

Power to a New Generation

San Luis rolls out a pioneering experiment in community-wide digital inclusion, and leaders throughout Latin America are watching.



CHALLENGE

- Digital inclusion as all citizens are trained on ICT
- Export with technological value added
- Attract software companies, entertainment, and agribusiness

SOLUTION

- 20-year technology plan
- Information highway (IH)
- Free WiFi throughout the province
- Implement a 1:1 model (Intel-powered classmate PCs)
- Incorporate 10,000 Intel-powered classmate PCs per year
- Offer 50 percent tax credit and financing to purchase home computers

MILESTONES

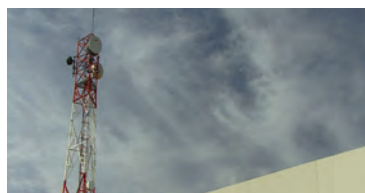
- Single digital agenda under way, with 235 initiatives in process
- 70 regional digital inclusion centers
- ICT training for 82 percent of teachers
- 70 percent of primary school students learned chess to develop logical reasoning
- Creation of Universidad de La Punta to carry out this plan
- Creation of the Parque Informático de La Punta (PILP) - La Punta Computer Sciences Business Park - housing 14 companies
- Increase in the number of households with PCs (70%)

The Argentine province of San Luis has been pursuing an ambitious 20-year goal: digital inclusion for its entire population. Leaders set goals to export more products with technological content, cultivate a dense network of Internet users, train more professionals in sciences and in engineering, and above all to broaden its base of workers who have completed secondary education and possess better skills in math, reading, writing, science, and information and communication technology (ICT).

To achieve its goals, the provincial government allocates 23 percent of its budget for education, science, and technology. It invests 50 percent in capital goods and infrastructure—all using local resources, without help from the national government or foreign loans. Strongly independent, the 420,000 inhabitants of San Luis—1 percent of the country's population—get by with the equivalent of 1 percent of Argentina's overall budget. Its unemployment rate is zero.

San Luis citizens enjoy a powerful incentive to purchase computers, with payment terms of 20 installments and a tax credit good for 50 percent of the cost. As a result, the number of households with PCs increased from 31 to 70 percent. By the end of 2010, the number of computer-owning households in San Luis Province is expected to reach 80 percent.

The province has built an Information Highway (IH), planned a fiber optic network, and established 20 radio links to provide broadband Internet and IP telephony to every town with a population of 20 or more residents. In 2003 San Luis inaugurated the centerpiece of the IH, its data center and primary network. WiFi connectivity is ubiquitous and free.





Digital Inclusion Goes to School: La Punta University

Pursing the ideals of the Intel World Ahead Program, Intel experts in 2007 began collaborating with the government of San Luis and La Punta University on a pilot to place 500 Intel-powered classmate PCs in several provincial schools. One year later, the government bought an additional 1,500 units for a special program for children ages 7 to 12. Excited by the results of digital inclusion, the province bought another 1,040 units in September and 1,000 more in October. In 2009, purchases of Intel-powered classmate PCs reached 6,407 units, as well as more than 422 computers for teachers. San Luis plans to purchase 10,000 units per year until each of its 104,000 school-age children has a classmate PC.

All Kids Online

As part of San Luis's digital inclusion plan, the All Kids Online Initiative established a 1:1 eLearning in 16 towns in the province, delivering one classmate PC with educational support software to each child between the ages of 6 and 12 in 2008; the initiative grew to 30 locations the following year.

Intel worked closely with San Luis through the Intel® Teach Program. Teachers received a government-issued laptop and special ICT training so that they could introduce the new technologies in the classroom. After computers were distributed, evaluation of the children's language and math skills revealed remarkable progress in a very short time. And, as children advance in their use and enjoyment of the Intel-powered classmate PC, they interact with parents and grandparents, passing on their skills.

All Kids Online is but one of the 235 initiatives promoted by the San Luis Digital Agenda. Others include a Knowledge Olympiad, chess instruction to help schoolchildren develop logical thinking, and training centers for adults. One of the most noteworthy of these initiatives is Balance Cero.

Attaining a Sustainable "Balance"

Balance Cero (Zero Balance) is an environmental initiative in which children use their Intel-powered classmate PCs to calculate the total energy consumed in their towns. The expressed goal of the project is for children to learn from first-hand experience about energy efficiency, forestation, and reduction of global warming through the use of technology and collaborative work in their communities.

Within just one quarter, implementation of the "All Kids Online" project had managed to improve learning in language arts and in mathematics by an average 10 percent, according to evaluations performed by Argentina's Centro Interdisciplinario para el Estudio de Políticas Públicas (Interdisciplinary Center for Public Policy Studies - CIEPP¹).

Working in groups, children carrying their PCs use "Efficient House" software to survey the amount of electric energy annually consumed in each house, as well as the equivalent carbon dioxide released into the atmosphere due to consumption by the entire town. Based on this information, they calculate the number of trees necessary to balance those emissions. As a result, eleven provincial locations—Nueva Galia, Fortuna, Juan Jorba, Villa General Roca, Villa de Praga, San Martín, Balde de Escudero, Las Palomas, El Talita, Lafinur, and Los Cajones—have finished the planting. Additional locations are planting the necessary trees to achieve zero balance in their towns.

Mayors in each city cede land for replanting, and the provincial nursery provides seedlings of tree species that best adapt to each town. Entire communities pitch in to help in the planting effort, so that the balance between carbon dioxide released to produced energy and forest capture is zero, or negative. The end of a plantation is celebrated by the raising of a Zero Balance flag.



