

Bi-regional
economic perspectives



EU-LAC Foundation
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Case studies on Circular Economy models and integration of Sustainable Development Goals in business strategies in the EU and LAC

Project executed
by InnovacionAL





About the EU-LAC Foundation

Created in May 2010 by the Sixth Summit of Heads of State and Government, the European Union - Latin America and the Caribbean Foundation (EU-LAC Foundation) began its activities in November 2011.

The EU-LAC Foundation Headquarters is located in the city of Hamburg in Germany. The Foundation has 62 members: the 33 States of Latin America and the Caribbean, the 28 Member States of the European Union, and the European Union itself.

The mission of the Foundation is to reinforce and promote the bi-regional association, by improving its visibility and encouraging the active participation of the respective civil societies.

For more information see <https://eulacfoundation.org/en>



About InnovacionAL Spa

This is a social enterprise that seeks to improve and increase the positive social impact of businesses and organisations in society through studies, measurements and evaluations. Its track record, international networks and a team made up of experts in various countries enable it to develop excellent leading-edge projects.

InnovacionAL has undertaken many consultancy and research projects focussed on aspects of sustainability with an emphasis on models of evaluation and monitoring. Its principal clients and strategic partners are found in Latin America and some countries in Europe, for example Spain, Belgium and Germany.

For more information see <http://www.innovacional.com/>

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Executive Summary and Main Highlights

The overall purpose of this call was to promote economic inclusion, innovation and sustainability through the dissemination of good business practices and for the exchange of experiences and learning among countries, and at a bi-regional level.

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PRESENTATION

– *of this Publication*

The EU-LAC Foundation (<https://eulacfoundation.org/en>) was created with the aim of strengthening the links between the European Union, Latin America and the Caribbean. It seeks to ensure that relations between the two continents grow fruitfully and sustainably, in a context of high competitiveness and challenges, as well as opportunities for greater interrelation. It seeks to promote sustained economic growth with social cohesion and inclusion, which, at the same time, is friendly with the environment. Relationships at all levels are promoted, including among civil society, academic institutions and business.

In 2015, the United Nations approved the 2030 Agenda with its 17 Sustainable Development Goals that, in a cross-cutting manner, promotes the partnership among governments, civil society and the private sector for a sustainable and efficient development.

In the same year, the *EU-LAC Foundation* and *Forum Empresa* wrote a report (<https://bit.ly/2le3AaS>) containing a baseline of the National Action Plans on Corporate Social Responsibility (CSR) of the countries of Latin America, the Caribbean and the European Union (EU). In addition, public policies related to sustainability were registered and a roadmap was proposed to comply with the commitments of the EU-CELAC Summits (Santiago and Brussels). One of the recommendations of this publication was the creation of a bi-regional working group, to develop shared learning, exchange of best practices and lessons to enable fostering the relationship between Europe, Latin America and the Caribbean.

The EU-LAC Foundation launched a competitive call for proposals for a project on bi-regional cooperation on Corporate Social Responsibility (CSR) in June 2017. The expert team selected through the call, InnovacionAL, started to work on the project in August, with consultations across the two regions. The organisation of a bi-regional working group was initiated, aimed at defining a common action plan in terms of studies, promoting sustainable efforts at joint activities and collaboration, as well as establishing a repository of best practices.

This group is formed by regional and national entities dedicated to CSR. In Latin America and the Caribbean the regional networks *Forum Empresa* and *RedEAmérica* are participating, as well as national entities in Argentina, Bolivia, Brazil, Chile, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru and Uruguay. In Europe, the regional organisation *World Forum Lille* of France is a partner. Contacts were made with CSR Europe, and national entities in Spain, France and Ireland, among others.

Furthermore, through this group, in 2017 the baseline was updated and a second round of research was conducted. It provides a general view about the state of progress of CSR and the National Action Plans of various countries in Europe, Latin America and Caribbean. In this study, topics of interest in both continents were highlighted, to promote the exchange of best practices and business cases that allow simplifying modalities through which the business sector can advance in certain aspects of sustainable development.

The EU-LAC Foundation presents this series of case studies of companies and institutions interested in making visible their best practices on the first two topics. Out of a total of 45 proposals, 16 cases of companies were identified as best practices. This includes, 7 cases on CE business models and 9 cases on the inclusion of the SDGs in business strategies. These case studies are followed by two implementation guides, one for CE and another for the SDGs.



