Dunamare Education Group Enriches Learning by Providing Wi-Fi in All Indoor Areas

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BASTIAAN GROENEVELD,
DUNAMARE EDUCATION GROUP

IN THE NORTH OF HOLLAND, 13,800 students ages 12 to 18 attend secondary schools operated by the Dunamare Education Group. The district has 24 schools and 1,700 teachers and administrators.

Dunamare started providing school Wi-Fi in 2010 using a leading vendor's solution. "The network worked well in the beginning, but that was before we introduced BYOD [bring-your-own-device]," says Bastiaan Groeneveld, head of IT for Dunamare Education Group. "As students and staff started bringing more mobile devices to school, connections slowed down and strange errors started appearing." To take advantage of Wi-Fi for learning and administration, the district needed a Wi-Fi solution that worked reliably in high-density school environments.

Students' Online Habits Stress Wi-Fi

GROENEVELD CAREFULLY RESEARCHED WI-FI SOLUTIONS for schools. "One thousand students stress networks in different ways than 1,000 business users," he says. "Students tend to stay connected throughout the school day. They access different kinds of content, like social media and streaming video and music. And they tend to gather in crowded areas."

Xirrus Solution: Wi-Fi in Every Classroom and Indoor Area
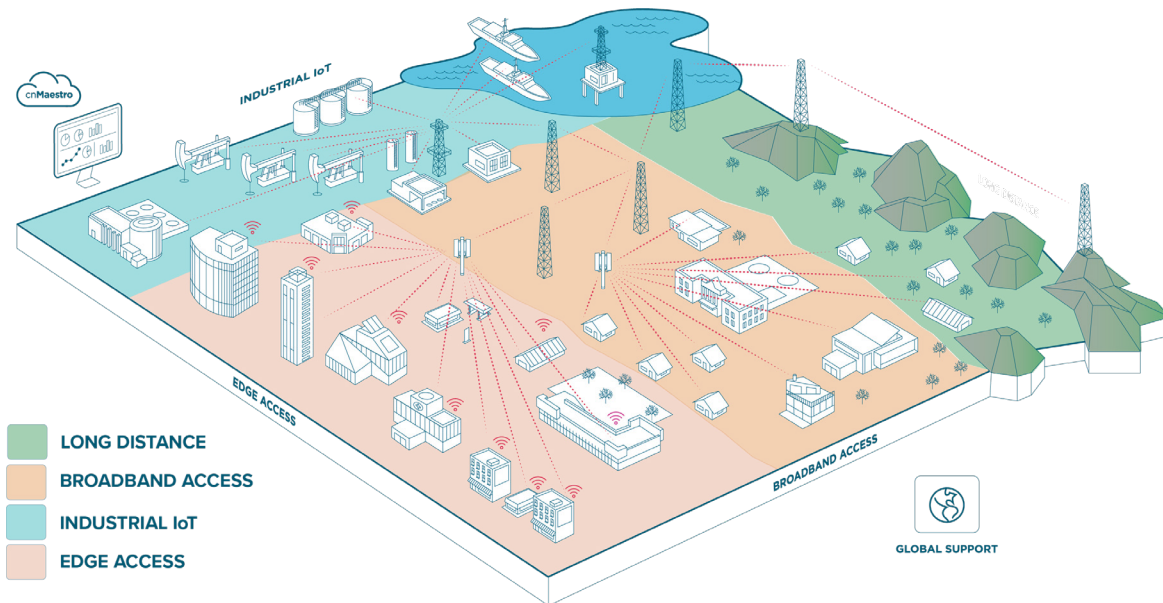
ENCOURAGED BY THE EXPERIENCES of thousands of schools around the world, Dunamare decided to deploy a Wi-Fi network. Ultimately, they decided that Xirrus Wi-Fi was right for their needs. "Xirrus Management System makes it easy to see where we need access points as more students start bringing mobile devices to school," Groeneveld says. "And it alerts us about issues so that we can correct them before they interfere with lessons."

Today, students, teachers and staff can connect from all indoor areas on any campus. Each classroom has a Xirrus access point with two radios. The access points in auditoriums, cafeterias and other large spaces have 4 to 8 radios — providing more coverage with the same number of access points and cables.

A click in the management console programs the radios to operate in either the 2.4 GHz band (for older devices) or 5 GHz band (for newer devices). Currently, half the classrooms have an access point with one of each type of radio; alternating classrooms have two 5 GHz radios. "We know from the Xirrus Management System that 65% of devices in our schools can connect over 5 GHz," says Groeneveld. "As the proportion grows, we can configure more radios for 5 GHz with a click in the management console. Not having to replace the radios saves money."

DUNAMARE TEACHERS take advantage of Wi-Fi to engage students and enliven the classroom. For example, some teachers "flip" the classroom by assigning video lectures as homework, using class time for discussion.

Teachers can conveniently record video lessons using a wireless tablet or laptop. Students watch the video lessons after school on their smartphones or tablets. "Now, learning doesn't stop when the bell rings," says Groeneveld. "Students can connect to the Xirrus Wi-Fi network to do homework from anywhere on campus."

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Cambium Networks' Wireless Fabric of technology solutions enables network operators to tailor connectivity solutions to meet exact requirements and grow as needs evolve.

Schools Take Advantage of Wi-Fi to Offer Personalised Learning

DUNAMARE IS TESTING cloud-based software that personalises instruction for each student. Some students see more video, for example, while others take more quizzes. "We couldn't deliver personalised learning without reliable Wi-Fi," Groeneveld says.

Administrators Can Work Anywhere

THE XIRRUS NETWORK also helps administrators work more efficiently. Instead of being tied to a particular desk, they choose the best place to work each day — perhaps a quiet area in the morning and a conference room in the afternoon. Wherever they are, they just open their laptop to connect over the Xirrus network. To avoid Holland's tolls for local calls, teachers and administrators communicate using Microsoft Lync and Skype for Business instead of standard desk phones. Costs for local calls have dropped by 20%.

Easy to Adapt to New Standards, New Needs

THE DISTRICT IS TESTING the new 802.11ac standard in one location. "With Xirrus, the upgrade was as simple as snapping a new chip into the Xirrus access point. We didn't have to buy new access points," says Groeneveld. So far, the big advantages are faster file copying between PCs and sharper resolution for videoconferencing.

After deploying the network, the education group was able to support devices for students, teachers and administrators. As more students start bringing personal devices to school, Dunamare might start filtering applications that take up a lot of bandwidth, such as instant messaging and social media. "With Xirrus Application Control, we can block traffic right on the access point," says Groeneveld. "That keeps the network free for learning applications."