

Rijkswaterstaat:

Successful automation within an ecosystem

Rijkswaterstaat aims for transparent, timely and affordable services. It uses its iStrategy in order to accomplish a completely new way of provisioning information. The result: Rijkswaterstaat achieves automation within an ecosystem where everything is connected.

Challenge

Organizations that are able to handle automation can continuously improve their services. With this statement in mind, Rijkswaterstaat has completely reassessed its approach to automation. Main consideration: the notion that automation is no longer a technical challenge, but rather a matter of change, with impact on the entire organization. The challenge was to define a method that was fully manageable while facilitating flexibility and quality.

Approach

Successful automation starts with a clear picture of the challenge, want or need. That's why it's crucial that the business and IT understand each other. By means of enterprise engineering, Rijkswaterstaat maps out the 'essential model' of the organization. DEMO is used for this purpose, whereby the organization itself describes its own process resulting in a 'minimum viable product.' This promotes commitment.

The use of a rapid application development platform (Mendix) makes it possible to quickly produce a working prototype based on the essential model of the organization. Together with the business it is further iteratively refined. After going live, integration with SAS business intelligence follows. SharePoint takes care of document management and SAP supports all processes around ordering, purchasing, and payrolling.

Rijkswaterstaat harnesses the flexibility of its approach by working with small, multi-disciplinary and dedicated teams, consisting of professionals from within and outside the organization. These teams fall back on clear frameworks, of which the iStrategy and platform strategy are most important. The iStrategy focuses on standardization and reuse, while the platform strategy aims for rationalization and ensures that all applications use the same building blocks.

The rapid application development platform is powered by Pivotal Cloud Foundry. This is a complete toolbox for virtualized deployment and management. Micro-services enable the service catalog, autoscaling and self-healing. The building blocks of applications are shared by Rijkswaterstaat in an app store, which all teams make use of. In the future, other government organizations will also be able to access it.

RESULTS

With 15 apps developed in 18 months, it has become clear that the new method offers many advantages:

- Increase in quality and speed
- Greater involvement of both business and IT
- Significantly lower costs, thanks to an enterprise licensing model: no more ‘pay per application’
- Effective management and maintenance thanks to virtualization
- Direct deployment provides enormous time saving

Rijkswaterstaat is becoming a data-driven organization. The automation process delivers smart services which are fast, standard, secure, scalable, and always available.

CONCLUSION

Rijkswaterstaat has succeeded in developing an integrated, self-sufficient method for implementing automation. Starting from a clear vision, it has created an effective mix of clever methods, advanced techniques and the right professionals. The result is an independently operating ecosystem in which everything is connected. In this way Rijkswaterstaat has positioned itself as an agile and learning organization—an organization that is increasing value for citizens and companies.

About Rijkswaterstaat

Rijkswaterstaat works daily towards a safe, habitable and accessible Holland. It ensures speedy and safe circulation on the road as well as on water and protects the country against floods. The organization, which was founded in 1798, totals about 9,000 employees.

Case: In Control of Every Case with SAM

Every day hundreds of alerts and questions from citizens, employees and companies reach Rijkswaterstaat. These regard, for example, the condition of roads, opening times of sluices or the initiation of an employee. Rijkswaterstaat handles each alert using SAM, an intelligent case management system.

SAM stands for Samenwerken aan Meldingen – Cooperating on Cases. Rijkswaterstaat developed the application completely according to the new automation method. This means an agile (SCRUM) and process-oriented (DEMO) approach, with much attention to the involvement of management and the cooperation between business and IT.

SAM is powered by recognized platforms. It uses Mendix building blocks, while Pivotal Cloud Foundry ensures continued availability, thanks in part to virtualization and autoscaling. SAS deals with business intelligence, providing insights and management information regarding alerts. SharePoint is used for document management. A number of APIs connect the various building blocks and platforms.

SAM also offers many benefits through its practical application. Because employees are able to work simultaneously on the same case, they cooperate better and handle each alert better and faster. Thanks to the insights generated by SAS, the organization is able to learn from practice, thereby improving its case management process. Furthermore, the introduction of SAM has significantly reduced the costs of handling the many alerts and questions.

In short, SAM supports both effective collaboration and fast solutions allowing Rijkswaterstaat to fulfil its mission: one Rijkswaterstaat, improving every day, together with others.

The Power of Mendix

Mendix offers a cloud-based rapid application development platform that enables users to quickly develop, integrate and deploy high-end applications for web and mobile. Mendix enables Rijkswaterstaat to deliver valuable business solutions, combining continuously improved quality and agility with lower costs.

An important asset of Mendix lies in the fact that it's visually driven. Mendix works with the 'low code' principle. This lowers the threshold for non-IT professionals and enables the business to fully participate in the process of automation. This is essential for achieving results that are of value in practice.

Rijkswaterstaat uses Mendix to develop a working prototype in a matter of weeks. This prototype offers 80 or 90 percent of the required functionality. Next the application is further refined in close collaboration with end-users, to ensure that the application aligns with their needs and wishes.

Employees at Rijkswaterstaat respond very enthusiastic to Mendix. The platform gives developers real-time insight in the building blocks of applications and the way an application supports the daily practice. The business experiences direct influence during the development process. This promotes commitment and ownership.

Rijkswaterstaat uses the Mendix Application Quality Monitor (AQM) developed in collaboration with the Software Improvement Group (SIG). AQM ensures the continued manageability of each application. An application is deployed only if it scores at least four out of a possible five stars. The quality monitor also makes suggestions for improvements to the application. AQM enables Rijkswaterstaat to combine high-quality automation with increasing development speed.



Mendix is the fastest and easiest Rapid Application Development platform to build and deploy Smart Mobile and Web applications at scale. Cloud-native, open and enterprise class, Mendix is the only platform that supports the full application lifecycle with Collaboration, Speed and Control.

A recognized market leader, Mendix is helping hundreds of customers across dozens of industries achieve exceptional results. For more information, visit www.mendix.com and follow us on Twitter @Mendix.

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