45

proposals

16

cases of companies were identified as best practices

7

cases on Circular Economy business models

9

cases on the inclusion of the Sustainable Development Goals (SDGs) in business strategies

Five topics of interest were identified to continue the shared learning:



1. Circular Economy and Mechanisms of Protection to the Environment, and Renewable Energy Generation

In the context of environmental sustainability, the Circular economy (CE) model consists of a strategy that reduces the negative impact on the environment, offering an alternative to the traditional linear business model, where the final product is the source of value creation, reaching its highest point with its consumption. In the CE, one of the objectives is to increase the product life span, produce goods with a long life cycle and focusing on services rather than products.

The growing attention on the environment has driven the research and the inquiry on adaptation and mitigation of climate change based models that are applicable by private companies. The goal, in this case, is that these models should be implemented in the productive processes and in the provision of services in an innovative way.

Given this context, we received best practices and business cases that are in line with the principles of the CE model:

- **Preserve and improve natural capital:** controlling limited reserves and balancing resource flows.
- **Optimize the use of resources:** distributing products, components and materials with maximum utility in both technical and biological cycles.
- **Promote the effectiveness of the system:** detecting and eliminating negative externalities.

The perspective to which this publication adheres corresponds to that promoted by the Ellen MacArthur Foundation. For a further examination of this topic, please review articles and examples of business cases at <https://www.ellenmacarthurfoundation.org>

Linear Economy



Circular Economy



2. The Integration of the 2030 Agenda and the SDGs in the Business Strategy: Identifying Opportunities for Development and for Business

The SDGs represent a fundamental stage in the awareness of the failures of the current socio-economic model and a joint commitment among governments, civil society and the private sector for the future of international development. The 17 SDGs particularly can be summarized in three macro objectives, which are: eradication of extreme poverty, reduction of inequality, and confronting climate change.

It is necessary to understand that the 2030 Agenda, although elaborated to overcome these challenges, can result in an opportunity for growth of the companies. In this respect, it is essential to work for an integration of the SDGs into business strategies so that, together with the results for poverty reduction and climate change, the business goals are achieved, in order to encourage the scaling up of projects with positive economic, social and environmental benefits.

3. Objective of the Publication

For this publication we chose case studies on good practices and lessons learned in relation to CE business models and the integration of SDGs into business strategies in the EU and LAC countries.

The overall purpose of this call was to promote economic inclusion, innovation and sustainability through the dissemination of good business practices and for the exchange of experiences and learning among countries, and at a bi-regional level. In addition, the cases make significant positive impacts, in particular in local development.

Finally, it is fundamental to consider that aside from describing the key characteristics, evolution and results of each good practice; all case studies include an introduction and the key success criteria of the initiative.

The companies presented here have their headquarters in one of the countries of Latin America, the Caribbean or the European Union, and are of a public or private nature.

4. Selection Process of Case Studies

The final decision on the selected cases was taken by the EU-LAC Foundation, based on the selection process made by a review committee, composed of experts in the field appointed by the Foundation and by InnovacionAL. The evaluation was based on a qualitative analysis and in accordance with the following selection criteria:

1. That it be implemented by a company or a legally registered business foundation.
2. That it be carried out voluntarily, namely that it is not a practice that is mandatory by law.
3. That it can show results for the business and, at the same time, the generation of social and/or environmental benefits.
4. That it expresses in a concrete and intelligible way the process, which was developed to achieve the aforementioned results.
5. Those experiences that have an evaluation or quantitative analysis of their results will be privileged.
6. Those cases that positively impact local development will be privileged and, in the case of CE, they can show the relation of their results with the SDGs.
7. The case studies that have the greatest potential to be replicated in other similar contexts or in front of comparable challenges will be privileged as well.
8. In the selection of the cases geographical equilibrium was taken into account.

CIRCULAR ECONOMY

– Case Studies. Main Highlights

We selected seven cases to showcase best practices in the inclusion of CE concepts, three from Latin America and four from the European Union. The Latin American companies are all from the Southern Cone: **Neptuno Pumps** from Chile; **Pulpo SA** from Argentina and Technological **Laboratory in Uruguay** (LATU) from Uruguay. Two of the European cases are from the Netherlands (a global front runner on the subject of sustainability), **Closing the Loop** and **Better Future Factory**. The third case is **Donar** from Slovenia, whilst the fourth is **Ananas Anam** from the United Kingdom.



