Turkey E-Government Research and Application Center Showcases Connected Virtual Classroom with Cisco and Intel

"We wanted to show that ICT in schools could go beyond computer labs—it's much more about the human network of students and teachers who can collaborate in a new type of learning environment. We benefited from the wealth of expertise and solutions that resulted from the public-private collaboration with partners like Cisco and Intel."—Dr. Fatos Yarman, president, EDMER (E-Government Research and Application Center, Turkey)

In Brief

Education is a key factor in Turkey's national e-transformation initiative and ascension to the European Union (EU). The government launched a national Digital Education initiative a few years ago, under which the Ministry of National Education (MoNE) established computer labs and Internet dial-up connections in many of the country's 44,000 public schools to increase Turkey's well-educated workforce. The country also has 2,000 private schools and 1 million education personnel—700,000 of whom are teachers. Fifteen million of the country's 75 million people are primary and secondary school students. The E-Government Research and Application Center (EDMER) is a public-private-academic consortium mandated by the prime minister's State Planning Organization (SPO) and Ministry of Industry to collaborate on developing global best practices, and to demonstrate e-transformation initiatives, with the aim of scaling the experience nationwide. Managed by the rectorship of the Middle-East Technical University (METU), it includes major global and local industry partners such as the Cisco® Internet Business Solutions Group (IBSG), Intel, Microsoft, and Turk Telekom.

Customer

EDMER and Turkey Ministry of National Education (MoNE)

Industry

Public Sector

Challenges

- Turkey's schools face persistent challenges in making information and communications technology (ICT) go beyond IT classes and computer labs in developing e-learning that meets the requirements of a 21st century workforce.
- A Cisco IBSG workshop with key members of MoNE identified key challenges in:
  - Developing a student-centric environment that would shift the focus from IT classes to a digitally enabled learning environment.

- Motivating teachers to learn new technologies.
- Spanning a digital divide due to issues of infrastructure, capacity, and geography.
- Raising awareness of technology, building technology competence, and developing local content.
- Scaling change and a sustainable model to a national level.

Solutions

- Model an evolutionary e-learning scenario in the context of Turkey's curriculum and physical conditions to demonstrate equal educational access through virtual classroom collaboration for schools with different geographic and socioeconomic conditions.
- Cisco IBSG, in partnership with Intel, designed a value proposition based on the Cisco IBSG Connected Learning approach of ensuring access, quality, and reform, including the required networking equipment and collaboration-centric applications. Cisco and Intel steered implementation at two urban and two rural schools in Ankara, selected by MoNE to cover:
  - Broadband connectivity to provide equal access for urban and rural schools.
  - Network-based applications enabling teacher-to-teacher, teacher-to-student, and student-to-student collaboration within a classroom and between schools.
  - Teacher motivation and productivity.
  - Interactive, student-centric lessons.
- Intel managed the project with METU and furnished one-on-one e-learning ClassmatePCs, teacher laptops, mobile learning carts, teacher trainings, and K-12 content. Polycom and Smarttech provided videoconferencing and smartboards. Oracle and SEBIT supplied local content and the learning portal.

Next Steps

- An evaluation/measurement study on the project by Turkey's Anadolu University Education faculty is ongoing. Results will be reported by METU and presented in Vienna to EU universities and global education stakeholders.
- Cisco IBSG will develop and present a sustainable business and operating model to MoNE.
- Participants in the pilot will jointly define a go-to-market solution with Turk Telekom for MoNE to help define and propose a national rollout plan.

Projected Results / Benefits

- E-learning is one of three key projects that Cisco IBSG helped identify to be part of EDMER's strategic e-transformation projects, garnering government buy-in and funding. Twenty classrooms and 775 students participated in different phases of the six-month project, showcasing the virtual lesson scenario to MoNE stakeholders. This resulted in

elevating conversations with MoNE to define a detailed business operating model and solution strategy for national rollout.

- A preliminary analysis revealed an increase in student-teacher motivation and collaboration, usage of content-based subjects, efficient time management, and student performance. Ninety percent of the surveyed parents said they were pleased with the project after seeing marked improvements in their children's communication skills, eagerness to learn and cooperate, and computer skills.
- If the pilot solution is scaled nationwide, the projected benefits for Turkey will include:
  - Transportation cost savings in managing a fleet of buses to transfer students from their rural villages to central schools.
  - Productivity savings by eliminating time spent on transporting pupils to classes where a teacher is available.
  - Higher-quality education with scalable access by multiple schools to subject-matter experts and teachers.
  - Operational efficiency through better teacher education in administrative and professional development.

IBSG Consultants

Ahmet Hasanbeseoglu
Phone: +90 212 335 0241
Email: ahasanbe@cisco.com

Ugur Terzioglu
Phone: +90 212 366 7601
Email: uterziog@cisco.com

Eileen Lavergne
Phone: +33 15 804 6039
Email: elavergn@cisco.com

Jim Wynn
Phone: +44 20 8824 8119
Email: jiwynn@cisco.com

Other Contributors

Erkan Akdemir, general manager, Cisco Turkey
Peter Hajdu, Business Development, Cisco Hungary
Dilek Kurt, marketing communications, Cisco Turkey
Judit Sinko, public relations lead, Central and Eastern Europe
Michael Stevenson, CSR Global Education

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV
Amsterdam, The Netherlands

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