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New digital services for the Yvelines Department

Seine et Yvelines Numérique deploys a multiservice network to power new digital services

The Yvelines Department in France, has a population of 1.5 Million people. Nokia and technology integrator NXO partnered to establish a regional innovative multiservice network for 114 schools in the department. The underlying technology, Nokia IP/MPLS, offers unmatched flexibility, by deploying different virtual networks on the same physical infrastructure, with at least the same level of reliability as network service providers.

"Security is a very important development axis for us, ... thanks to digitalization, we can equip our middle schools with an innovative and modern video protection system."

Emile Blaison, Director of Education and Youth, Yvelines Departmental Council

Seine et Yvelines Numérique, the ICT agency of the government for the Yvelines Department in France, already had some fiber assets that were rolled out as part of the French Government broadband plan to bring ultra-high broadband capabilities to underserved citizens. Seine et Yvelines Numérique decided to leverage this unique infrastructure to support communications and new digital services that the Yvelines government wants to roll-out to optimize and improve the operations of its different agencies, such as middle schools, roads and infrastructure, or firefighters to name a few.

The Yvelines government, has been actively looking at digital technologies to improve education services with three main applications:

- **E-learning:** to facilitate personalization of courses and learning services delivered to students.

- **Networking:** to facilitate sharing of information and practices within the education community as well as with parents and students.

- **Security:** to provide the best possible protection for students and teachers in the school environment.

The first scope of the project decided by the Yvelines government was to implement a smart, modernized video protection system to monitor security for all 114 middle schools of the department. They decided to create a more robust and centralized system as the systems in place had many deficiencies:

- They were very heterogeneous and some of the equipment has become obsolete. They were decentralized, which lacked efficiency as it involved local management of video streams. This also created many issues for external organizations to easily get access to videos because they were dispersed across all schools.

- They were very inefficient for fast response time as it was not feasible to assign agents to monitor live streams.

Due to these issues, the Yvelines government needed to roll-out a state of the art, intelligent and centralized video protection system. This system leverages artificial intelligence to automatically detect abnormal situations. When an incident happens, the video stream is automatically sent to a centralized supervision system that can then alert local public safety authorities to address it.
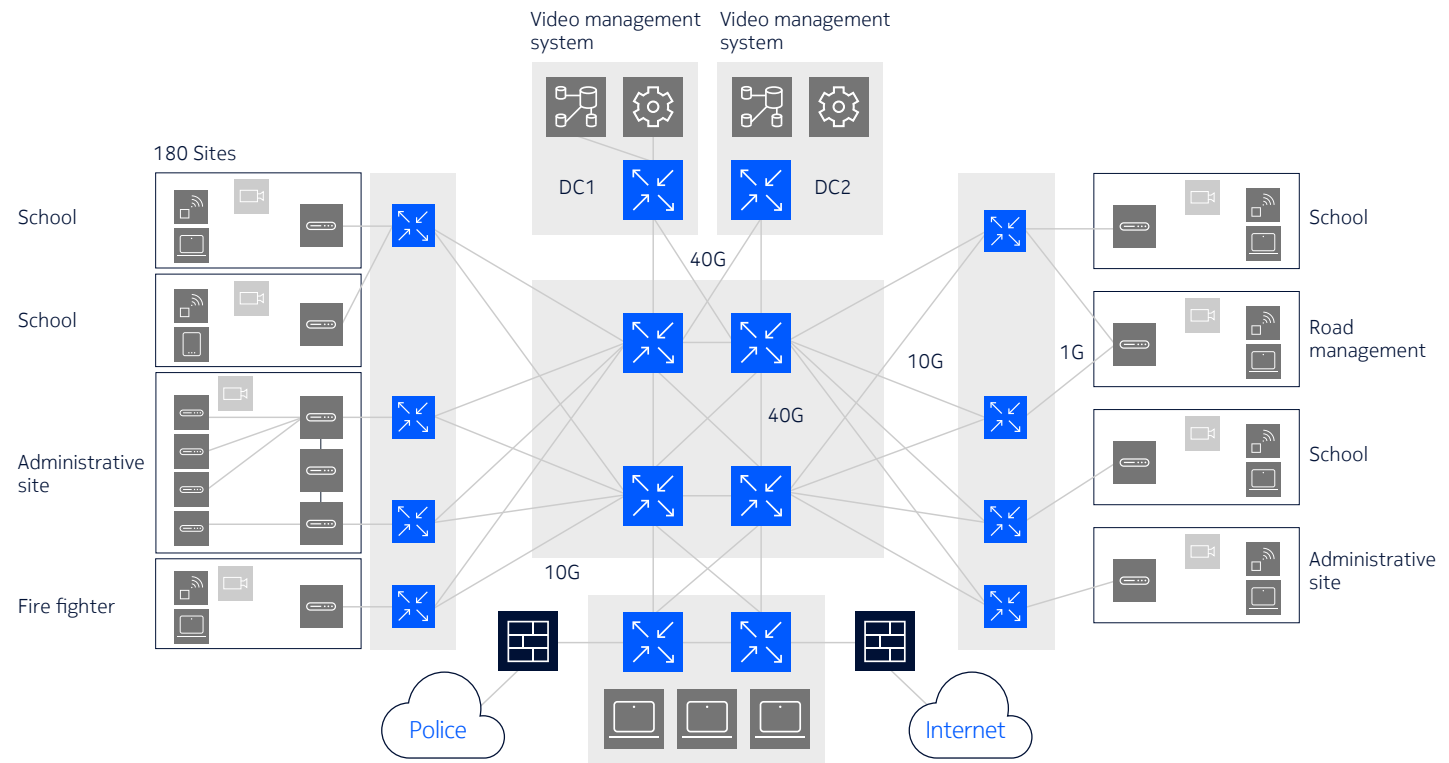
Seine et Yvelines Numérique, was tasked to manage and implement this new project. The challenge that they faced was to develop a new dedicated network for video protection (CCTV). However, they were already managing several other networks, which meant that they had the choice of continuing to stack the networks on top of each other or to adopt a new strategy with a single multiservice network supporting all applications, which was a more efficient and secure solution.