7	3
cases to showcase best practices in the inclusion of CE concepts	from Latin America
	4
	from the European Union

In terms of industrial sector, we also have a variety across our cases. Though CE is often associated with just recycling, our chosen cases also innovate via producing, manufacturing and selling their CE goods such as Better Future Factory, which sells designer goods made from recycled waste; Donar, which recycles waste to produce stylish furniture; Neptuno, which produces pumps made from recycled waste material; and Ananas Anam, which produces textile fibres to create fashionable items from pineapple waste. This demonstrates that CE can be the very purpose of a business, its *raison d'être*, thereby addressing any criticisms about it becoming an “add on” to the business strategy. Here, CE is at the very core of the business strategy and DNA of the organisations.

Another comparison of interest between the cases is that the Latin American companies are far larger and more established than the selected European cases. For example, LATU from Uruguay has 500 employees, Neptuno Pumps relies on 150 and Pulpo has 100 workers. Donar, in contrast, has 20 employees. The following section analyses cross-cutting issues such as financial backing, drivers, leadership vision, impact (environmental, social and economic), and communication among the cases.



1. Financial Investment

Obtaining initial financial outlay is imperative for any business including a CE one to come into fruition. Two of our cases, one from each continent - LATU and Donar -, initially received public funds in order to start-up their CE businesses. LATU received funding from the UN Development Programme (UNDP) in 2007 as well as from the Uruguayan Ministry of Social Development. Donar received 54% of its investment from EU funding, via the Slovenian Ministry of Economic Development and Technology (Euro 147,447).

Ananas Anam had the unorthodox combination of initial funding by the Royal College of Art (London) and later also received funds from the Philippines government. The company has attracted about Euro 2.500.000 of funding from private investors and financial institutions since its creation.

The other four cases received primarily private investment, in some cases from personal funds of the founders (such as Closing the Loop and Better Future Factory). Pulpo required Euro 1.500.000 in order to finance its large ambitions around recycling and reusing solid waste in a socially responsible way in southern Patagonia, Argentina.



2. Drivers and Leadership


In accordance with the CE implementation guide, the leadership's role, from start to finish, is essential to ensure a successful and enduring CE business. The underlying passion for addressing human-made ecological problems, being part of the solution and sustainability explain why all the cases were set-up. The importance of visionary idealistic and brave leadership from the companies presented was another key success factor.

For example, at Closing the Loop the founding CEO became conscious as he travelled frequently to Africa to sell used mobile phones, that what he sold often ended up as scrap. In this way he was indirectly contributing to a huge waste pile of old phones in Tanzania. CEO Joost de Kluijver took the bold move to leave his stable job and set up Closing the Loop, where he would then recycle mobile phones in Africa, to prevent them from ending up in scrap heaps or landfill sites. These recycled phones are then sold at affordable prices to locals in Africa and elsewhere in the emerging markets.

The company also extracts components from those mobile phones that can no longer be used.

Better Future Factory, also from the Netherlands, was co-founded by five industrial design engineering graduate students from the Delft University of Technology, Netherlands. The students were perplexed by the dominant linear economy thinking during their studies and decided to make a business out of going circular, which has turned out to be a success.

At Neptuno from Chile, we can observe an example of the significance that leadership decision-making has. Despite the company being founded in 1972 and in line with a CE approach, Neptuno was not receiving the recognition it deserved for its innovation and vision. However, this changed in 2014 when the CEO Petar Ostojic took the courage to further embed CE into the company and to voluntarily act as a promoter of CE on a national Chilean and regional Latin American scale in the media and communications arena to raise awareness about the company. This entailed communicating via social media, giving talks and presentations at companies, universities and elsewhere. This led to the company receiving awards and recognition for its efforts and achievements in CE by Latin American governments and international organisations such as the World Economic Forum and UN agencies.



LEADER SHIP

The leadership's role, from start to finish, is essential to ensure a successful and enduring circular economy business.

At LATU in Uruguay, senior management was also crucial in supporting CE, initially by allocating the necessary financial and human resources to the idea. The management also decided that LATU's headquarter offices should hold the annual CE forum in Uruguay. The importance of cross-organizational learning can be appreciated by the story of Pulpo; once the company's senior management decided on the problem they wanted to address, they travelled to Spain, Japan and China to visit state of the art waste recycling plants in order to learn and apply back in Patagonia. At Ananas Anam the start-up was driven by its desire to address negative social and environmental impacts generated by the fashion industry.

According to the CE guide (see below), it is vital that companies monitor the progress of their implementation and impact. The following section reflects on the environmental, social and economic impact of their CE businesses.



