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Waste That Doesn't Go To Waste

Electronic waste is beginning to pile up, just like rubbish you take out for collection. But e-waste has an upside that makes it slightly different. It can create jobs, drive growth, and help bridge the digital divide. Hard to believe? Not really

Ten tons of printers. Five tons of fax machines. Fifteen tons of computer displays. Twenty tons of CPUs. No this is not part of a transnational's inventory – it's a record of operations in 2005 at the Recycla plant in Pudahuel, on the outskirts of Santiago. Recycla started in 2003, as the Nilo brothers set out to take Chilean e-waste recycling from 1 percent to 10 percent by 2010, the year of Chile's bicentennial.

They started out with the right foot. They were the first small Chilean business ever to enter into a strategic partnership with a NASDAQ-listed company – U.S. based Maxus Technology, an e-waste recycling pioneer. Just two months after starting out, they shipped a container of recycled copper to China. That was three years ago. Ever since kudos have rained in from all quarters and this year business schools from Costa Rica's INCAE to Harvard are busy writing case studies on Recycla.

Recycla General Manager, Fernando Nilo, is not swayed by the accolades, however, and recounts how hard raising awareness has been. "When told about the importance of not discarding hazardous e-waste into environment, some people just don't get it. They don't want to pay anyone to collect their e-waste. Educating people about this is a truly Herculean task. When first went to the bank saying that we wanted to recycle e-waste as a proposition with both business and social value, they said 'what's e-waste'? It took a year for a bank to believe in us." Reclaiming, then selling 300 tons of copper, 500 tons of aluminium and 200 tons of stainless steel to European and U.S. smelters under ISO 14001 standards, as they did last year, has taken a lot of hard work.

They've done it one step at a time. The process begins when blenders, switchboards, computers or just about anything with a microchip inside is discarded. That's when e-waste gets sorted by colour. White is for home appliances; brown for television, audio and video equipment and grey for computer and telecommunications equipment. Recycla shares the goals of electronic recycling initiatives elsewhere: recycling e-waste makes business, environmental and social sense.

THE ICING ON THE CAKE

To Evelyn Frisch, Environmental Project Manager for the Chile-Germany Chamber of Commerce, considering e-waste recycling merely a business proposition is like eating the icing and leaving the rest of the cake. "It's a cycle. From the moment an appliance or machine is designed, you consider how it will be taken apart, which components will be recycled and avoid materials that can harm people or the environment. Germany uses a sustainable approach. European law requires manufacturers to take back and recycle their discarded products. Product labels have to clearly specify who the responsible manufacturer is. In 2005 Germany was among the first European Union members to introduce that standard"

A simplistic view of things would release Chile from such an obligation, since we aren't large-scale manufacturers of electronics goods. But the numbers show that as a country we ought to do more, not less. "Not recycling electronics just because we don't manufacture them is an outright mistake. Over 80% of the Chilean population owns a cell phone. That's 12 million cell phones. We nearly double Argentina, where the figure is 45%. In addition, we have the highest rate of Internet use in Latin America", says Nilo

The number of computers in use in Chile grows by 20% or 550,000 units a year, Nilo says. About 500,000 computers and one million of cell phones are thrown away each year. The need to educate the public is evident.

“Do you know how much of this cell phone is made of copper? 8%”, says Juan Velásquez. “And then there’s the gold – an excellent conductor- used for microchip connectors. A cell phone battery contains so much copper, recycling becomes as feasible a method of recovery as operating mine”. Velásquez, a Professor of industrial Engineering at the University of Chile did his Ph.D. in Japan. As a student there, he witnessed how waste of different kinds would be taken daily to Odaiba, an island made entirely of waste. He saw how the Japanese turn plastics that can no longer be recovered for other uses into road paint.



PROGRESS AND NEW PROJECTS

“Some people say ‘I do not pollute; I keep my surplus computers in a locker’. But equipment deteriorates over time, and components such as batteries and displays can leak hazardous materials into the environment” says Raul Ciudad, president of the Chilean Association of information Technology enterprises (ACTI). They would like to see legislation enacted to deal with this issue. “Colombia has made great strides. They are number one in Latin America in computer recycling”. Ciudad refers to Computer for Education a Colombian initiative replicated in Chile by Todo Chilenter, an organization in which he sits as secretary (see inset)

“These initiatives are based on computers for School, a Canadian idea” explains Uca Silva, a Sur Corporación researcher working since 2004 on a project funded by the Canadian International Development Research Centre. Countries such as Canada have solved their surplus computer issue by shipping them to Asia. “One man’s garbage is another man treasure” says Uca, who hastens to add that these computers are reconditioned (refurbished) and put back to use. The project is closely evaluated to make sure that it provides a benefit to recipients and doesn’t just becomes an easy way to dump unwanted or hazardous material to others. The idea is to bridge the digital divide – responsibly.

“If we are to propose and promote a model based on giving, we want to know what’s going to happen to those materials in terms of controls, regulations and quality standards. In other words, we need clear rules”, says Silva.

They started out by recognizing that Latin America lacked specialists, researchers, methodologies and sources of information on the issue, and that it was necessary to start from square one. Two year later, they have a review of the state of the art in the recycling industry, a study on the social impact of refurbished computer programs, and others studies on related legislative and environmental issues, among others

Further information was gathered at workshops held in Chile, Brazil and Costa Rica, where Uca flew last November “we’re working with people of U.S., the Netherlands, Switzerland and Canada who are willing to help. We’re acting as a source of information and specialist from industrialized countries”, she says.

What she learned is that the issue required a new turn, as in terms of volume alone, these initiatives have limited impact. In Colombia, Computer for education has reconditioned 77,000 computers since 2000, while Todo Chilenter has reconditioned 10,000. This means that a lot of disadvantaged children can now spend hours in front of a computer and find and use information. “That’s invaluable. The benefits cannot be measured in terms of the cost of an older computer, but in terms of access and environmental benefits, since reconditioning a computer means prolonging its life.

A key step along this process would be for Chile to consider e-waste recycling a collective social undertaking. “The impact would be that much greater. This is a complex issue that concerns all of us. While we don’t have detailed information yet, we feel that e-waste has much more potential than appears at first blush. In Argentina, street collectors are already sorting e-waste, while in Chile we have e-waste disposal sites. We have to make sure that these operations meet all necessary environmental standards, and that requires both legislation and education”

To Silva, what’s especially gratifying is that Latin American concern over e-waste is growing where none existed as recently as two year ago. Now her sights are set on the next step – joining STEP, a UN-sponsored e-waste initiative. “the digital divide is not merely a question of how many computers we have. In an information society, it’s also about being properly represented in international groups concerned with these issues”

And talking about shared goals, Recycla has also addressed the social aspects of e-waste recycling –indeed, they’re working to recycle behavior: they’ve joined forces with Artist for Rehabilitation to hire former convicts as recycling plant operators. Nilo sees a bright future ahead, a future where they could even progress from B2B to B2C services. “I hope for an adequate legal framework and for this issue to be addressed as a matter of national interest”, he says.