Technology Lights the Way for San Luis

Digital inclusion has embraced every level of San Luis society and enabled profound advancements, said Graciela Ponce, the Director of Educational Center No. 6: "One night when I was returning home, I went past a mountainous area that has no electrical power," she recalled. "In that pitch-blackness, I saw the tiny gleam of a computer shining out against the darkness of that home. In those moments, you

Among the celebrations for these activities, the province introduced into its schedule an annual meeting—San Luis Digital—that shows the progress toward digital inclusion and what has been done during the year by faculty and students, as well as the companies affiliated with the PILP.

appreciate that these people—with minimal financial resources—have access to that environment, to these tools, which until now were only seen in certain social strata... I was moved by that scene in such a humble house on the road to Potrerillos, with children bowing their little heads together, and the only light being that of the Intel-powered classmate PC."

Ms. Ponce is impressed to watch the children as they wait for their parents to pick them up, using that time doing research on their machines. "Something interesting happened when we were all very worried about Influenza A," she said. "When the children were asked how much they knew about the epidemic, they could be found searching the Internet to answer my question and that was a very rewarding occasion... It was gratifying that they would use this medium, and that kids from poor homes can have such access and reach out to the whole wide world."

The Students Become the Teachers

"I have two girls who are practically programmers," said Liliana Coria, a third grade teacher at the Educational Center No. 6 in El Volcán. "They use icons better

than I do, and I see that they have bought special mice. They are in third grade, are eight years old, and work with PowerPoint better than I can."

As president of La Punta University, the entity guiding, coordinating, and executing implementation of the Digital Agenda, Alicia Bañuelos has helped to realize the goals of digital inclusion for all citizens. "We have a specific plan for people to complete primary school and secondary school with technology skills," she said. "To do this, we have digital inclusion centers in 46 locations throughout the province. There is connectivity across the entire territory because we need an ever-denser network of Internet users. We make it easy for people to purchase computers by having the provincial government cover 50 percent of the cost. We have already prepared and trained 85 percent of the teachers in San Luis."

At the same time, Bañuelos said, the school is pursuing many educational efforts with the children. "For example, we teach them how to play chess because it improves their formal logical reasoning," she said. "This year we have succeeded at having 70 percent of primary schoolchildren play chess, and now San Luis is a hotbed for Argentine chess players. We do not do this as an isolated event, but as part of the same plan to attain better development in science and technology."

San Luis Achieves its World Ahead Vision

New technologies make all worlds possible—not just for students but everyone in their community. The challenge of digital inclusion in San Luis is to train more engineers and scientists, to fundamentally transform and enrich the people's ability to participate and compete in the world at large. From villages to population centers, the acquired skills, knowledge, and opportunities of digital inclusion promise to carry this independent Argentine province far into the future.

The Intel World Ahead Program is at work in regions like San Luis across the globe, collaborating with governments and fellow industry leaders to accelerate technology access and speed market development. Project by project, the



Alberto Rodríguez Saá, Governor of San Luis, Alicia Bañuelos, University of La Punta



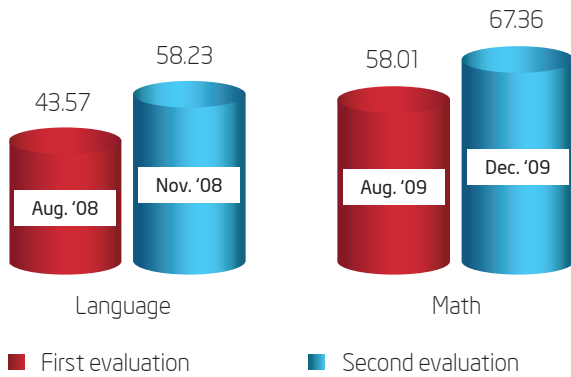
program connects millions of people with appropriate technologies, high-speed connectivity, education programs, locally relevant content, and healthcare solutions. This long-term, comprehensive approach delivers sustainable social and economic gains... for the citizens of San Luis and of communities worldwide.

What is your vision for the world of tomorrow? Contact your local Intel representative to discuss how you can implement a sustainable, technology- and education-based program in your country.

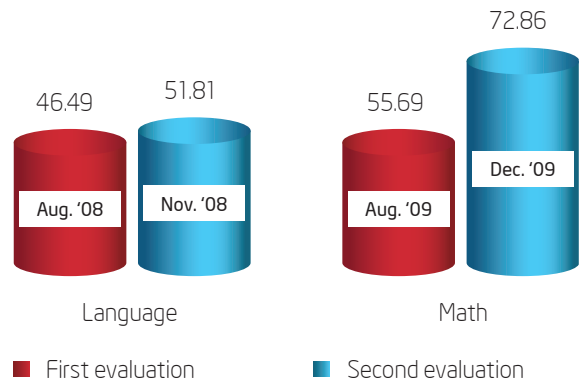
"In San Luis we have empowered the children and we are undergoing a true revolution."

Alberto Rodríguez Saá, Governor of San Luis

Evaluation results for the 3rd grade



Evaluation results for the 6th grade



(Source: Center for Studies in Public Policy and La Punta University), www.funacioncepplogr.ar, www.ulp.edu.ar

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FUTURE VETERINARIAN: FLOR

Sixth grader Flor focuses on the glowing screen of her Intel-powered classmate PC. Seated on a hallway floor at School 267 in Potrero de Funes, she plugs it into an electrical outlet to recharge and takes a moment to chat.

Although Flor was among the first students to receive an Intel-powered classmate PC in 2008, she must seize every minute of opportunity in school to use it, because she has no Internet or electricity at her home in the mountains. Which also means that school is virtually the only place she can do homework.

Flor's Intel-powered classmate PC can help her prepare for her dream profession someday: "A veterinarian," she said. "I really like animals. At home I have horses, a cow, a baby goat, a hen, and a dog. The only thing that I don't have is a cat."



1. Source: Report from the Center for Public Policy Studies.

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