3. Environmental Impact

Environmental Impact has been the most measured and reported aspect by our chosen case companies. With regards to the production and sales of recycled waste, we see impressive figures from Better Future Factory where the company has recycled

221 tonnes of plastic. Clients purchasing pumps from Neptuno have made annual energy consumption savings of up to 70% and 75% in the reduction of solid waste. This has also resulted in a decrease of 70% of CO2 emissions by Neptuno's clients. For each Nico Less product that Donar produces, it recycles 70 plastic bottles. Closing the Loop has already recycled and saved 2 million phones from going to dumps in Africa (and potentially causing toxic waste).

At LATU, the company reports 800 kilos a month of solid waste recycling. All LATU's CE efforts equate to an annual reduction of 10 tonnes of CO2 emission from the atmosphere. Also, in relation to waste, the Pulpo replaces 500 refuse collection trucks worth of expanded polystyrene (EPS) waste by transforming it into biodegradable material. Ananas Anam, by using the waste produce from pineapple to make its products, creates a double win by reducing waste and also its environmental impact.



4. Economic Impact

Closing the Loop stands out most in terms of the consumer focused cases we present. Though the company is still at a transformational stage, in the past three years Closing the Loop has grown from just its founder to now having 3 part time and 3 full time staff members. Revenues have also accompanied this growth from Euro 250.000 to Euro 700.000 in 2017.

However, we see that the larger Latin American firms have been more effective in measuring their economic impact, possibly due to their longer histories and size in comparison to the European cases. For example, Neptuno has been reporting on the financial savings it makes for its client companies over the years. Most impressive to date is how Neptuno helped trim Euro 4.310.000 of savings in maintenance and repairs costs for one large client. Neptuno registered sales growth of 25% per year and reported a hiring rise of 15% per annum since 2016, demonstrating that in this case CE has been great for the bottom line too. On the other side of the Andes Mountains in Argentina, Pulpo has witnessed a 50% increase in annual sales and sold in excess of two million units to date.

Over the past 2 years of trading, Ananas Anam has received over 900 paid production and sample orders across the fashion, accessories, bags, footwear, upholstery and automotive industries. The company estimates sales of around Euro 600.000 in 2018 and Euro 2.800.000 in 2019. The business is expected to break-even in 2019 and end the year with net earnings of approximately Euro 150,000.



5. Social Impact

Besides the employment that these companies provide, the selected companies here also provide further social benefits to their employees and/or the local community. Better Future Factory, for example, places education as a core value; consequently, consequently it gives presentations and talks to over 250,000 people (mostly school children) about CE. In Slovenia, Donar aims to move as high as possible on Maslow's hierarchy model, as a result limits work days to just six hours per day. The company also has stringent gender equality policies such as equal pay regardless of gender.

LATU in Uruguay prioritises social inclusion and community engagement as a key strategic objective. The company follows a collaborative associative model whereby workers collect waste and sell this to LATU, thereby making it more socially inclusive. Pulpo sets socially responsible goals such as aiming to increase women in the boardroom by 15% and hiring 5% more staff with disability. Ananas Anam works with a fair trade approach with its farmers, weavers, factory workers and everyone else along its value chain. This also implies Ananas Anam ensures workers in its value chain are paid a fair wage.



6. Communication

All the selected case companies have eye catching and creative websites with informative content about their work and activities. As mentioned earlier, the Better Future Factory has opted to raise awareness on CE with school children and with the public, as one of their moral responsibilities. Neptuno's CEO also arrived to the conclusion that he should become more outspoken on CE and its impacts on his business. All of the companies selected in this publication have won multiple awards from other organisations for their CE efforts. As a result, the CEOs and leaders of the companies are often invited to speak about their trajectories with the aim to inspire future CE innovators. However, we should also take into consideration, as explained by one of the CEOs from the cases, that they can "become victims of their own success" and spend more time communicating on what happened instead of working to further develop their nascent businesses. Achieving a balance between communication and business growth and innovation is an important objective to strive towards.



7. Concluding Remarks

The seven cases selected are in our view the ones who have the most compelling story to tell about CE, representing two continents, five countries, different sizes and different business sectors. This diversity is testament to the how pertinent CE is to all businesses, regardless of geography, size, sector or end customer (business to business or consumer).

Partnering with non-business actors, whether specialists or not, appears to be a common cross-cutting theme that can help explain the success of these businesses. The example from Ananas Anam seems representative of partnering with non-business actors, inasmuch as how the company learned about their business from farmers and weavers in the Philippines. It would appear that humbleness and passion for learning from diverse stakeholders is a necessary element for a successful EC endeavour.

