CASE

Keeping your legacy system **up to date** during new development: **what does that involve?**

Almost every public transport company in the Netherlands is in the process of upgrading its application landscape, including NS Netherlands Railways. The outdated application Vervoer Per Trein (VPT), or Transport By Train, was gradually replaced by the new DONNA system. Whereas companies in these types of projects tend to put their old systems out to pasture, NS and InTraffic show that you can remove a lot of stress around the launch of the new application if you take good care of your legacy system.

Developed in the late 1980s and early 1990s, VPT runs on the OpenVMS operating system. "VPT actually consists of a number of subsystems that communicate with each other through file exchange. Together, these systems support the planning of a complete railway service: the timetable, planning of personnel and equipment planning", Erwin Koning, IT manager of the Planning team at NS, explains. The various subsystems were divided between NS and ProRail back when NS and ProRail became two separate organisations. The NS systems were subsequently frozen pending the delivery of DONNA.

Keep legacy healthy

"The moment you freeze an application, some parts of the organisation and some stakeholders may easily start thinking that you can just leave it at that," says Koning. He knows that's not right. "There are two lines that cross one another at some point. An ascending line that represents the development of the new application and a descending line that represents the reliability of the legacy application being replaced. The moment you stop maintaining and updating that legacy system, that application quickly goes downhill and creates a dependency:

you need to speed up the development of the new application. You don't want to end up in a situation where you're launching things under time pressure that aren't quite finished yet and that all still have a lot of loose ends. You can prevent this dependency by maintaining the legacy application properly."

Request for expertise

Yet that's easier said than done. After all, where do you find people these days who still know about the outdated Windows servers with the cocoon of the OpenVMS operating system that VPT runs on, and who also have some knowledge of the application itself? Koning: "That's why we sent a request for expertise to the market rather than – as you would normally do for a project – ask about the results. There are very few people who have the skills required and two of them worked at InTraffic." System integrator Bob Kortlandt is one of them. He explains: "The difficulty is that DONNA was launched in phases and that the more than 300 planners were migrated in phases between 2010 and 2020. During the final stage, some planners were working simultaneously in both systems. VPT and DONNA therefore had to have access to the identical data the whole time. Organising this data integrity was one of the biggest challenges. All the more so because VPT and DONNA have a lot of interfaces to other applications, which are also constantly updated and upgraded."

Another challenge was the fact that the old Windows servers had to be replaced with newer hardware. "It's a process you would ideally avoid with an application that is about to be replaced, but it was necessary in order to keep VPT up and running," he says this delivered space for the teams that worked on DONNA in order to eliminate all loose ends for the launch. The result is a technically sophisticated system without an irresponsible technical debt, i.e. problems in the code or design that you need to solve later on. Koning: "As a result, DONNA's launch has been really smooth. The few

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minor glitches we found could be eliminated in two or three sprints."

The one tip he would like to share with other organisations looking to replace their legacy is to make sure you keep your old system healthy. "This creates peace of mind for the teams working on the new application. And it means that they will deliver higher-quality software because they experience less stress and there is sufficient time to test everything properly."

Seniority

He is very satisfied with the cooperation with InTraffic. "They provided two very seasoned professionals who took responsibility for their work and whom I hardly had to manage. They worked together with NS specialists as a kind of trinity. They set up the methods and procedures for their team, divided duties, and so on. As a manager, I could just trust them to keep their promises," says Koning.

"We were very pleased with their level of experience. We found ourselves in touch-and-go situations a few times, but they managed to keep a cool head and knew exactly what to do. People with less experience would crawl under their desks in desperation in such a situation, but the two InTraffic specialists kept their cool and got the job done."

Finally, he was struck by how much fun the VPT team had doing the work. If you look at it from a distance, the job of keeping an application alive that is being phased out might seem uninspiring. Koning: "But nothing could be further from the truth. Because there are so many unpredictable things going on with the application, they constantly had to tap into their expertise and creativity. They did it with a lot of passion and enthusiasm. Perhaps that was the secret to why the transition from VPT to DONNA went so smoothly."

More information about this case?

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