The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

Final Copy of Case Study

Status:
Laureate

Year:
2013

Organization Name:
Secretaría de Educación de Medellín, Colombia (SEM) (English: Department of Education, Medellín, Colombia)

Organization URL:
http://www.medellin.edu.co

Project Name:
Digital Transformation of Education

Please select the category in which you are submitting your entry:
Human Services

Please provide an overview of the nominated project. Describe the problem it was intended to solve, the technology or approach used, how it was innovative and any technical or other challenges that had to be overcome for successful implementation and adoption. (In 300 words or less.)

The city leaders of Medellín, Colombia are transforming its educational system to create new career opportunities for its children and new economic potential for its community, which faces numerous security, financial and economic development challenges. Central to the initiative is the development of information technology skills among the younger generation. The city uses Citrix desktop virtualization software to deliver a cost-effective standard educational solution across 40,000 student and teacher desktops in 441 schools, all accessible on any personal or school-owned device. Standard K 12 curriculum materials are complemented with IT training content, community-building tools, special campaigns on topics

such as health and other resources designed around community needs. Students become not only better educated and more highly skilled, but better prepared to engage in the specific challenges their community faces, from improving public health to building new social institutions. To ensure that the initiative reaches disenfranchised and disadvantaged individuals, the solution can be accessed by low-income families on inexpensive, low-spec devices, and is also designed to provide a rich, accessible experience for handicapped community members. Concurrently, the Citrix solution helps Medellin's Department of Education simplify IT operations and reduce long-term cost, critical factors for ensuring the ongoing viability of the initiative. The city has reduced its energy consumption by 25 percent, or 2 billion watts per year, while electronic waste has been reduced 50 percent by doubling the effective life of endpoint devices. Medellín's IT team can manage, monitor and assure the continuity of the solution more efficiently, freeing resources for more strategic initiatives. The project provides a foundation for Medellín's vision for the future, to become a World Digital City by 2016, a legacy its leaders seek to establish on behalf of the city's children.

When was this project implemented or last updated? (Please specify month and year.) Has it incorporated new technologies and/or other innovations since its initial deployment? (In 300 words or less.)

Implementation started in February 2012. Technologies deployed in the first stage included desktop and application virtualization. SEM is currently implementing additional technologies including cloud services and mobile devices.

Is implementation of the project complete? If no, please describe the project's phases and which phase the project is now in. (In 300 words or less.)

To date, the City of Medellín has 11,560 Citrix XenDesktop Enterprise Edition licenses in production, with a total of 40,000 to be rolled out. The solution currently serves 270 schools with a total of 441 to be deployed, with full deployment slated for completion by 2015.

Please provide at least one example of how the technology project has benefited a specific individual or organization. Feel free to include personal quotes from individuals who have directly benefited from the work. (In 300 words or less.)

Diana Franco is an example of the real world impact the Digital Transformation of Education project is providing to the people of Medellin. Born and raised in Antioquia, an impoverished district of the city, Franco is committed to improving access to education and helping residents overcome the obstacles of poverty

and violence. Her hope is that Antioquia will become a model community for showcasing the future promise of the city's youth. As a teacher of information technology she works with her female students, familiarizing them with computers and instructing them on how to use various applications in their daily lives. "Working with young girls will help the youth of this area," she says. "Many students lack a family unit. As children of young mothers who didn't finish their education, they don't know how to educate the young girls of today. Through technology, girls can learn about the world. This will make our community better, with better qualities, principles and values. They will graduate with a different vision of what life is about." The ability to access any application on any device, including complex multimedia applications, has transformed the educational experience for Franco's students. "Now when they see computers and technology, they feel comfortable and happy because they understand how to work with photos, videos, songs, text, web pages and social networks." Educational institutions throughout Medellín are interconnected, making it possible to access each other's applications and information from any location. Franco also seeks to open her classrooms to the community, much in the way the Parque Biblioteca Espana (Spain Library) provides opportunities for young people to work on homework and do research. "The library has become a symbol for our city," she says. "We can realize our dreams and improve our quality of life."

Would this project be considered an innovation, a best practice or other notable advancement that could be adopted by or tailored for other organizations and uses? If yes, please describe that here. (In 300 words or less.)

The Digital Transformation of Education initiative provides a model that can be adopted by any developing community, even those with limited budgets and low household incomes. The ability to access any application on any device, including inexpensive low-spec machines, makes advanced technology available to the disenfranchised and disadvantaged individuals who can most benefit from it. The virtual desktop environment can be managed centrally, increasing efficiency and making it possible for a relatively small number of IT professionals to support a large user community. The cost advantages of the solution make it more affordable and sustainable over the long term, a critical factor for delivering lasting impact.

If there are any other details that the judges should know about this project, please note them here. (In 300 words or less.)

The Digital Transformation of Education initiative leverages previous investments by the city of Medellín designed to empower its development as a World Digital City. These include Ruta-N (Route N), a corporation created by the city with local telecom provider UNE EPM to promote the development of innovative technology-based businesses. The project also leverages the city's Medellín Digital project, founded in 2006, which seeks to build a digital city that makes new information and communication tools available to the inhabitants of various city districts and communities.