Only three of the cases have received significant amounts of public funds in order to start up, and all are now profitable and growing. This also offers much encouragement to future aspiring CE entrepreneurs and is equally positive for governments and other public institutions that CE is not dependent upon significant public funds. It seems to depend very much on the individual drive and passion for addressing the crucial global problem of waste and sustainability, something all our cases have in common.

Measuring progress is present in our cases, to varying degrees, which, can be explained by the length of time some companies have been established, such as Neptune Pumps or LATU who have had decades to grow and measure their respective impacts. Measuring impact takes time and resources and should not be expected from a start-up, however, it is important for all companies to plan for monitoring of what a difference their CE activities make, environmentally, socially and economically. We are confident that the cases showcased here can act as inspiration for any future CE entrepreneurs, researchers and policymakers.

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SDG CASE STUDIES.

– *Main Highlights*

The nine chosen cases for this section represent diversity in terms of geography, size, history, industry sector and focus on SDG. Six of the cases are Latin American focused whilst three are in the EU. Both Chile and Ecuador feature twice with two cases each. Europe is represented by Portugal with **LIPOR**, Spain with **Telefónica** and Slovenia with **Iskraemeco**. The smallest firm is the Ecuadorian organic chocolate producer **Pacari** with just 89 employees, compared to the 295,000 of **FEMSA** global. The companies also have a wide range in terms of their longevity, companies such as **Unilever** and **FEMSA** (Mexico) date back to the 19th century, whereas **Pacari** was formed in 2002. Industrial sectors are equally diverse and include energy (**Iskraemeco**); finance (**Produbanco**); pharmacy (**Bagó Chile**); food and beverage (**Pacari**, organic chocolate producer; **FEMSA**, beverages; **Las Tacuaras**, poultry); waste management (**LIPOR**); telecommunications (**Telefónica**); and consumer goods (**Unilever**). There is equally a diversity in the SDGs that the companies are addressing, resulting in no exclusive focus on specific SDGs.

9

chosen cases for this section represent diversity in terms of geography, size, history, industry sector and focus on SDG.

6

the cases are Latin American focused

3

the cases are in the EU



1. Financial Investment

Some of the larger companies decided to allocate specific funding to manage their SDG efforts. The case study offered by Iskraemeco (Slovenia) highlights its smart electricity metering business, which deals most directly with the SDGs. This business unit required an initial outlay of Euro 500,000 and has a sizable research and development team of 100 employees.

Produbanco from Ecuador provides us with an example of how finance institutions (from Latin America) can set their sights and efforts on the SDGs. In order for Produbanco to offer financial credits on its Programa de Líneas Verdes (Green product programme) the bank itself required funding from Dutch development bank FMO of Euro 10.000.000 in 2016. A year later the financial institution also had access for credit from the World Bank's International Finance Corporation (IFC). With this funding, Produbanco was able to create its Green Finance product programme, which requires clients to demonstrate its environmental friendly credentials in order to qualify for a loan. As a consequence, Produbanco directly addresses SDG 9. The beverage company uses its foundation (Fundación FEMSA) to channel CSR and SDGs related work. Here the foundation chose the material subject of water as its focus. Once again, we see how SDGs efforts can multiply by partnering with different organisations. Together with the multilateral Inter-American Development Bank and the NGO The Nature Conservancy, FEMSA's foundation established the Alianza Latinoamericana de Fondos de Agua (Latin American Water Fund Alliance). It is worth remembering that the final SDG 17 is about partnerships between business and non-business actors. To date, the FEMSA Foundation has invested Euro 30.340.000 and together with its 250 strategic partners amounted to Euro 132.745.000 resulting in positive impacts to the lives of 1,600 communities in 12 countries throughout Latin America and the Philippines. More specifically the foundation invested Euro 948.000 in the learning-by-doing project within the Water Fund Alliance, which promoted several workshops on water in Mexico City during 2017.

Spanish telecoms multinational Telefónica also approached its strategy for the SDGs via the creation of a fund. Since 2014, in part planning for the launch of the SDGs, the corporate headquarters launched the Sustainable Innovation Investment Initiative (Iniciativa de Inversión en Innovación Sustentable). The Initiative had Euro 350,000 and all departments across the corporation were encouraged to apply, as long as there was a clear business case with convincing return on investment projections.

Nonetheless, it is important to clarify that additional funding is not a requirement for managing and integrating the SDGs into a company's business operations. For larger multinationals, funding would make sense due to their size. However, the smaller companies featured in this publication did not require specific financing for their SDGs ambitions.



