

CUSTOMER SUCCESS STORY

GOVERNMENT · WATER AND ENERGY

NVE Norwegian Water Resource and Energy Directorate

NVE creates real-time insight into the risk of floods, landslides and avalanches with USoft

Responsibility for managing Norway's water and energy resources lies with the Norwegian Water Resource and Energy Directorate (NVE), part of the Ministry of Petroleum and Energy. One NVE service produces digital maps letting Norwegians see the current risk of floods, landslides and avalanches, while showing the situation as it was in previous years. NVE has used the USoft low-code development platform for some 30 years to collect all this sensor data, perform calculations and check the values. This means that only one developer is needed to maintain and manage all the tables, combine data from various sources and guarantee data quality.

- **Different cross-sections of the same data, offering real-time insight**
- **Easy integration of various databases allows many different types of data to be unlocked**
- **Through low-code easy application maintenance**

THE CHALLENGE

01

To control, manage and analyze a large volume of data with just one developer. Plus: ensuring that the data on possible floods and landslides is correct is vitally important, so a reliable system is key.

Norway has mountains and lots of water. It's a great combination for generating energy, but it also entails risks. The landscape height differences increase the risk of flooding, landslides and avalanches. All the more reason for the NVE to use numerous sensors to monitor just what's happening in the mountains and the water. The same monitoring data also enables climate changes to be tracked. That's the job of the Hydrology Department, where Vidar Eide, Senior Engineer at NVE, works.

"We collect about 700,000 different values each day in the USoft low-code platform," he explains. "That's data on water levels, but also on the water beds, landslides and snow conditions. We provide that information to many different target groups through the sites Varsom.no. and Retro.senorge.no: the Norwegian population, climate researchers, policy-makers and companies responsible for building and managing infrastructure like power plants, dams and high-voltage cables."

> The main advantage of the low-code platform over the traditional way of coding is that it saves a lot of time and needs far fewer people for development, maintenance and management than in the traditional situation.

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Vidar Eide
Senior Engineer at NVE

Lots of data available publicly

Where the dashboards for the population need to be as clear and as visual as possible, it's important that those used by maintenance engineers, for example, contain as much data as possible. "How you present the information depends entirely on the target group. At any one time, for instance, the two websites for the Norwegian population might use a map you can click through to access bar charts, while at another time a website or dashboard could contain lots of textual and numeric fields."

THE SOLUTION

02

USoft's Rules Engine makes the vast amount of data and relations between the data easy to maintain, while data quality is guaranteed, and cross-sections of the data are simple to create. All this is performed for the entire Norwegian population and other stakeholders by just one developer, using USoft's low-code platform.

The NVE has been using USoft's business-rules-driven development platform right back since 1992. The organization realized the benefits of a low-code approach in the back-end early on. As Eide explains: "I joined the company in 1994 and was introduced to USoft at that time. It's a great platform for bringing together many different types of data in one application. USoft's great strength is the integration of the different data sources and the simplicity of management. All this makes it possible for just one developer to combine and present a lot of information clearly, quickly and unambiguously."

That's because sensor data feeds into the databases, along with manual values, battery condition information, IP addresses, and information from the various hydropower stations. This data is brought together in a hundred tables in USoft's development environment. The platform is flexible and adjustments can be made easily, because the low-code platform is based on business rules rather than being set up in processes. It's not about the how (the processes), but about the what (what do you want to know and what's the shortest way to get there). That makes it easy for mechanics to access data about power plants and the batteries and instruments they contain. Or, for example, the maintenance work that has been performed, how it was carried out, and the scheduled work, including the control values that need to be checked.

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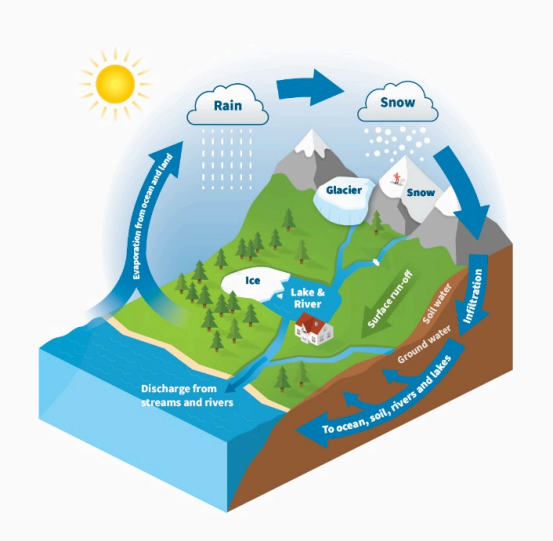
Senior Engineer at NVE

THE RESULT

03

Only one software engineer is needed to develop and maintain the databases in USoft's low-code platform. This ensures high quality, great flexibility, and speed.

Eide doesn't dare to estimate how much work would be involved in coding such an application traditionally. Laughing, he notes: "If we were coding this by hand, I wouldn't be sitting here alone; I'd have a whole team around me. But more importantly, the sheer volume of data means you would have to use so much code that the application would be almost impossible to maintain. It would be quite a mission to figure out what to change where just to add a data source or field later. With USoft, I can create data cross-sections without having to code. And if I want to bring up other information, all I have to do is change, remove or add a business rule and that implements the change throughout the application. So it saves lots of time, and you need far fewer people."



USoft Community Platform

He's really satisfied with the relationship with USoft. "You can contact the organization easily. When I call, I immediately get the right person on the line, and I'm assisted quickly. I think that's important, because I'm the only one in the NVE who works with the USoft development platform. I can't just pop out to ask colleagues."

That's part of the reason why he's pleased that USoft has a Community Platform and invests a lot in it. The platform provides documentation on working with the USoft platform, while also enabling members to get in touch with other customers and experts and exchange ideas. "The capabilities of the USoft platform are enormous. I can only say that I'm glad I got into this and that I've been able to work with the platform for 28 years."

ABOUT USOFT

The **rules-first platform** for business-critical operations.

Automate your operations with **full trust and control**. **Adapt** when your business demands it.

Rules govern every process and every decision. USoft helps you capture these business rules before software is created. Our engine ensures your rules are always enforced: no exceptions and fully traceable. Change your rules and your software stays in sync, everywhere. Whether people or AI build your software or act on your data, everything plays by the rules. All running in your ecosystem of choice.

We help organizations put their rules first: captured in natural language and enforced in every transaction, across people, systems and AI. Ready to change at the pace of your business.

We envision a world where organizations know exactly what their systems do and why, so people and AI can build the future with trust and confidence.

Clear rules you can trust. Results you can audit. Change you can control.

For more information, please visit **usoft.com** and **community.usoft.com**

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