.

Julius Center..

- supplies Electronic Data Capture as a service
- facilitates 150% more studies
- shortens the research time-to-market
- set up a new, improved EDC system within six months
- simplifies implementation of research studies
- puts the user in control
- complies with laws and regulations through automated systems
- is fulfilling its ambitions and claiming a leading position
- is innovating rapidly while remaining flexible and agile
- has completed 3 new applications in no time
- brings business and IT together

... thanks to Mendix



Mendix helps enterprises achieve their digital goals. Our digital innovation platform empowers customers to bring new products to market, digitize customer engagement, and automate unique business processes. Facilitating an iterative, collaborative approach, the platform brings business and IT together to build and deploy innovative applications at the speed of ideas.

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