2. Drivers and Leadership

Paul Polman, CEO of Unilever, is internationally well-known across the business and sustainability world for his ambition of making a truly positive impact on sustainable development. Following through with the CEO's public declarations on sustainability, Unilever announced its Sustainable Living Plan in 2010. We see Polman's leadership once more as a driving force for Unilever's work on the SDGs when in 2015 (when the SDGs were launched) it participated in a high-level committee composed of 27 members, including civil society and government representatives, to consult over the Goals. On a smaller scale, at Bagó Chile, the company's CEO was pivotal in deciding to seriously tackle the issue of gender-violence after one of the company's female employees was murdered.

Strong leadership and engagement by the CEO and board of directors of LIPOR is also cited as an important reason for its impressive progress on SDGs 2, 4, 7, 8 and 12. At Pacari, leadership has been shown proactively from the two husband and wife owners, who formed the company after first meeting each other thanks in part to their shared passion for sustainability. At Bagó, the importance of the CEO is also highlighted as crucial for implementing its dedicated strategy on gender equality (SDG 5).

The following section reflects on the environmental, social and economic impact of the SDG related initiatives.

Can your day job change the world? Absolutely. Having a positive impact at work gives us purpose in life.

Paul Polman, CEO of Unilever





3. Environmental Impact

The environmental impact is monitored and communicated by the companies within this SDGs section. The business model of Iskraemeco is geared up to improve environmental efficiency, since they are the second largest smart electricity meter supplier in the world. Between 2013-16 the company has reported a 25% decline in CO2 emissions. Similarly, LIPOR is dedicated to the business of a cleaner environment via the treatment of municipal waste, 500,000 tonnes per year. LIPOR has achieved a 20% reduction in greenhouse gas emissions since 2006 and decreased its own energy consumption by 28% since 2010.

Produbanco requires its clients to commit to a 20% reduction of their environmental impact in order to qualify for a “green credit.” Relatedly in terms of commitments and objectives, Unilever Argentina who partners with the Ministry of Environment and Solid Waste of the City of Buenos Aires government, is ambitiously aiming and planning to recycle and/or reuse all plastic bottles by 2025. Their current awareness raising initiatives have reached an impressive 1.5 million residents of Buenos Aires.



4. Social Impact

Besides the thousands of people employed by the ten selected cases, their SDG-related initiatives also make significant positive contributions. For example, Iskraemeco ensures that it sources only conflict-free minerals for its smart electricity meters. Meanwhile Bagó has devoted its SDG strategy to addressing gender-related violence after one of its female workers was murdered by her spouse. After numerous awareness raising workshops and assigning 80 monitors to identify and prevent gender based violence, the company reports higher levels of employee satisfaction and no reported violence from male partners towards its workers.

The founders of Pacari have been delivering multiple workshops on empowerment and self-autonomy to their small-scale cacao farmer suppliers. The founders encourage participants to be as proactive and involved as possible in the hope it will provide them with future life skills. Public workshops to local communities are also instrumental to the social impacts by Lipor and Unilever CIF. Meanwhile, Femsa states that it has positively impacted the access to good quality water of 19,000 families across Latin America and the Philippines.



5. Economic Impact

Las Tacuras, the poultry farming business that follows a Shared Value approach to its business, reports trebling its revenue between 2015-17. Produbanco had provided US\$50.4m in loans along the lines of SDG9. Bagó discovered its employees were more content and satisfied in their annual employee perceptions survey after implementing its women's protection programme. At Iskraemeco, the company found that its smart meter product directly aided in increasing its market share by 3%.



6. Concluding Remarks

We selected nine very diverse cases that work with the SDG in different areas. We found that CEO and senior leadership were crucial to the initial impulse of the initiatives or business models required. The desire for a more sustainable society and world was the main driver. Financial investment is also necessary, depending on the business sector and size of the company. Specific budgets for the SDGs make more sense in multinational or large entities, where a business case can be attached as a requisite. We also saw the importance of monitoring, measuring and reporting the environmental, social and economic impacts from the initiatives.

Moreover, a common theme in most of the cases was that of partnering with other actors, including other companies such as competitors. Collaborating with specialist NGOs, public authorities and consultants is also present across the cases. The subject of cross-sector partnerships and collaboration is vital to the long-term success of implementing and making progress with the SDGs. Business alone can only go so far with addressing the SDGs, collaboration with others is crucial.

