

CASE STUDY



EDUCATION

**CENTRALLY-MANAGED WIRELESS CONNECTIVITY
HELPS FONDAZIONE PER LA SCUOLA CLOSE THE
DIGITAL SKILLS GAP IN ITALIAN SCHOOLS**



**Fondazione
Compagnia
di San Paolo**

Deliver 10Gb bandwidth and robust Wi-Fi into primary and lower secondary schools in northern Italy, with centralised management and minimal on-site involvement. Establish a framework for national roll-out.



As any parent knows, children are great with technology. Exposure to devices and apps from a young age often makes the youngest in the house the most expert in the house. But home life is not school life.

Around the world, education authorities are racing to equip primary schools with the same level of digital connectivity found at home. Digital literacy is acknowledged to be as important as reading, writing and mathematics.

PROMOTE DIGITAL INNOVATION IN EDUCATION

Riconessioni is one of Europe's largest and most comprehensive programmes to promote digital innovation in education. It aims to connect more than 300 primary and lower secondary schools in and around the Turin region of Italy. If successful it will act as a blueprint for the rest of the country.

"We want to remove the physical and cultural barriers that prevent schools from being creative," says Lorenzo Benussi, Chief Innovation Officer, Fondazione per la Scuola, the organisation behind Riconessioni and part of Compagnia di San Paolo Foundation. "This requires fostering new methods of teaching and learning as well as creating a new model for Internet connectivity."

Compagnia di San Paolo Foundation is aligned to one of Italy's largest banks. It works to support projects around cultural, educational and economic development, creating practical delivery models. Bridging the digital skills gap in education will have a profound impact on Italy's long-term economic fortunes. Riconessioni reached



REQUIREMENTS

- Centrally manage and secure high-performance Wi-Fi for 96,000 students
- Establish network-as-a-service for more than 300 schools
- Standardise network architecture ahead of national roll-out

SOLUTION

- Aruba Unified Access Points
- Aruba Central cloud-native network management
- Aruba Access Switches
- Aruba 7210-series Mobility Controllers
- Aruba 7204-series Mobility Controllers
- Policy Enforcement Firewall (PEF)
- ClearPass Policy Manager Virtual Appliances
- ClearPass NAC
- Dynamic Segmentation

OUTCOMES

- Connected 20 schools in first phase
- Establishes secure connectivity within two days per school
- Accelerates adoption of digital skills among teachers
- Creates framework for national roll-out

96,000 students in its first phase and it is scaling up at national level.

DELIVER 10GB BANDWIDTH INTO SCHOOLS

Riconessioni's Wi-Fi network is built on Aruba. The project has so far established easy-to-access wireless connectivity, essential for young learners and dynamic teaching, in 26 schools. Both students and staff can connect their own devices to the network.

With greater connectivity, comes higher demand and more use cases. This has driven the need for far higher internet bandwidth for each school, which is why the



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MARCELLO MAGGIORA

Head of Technology & Digital Strategy, Compagnia di San Paolo Sistema Torino

Fondazione per la Scuola has upgraded access to 10Gb. The Aruba network provides the secure and high-performance access for pupils and staff.

“We’ll be using the first 26 schools to measure improvement,” says Benussi. “That will inform the next stage of the roll-out.”

Aruba’s ClearPass Policy Manager orchestrates secure and role-based network access for a unified wired and wireless network, while cloud-native Aruba Central delivers consistent network management with AI-enabled analytics. It means the foundation can deliver a superior and seamless connectivity service to each school, managed from a single pane of glass.

SHORTEN DEPLOYMENT TIMES TO ACCELERATE ROLL-OUT AS A SERVICE

The Aruba Edge Services Platform (ESP) establishes a consistent architecture to build on, with standard components and centralised management. This accelerates deployment times and reduces costs.

“Connectivity should be considered the same as the provision of water or electricity. It is a utility service,”

says Marcello Maggiora, Head of Technology & Digital Strategy, Compagnia di San Paolo Sistema Torino, the service provider for Compagnia di San Paolo Foundation. “We’ve transformed the network from a capex consideration to opex. With configuration templates agreed, we can have a school online within two or three days.”

The approach recognises the practical realities of primary education: schools with more than 300 pupils don’t have a dedicated IT or network manager. Aruba Central makes the network simple to deploy and manage.

“The most important feature of the Aruba solution is the flexibility. The flexibility and intelligence within Aruba Central means we can configure it to suit the requirements of different schools,” Maggiora explains. “It is effectively Zero Touch Provisioning. Central will be a great tool for understanding how the network is being used.”

ENABLE A FOCUS ON CULTURAL TRANSFORMATION

The simplicity of the architecture allows Fondazione Compagnia di San Paolo Foundation to focus on the cultural aspect of the project.

“If you want people to think about innovation, you have to have to make the things you do most the easiest,” says Maggiora. “Network management should never be a teacher’s problem.”

Compagnia di San Paolo Foundation is working with teachers to create digital advocates within schools, with these advocates then training colleagues within their own schools. It is estimated this trickle-down approach has already reached 60% of teaching staff and Benussi says that research indicates digital competency among teachers is up by 20%.

Covid accelerated plans. The foundation has built a library of more than 150 lesson plans created by teachers; there have been more than 50,000 views of the 64 online webinars. There is a sense of collaboration and comfort in the sharing of ideas and best practise.

“There are many examples of this kind of digital project failing in the past because they considered only the technology and not the user,” says Benussi. “We have





worked hard to make sure teachers are comfortable. We want them to see digital as one other teaching tool.”

DEMONSTRATE EVIDENCE OF IMPACT TO FUNDERS

Compagnia di San Paolo Foundation is a not-for-profit agency but must demonstrate a return on investment to funders. It matches its own revenues to funding committed by private enterprise and government. The Aruba architecture allows the organisation to show transparency around costs and process and to create standards, clearly define protocols to engage public and private stakeholders and provide project management frameworks for the service they provide.

“We believe it’s very important to set a standard. This project establishes a professional approach to satisfy public and private funders. We’re focused on impacts. It’s important that we measure everything we do,” says Benussi.

The foundation is working with University of Padua to research social and emotional skills, and it is part of a national research programme on learning analytics involving the Ministry of Education and Milan Polytechnic. Finally, Compagnia di San Paolo Foundation is working with the UN’s International Training Centre, also based in Turin, to refine a scalable teacher training programme on innovation.

PREPARE FOR A NATIONAL ROLL-OUT

The plan is for the programme to go national. The Covid-19 pandemic has demonstrated the importance of digital tools and new methods of teaching.



The foundation is working with Italian telecoms company Fastweb on a national connectivity project, using the Aruba approach as a benchmark. Alongside this, Italy’s National Plan for Schools Connectivity is developing training materials for more than 3,000 schools.

Benussi says that in the first quarter of 2021 the network traffic increased by 250% in connected schools compared to the previous months, reflecting the appeal of digital platforms. “Younger kids watch videos, they listen to other languages and they interact with learning platforms. They use more bandwidth than the older ones, because they use digital in more ways. Digital allows more variety in learning approaches.”

He is confident the Aruba approach can help the national school system to move quickly to bridge education’s digital skills gap. It allows for the use of Dynamic Segmentation and a Zero Trust security architecture as network demands mature: “Riconessioni is a model made out of components which can be replicated as a whole or separately.”