Seine et Yvelines Numérique selected this second option, leveraging the IP/MPLS technology on a dedicated network.

"We selected IP/MPLS technology, as it was the only technology that enabled us to deploy different applications on the same physical infrastructure, with a level of reliability equivalent to what communication service providers are able to offer."

Laurent Rochette, COO,
Seine et Yvelines Numérique

Rolling out a complex, mission-critical network infrastructure in a short time frame

Seine et Yvelines Numérique chose NXO as a partner because they had already worked with them before, and they were very satisfied with the result. Nokia was chosen as their network supplier of choice because they were offering the best value.

The project came with several challenges:

- The very tight timeframe to deploy the new network and to connect the first batch of schools of the department to this new CCTV system created very strong operational and logistical constraints for the project, particularly in a global context of a component's shortage.

- Changes required to the customer ecosystem specifications, which forced the initial architecture of the solution to be adapted, in a tight timeframe.

Laurent Rochette COO, Seine et Yvelines Numérique recognized that "There will probably be numerous applications that will use this new network and most of them are linked to the concept of a smart city. For instance, we think about traffic and mobility management, smart energy or public lighting services". He added "putting in place this infrastructure now will future proof the network, enabling the Yvelines Department to add services that they do not even know about today. Moreover, the use of a dedicated IP/MPLS network allowed the deployment of different applications on the same physical infrastructure with a reliability equal to that of network operators."

"We managed to take into account the changes that were needed in the customer's ecosystem and the global supply chain challenges while still respecting the short timeframe for delivery."

Patrick Postic, Project Manager, NXO

NXO and Nokia team had to demonstrate strong agility, to meet the project deadline in spite of these challenges.

From the NXO point of view, the relationship with Nokia was a productive one, based on mutual trust. The project was demanding, with a strict time constraint of only 5 months between the order and the deployment on the pilot sites. The constructive way in which the partnership was conducted by the two partners, led to a successful outcome.

Benefits: A Future Proof Network

The new network allows to carry the video streams from the several thousand CCTV cameras in the schools, up to the supervision centre and the Video Management System, with a high level of reliability. That is of utmost importance given the critical information carried by this network.

"It was important that this new infrastructure could support critical video protection information with secure and high-performance access to the internet for all schools. NXO/Nokia put in place a flexible network with end-to-end quality guarantee that met the client's demands."

Renaud Durand, Alliance Management, NXO

The network is also used to provide high-speed internet access to schools, whether for electronic boards in the classrooms or to support community networking applications for exchange of information between different groups of people.

"We are in a context where security is becoming a priority concern, and it is our mission to protect students, teachers and the family that are coming to our middle schools"

Emile Blaison, Director of Education and Youth, Yvelines Departmental Council

After equipping the middle schools, Seine et Yvelines Numérique is now extending the intelligent video-protection system to fire stations across the Yvelines Department to ensure their security as well.

According to Seine et Yvelines Numérique, the multiservice capability of the network will enable them to streamline their network infrastructure, reduce operating cost and complexity, and embrace future smart city applications.

At Nokia, we create technology that helps the world act together.

As a B2B technology innovation leader, we are pioneering the future where networks meet cloud to realize the full potential of digital in every industry.

Through networks that sense, think and act, we work with our customers and partners to create the digital services and applications of the future.