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Implementation Guide for Circular Economy

The CE is restorative and regenerative by design. It aims to redefine products and services, to design waste out via innovation, while minimising negative impacts.

WHAT IS THE

– *Circular Economy and its Benefits?*

The most renowned definition of the CE was provided by the Ellen MacArthur Foundation in 2013 as “an industrial economy that is restorative or regenerative by intention and design.” The European Union (EU) defines the CE as one in which “the value of products and materials is maintained for as long as possible. Waste and resource use are minimised, and when a product reaches the end of its life, it is used again to create further value. This can bring major economic benefits, contributing to innovation, growth and job creation” (EU, 2015).

A CE is an alternative to the traditional linear economy (where products are disposed for waste or recycling). The three key principles for a CE include:



1

Design out waste
and pollution

2

Keep products and
materials in use

3

Regenerate
natural systems

CE thinking can assist organisations in using energy and natural resources more efficiently, reduce greenhouse gas emissions, create employment and meet the UN's Sustainable Development Goals (SDGs), especially Goal 12, Sustainable Consumption and Production. SDG Goal 12 seeks to achieve “the sustainable management and efficient use of natural resources” by 2030.

The CE is restorative and regenerative by design. It aims to redefine products and services, to design waste out via innovation, while minimising negative impacts. In a CE, we make use of resources for as long as possible, extracting the maximum value from them while in use, then recover and regenerate products and materials at the end of each service life. A CE requires a completely new way of manufacturing products and as such a shift in thinking from value chains to value cycles.

CE requires rethinking products and services using principles based on durability, renewability, reuse, repair, replacement, upgrades, refurbishment and reduced material use. In a study conducted by the World Business Council for Sustainable Development (WBCSD) and the Boston Consulting Group (BCG), they found that implementing CE enhanced innovation for efficiency and competitiveness gains at 97% of the companies surveyed. Over half of the corporate interviewees stated that working with the CE contributed towards increased profits¹. Business can address the CE in three ways: first, by process innovation, secondly via product innovation and thirdly by innovating their business model.

Different governments around the world are introducing legislation and policy to help transition their economies towards the CE. The most notable of these is the introduction by the EU of its CE strategy in 2015, with its abundant web-based knowledge resources (see references)². It therefore would make great business sense to commence the transition towards the CE for all organisations.

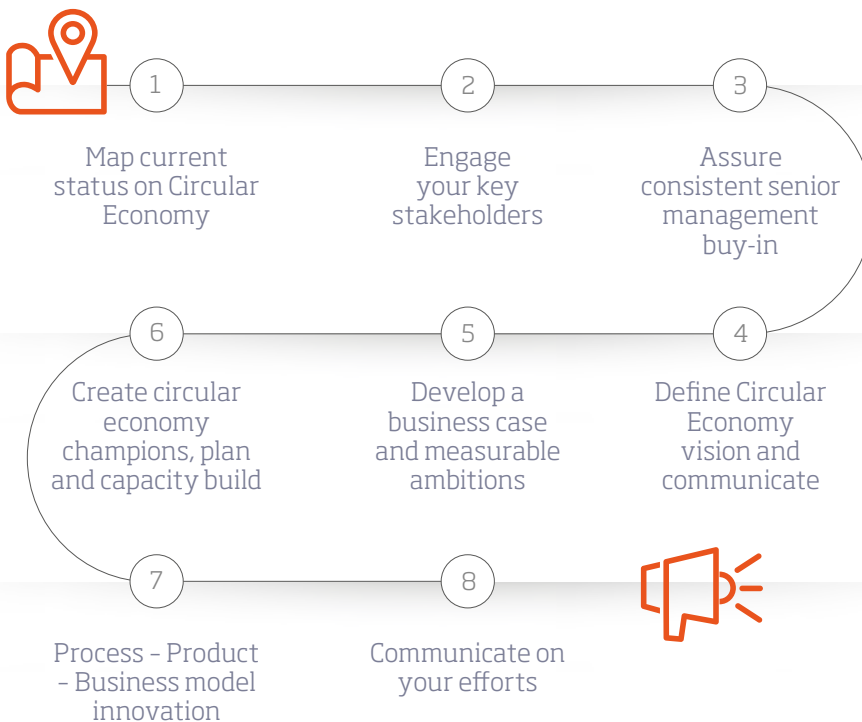
1. The New Big Circle (2018) Report by WBCSD and BCG.

