

— Eco-Innovation success story from Peru —

Mining Machinery Goes Green – Funvesa of Peru

A successful producer of iron castings for Peru’s mining and cement sectors, Funvesa is a company with growing ambitions. Before eco-innovation, the business was already using iron scrap to produce its goods. But Funvesa wanted to boost its green credentials even further to take advantage of new markets, especially Peru’s public sector where construction requires sustainable public procurement. Coupled with overseas export ambitions, Funvesa’s foray into new segments meant eco-innovation was a natural step to take the company to the next level.



Before eco-innovation, Funvesa Fundición Ventanilla S.A. was already producing iron and steel machinery pieces from iron scrap. And with a market share in Peru of some 30% for mining machinery products, the company was well established.

But the business of more than 180 employees wanted to aim higher. It wanted to become a leading producer of iron pieces in Latin America, “ensuring high quality products and services

at competitive prices.” This new strategy would also commit to sustainable production practices which would make production even more efficient and eco-friendly.

The beginning of a new journey

To do this, Funvesa embarked on an eco-innovation drive, basing its new business models on the “hotspot analysis” it had conducted. In eco-innovation, hotspot analysis simply means identifying areas along the value chain or production process which need to be improved, or changed altogether.

For Funvesa, the company’s performance was being adversely affected by three particular hotspots.

First, Funvesa was consuming too much energy during the iron melting process, costing money and efficiency. Second, the process of molding of iron pieces – which mainly uses sand – was creating large amounts of waste and even harmful pollution (in fact, the particulate matter being generated had respiratory health impacts on workers). Finally, Funvesa realised that one of the by-products of the foundry process, known as slag, was simply being disposed in landfills without any thought of its potential use as a material for other sectors – not good for the environment, and missing out on potential revenue streams.

And so the company’s eco-innovation journey began with the all-important ‘preparation’ phase.



Preparing for success

In this phase, eco-innovators are encouraged to identify the sectors, markets and clients they want to target as part of their new business approach.

Previously, Funvesa was mainly focusing on the domestic mining sector. In fact 80% of its activities were geared towards mining in Peru, with only 10% towards the country's grinding and cement production, and the remaining 10% towards export.

Under a new approach, Funvesa's management had some ambitious but realistic changes in mind. In future, the company would focus 70% of its activities on the core Peruvian mining market, with 10% still geared towards Peru's grinding and cement sector. However, through the sale of by-product slags and sands, Funvesa wanted to penetrate the domestic construction sector – this would occupy 10% of its efforts. As for new public sector opportunities, Funvesa's new strategy envisaged market penetration with 5% of its activities. The same would apply to exports.

But none of these targets would be achievable without a new business model. This is the phase of eco-innovation which really started to change Funvesa.

The company came up with two new business models to tackle its sustainability hotspots *and* achieve its new strategic commercial targets.

“One is focused on operationalizing the recovery of by-products (slags and sands) to be used as secondary raw materials for other industries,” says Funvesa. “This will reduce significant environmental impacts, promote resource efficiency in other industries, and also gain recognition [for us] as a company that follows sustainable practices.”

The second business model, according to the company, focuses on developing a new line of products to offer under sustainable public procurement initiatives – opening the door to all-important public sector markets.

The bigger picture

For Funvesa, the strategic shift to sustainability is about much more than troubleshooting or 'green PR'. It's about long-term business growth.

“Funvesa will become a pioneer of this sector in Peru and will be able to stay ahead of standards and regulations – not only from Peru but also from international agreements such as NAFTA and MERCOSUR,” says the company.

“This is attractive to customers that are increasingly seeking providers based on sustainability initiatives.”

“By becoming increasingly innovative,” argues Funvesa, “the company will also become a pioneer in research and development for resource efficiency. This can position us as a contributor of technical and technological knowledge for other companies.”

Soon after the implementation of eco-innovation, Funvesa is expecting positive results.

Within three years, the business expects profits from the sale of by-products such as sand and slag. In fact, new efficiencies mean that 20% more by-products will be recovered to sell on to clients in the cement sector, for example.

By 2019, Funvesa will make its move into the public sector, with a “product of high quality and environmental and social responsibility that complies with the requirements of sustainable public procurement for construction.” By that time, we can expect Peru’s roads and walkways to feature Funvesa’s metallic products and infrastructures.

As for energy efficiency at Funvesa’s production plant, the company is eyeing a 20% decrease in energy use per manufactured product by 2019. Here the company is focused on improvements to “operations protocol”, and on “optimised oven performance” (until now, Funvesa’s open induction furnace has allowed large losses of heat and energy).

The future is green

Across the board, changes through eco-innovation will mean a more efficient factory floor, improved worker health, clear cost reductions, increased revenues, and of course a more sustainable business strategy – one which can take advantage of new growth segments at home and abroad.

For this metals specialist, going green is more than a simple innovation... It’s the future.

The Eco-Innovation Project was funded by the European Commission with the administrative support of UN Environment and local implementing partners in Asia, Africa and Latin America.