2. EU strategy on circular economy - https://ec.europa.eu/commission/priorities/jobs-growth-and-investment/towards-circular-economy_en

IMPLEMENTING

– *Circular Economy Thinking*

This eight-step implementation guide acknowledges the uniqueness of each business/organisation operating in Latin America, the Caribbean and the EU. As such we do not advocate for a one-size-fits all solution for implementing the Circular Economy (CE). The concept of CE as we have already explained is very complex and detailed, as such requires holistic and systemic thinking by organisations in order to be implemented. This eight-step guide should serve any business/organisation as a basis to develop their own strategy for implementing CE. For further technical implementation of CE please refer to some of the tools referenced at the end of this guide.



1. Map Current Status on Circular Economy

Review all your current practices and activities to map what you are already doing that could be considered as 'circular thinking'. Consider all business units and include operations as well as products and services in your review.

2. Engage your Key Stakeholders

Stakeholders such as customers, NGOs and communities play an important influential role in driving the CE agenda. One way to engage with these actors is via focus groups. When engaging with employees and stakeholders, it is important to encourage them to think outside the box, as CE is about eliminating the whole concept of waste. Organisations should identify good, appropriate and relevant expert organisations (consultancies or NGOs) with whom they can partner from the outset throughout the transition to a CE business model.

With regards to internal stakeholders and employees, one way of encouraging engagement with them is to ask them to reflect on where your business currently experiences high costs, such as a large waste stream or one that is hard to recycle. Other areas of poor performance like high levels of product returns, or complaints about product durability, which can get negative media coverage, should also be explored.

3. Assure Consistent Senior Management Buy-in

The World Business Council for Sustainable Development (WBCSD) and Boston Consulting Group's (BCG) survey found corporate leadership was the most important factor in driving forward CE within corporations. Indeed, most CE projects are initially funded from within the companies, therefore senior leadership's commitment and steering on the subject is vital for the successful implementation. Without engaged senior management and leadership, circular economy thinking will not advance within organisations. It is therefore important that senior management and leaders are made well aware of the concepts of CE and its potential benefits and impacts to the business. Businesses where leadership is also proactive and engaged on issues relating to sustainability should be at an advantage for also obtaining the buy-in from leaders for CE thinking.

4. Define Circular Economy Vision and Communicate

Management should clearly define from the beginning what the company understands as “circular economy” in terms of strategy and operations. This will make it easier for management to communicate the concept of CE to employees and stakeholders. The definition is unique for every company and its specific context. It is important to bear in mind that no business alone can solve all the challenges it faces to become more circular. Many issues can only be solved by collaborating with different businesses and sectors, throughout value chains and even with national and local governments. It is therefore imperative that businesses identify which issues are most relevant for them, and whom they could and should be collaborating with. Decide the issue(s) which you can lead, with your expertise and experience and where you can benefit from learning from others.

5. Develop a Business Case and Measurable Ambitions

The WBCSD and BCG found that 81% of companies surveyed with CE strategies also had a clear business case. In order to motivate and engage employees on the CE, management should quantify their ambitions and set goals to move forward. Ambitious, measurable goals drive action, create accountability and emphasise the need for change. Organisations should seek to disrupt themselves instead of waiting for external actors. (Please see the references for CE standards and frameworks by British Standards Institute BSI and the Ellen McArthur Foundation for guidance on specific and detailed indicators³).

The best way to demonstrate a business case is by having Key Performance Indicators (KPIs) in place to measure progress. Regular reporting, both internally and externally, helps maintain accountability. According to WBCSD and BCG, KPIs do not need to be circular specific, especially not in the beginning, since they are often measured against traditional projects with traditional metrics such as Return

3. <https://www.bsigroup.com/en-GB/standards/benefits-of-using-standards/becoming-more-sustainable-with-standards/BS8001-Circular-Economy/> and <https://www.ellenmacarthurfoundation.org>

on Investment (ROI) or Net Present Value (NPV). In their study on CE within firms, WBCSD and BCG found that most companies use general KPIs such as ROI, amortization rate or net present value to monitor their implementation and progress of CE. Currently, there are no generally accepted circular KPIs, though the new CE standard by the BSI may provide some guidance here. Some companies track the “true costs” of their goods or services to society (for example by applying internal carbon pricing to quantify the cost of greenhouse gas emissions).

6. Create Circular Economy Champions, Plan and Capacity Build

Bioregional⁴ recommends that organisations convene a working group that cuts across operations and products/services, including key influencers who can champion your approach to CE. This group of champions could review what the organisation has already done in terms of CE (see step 1), helping to create a shared understanding of what worked, what did not and why and what is currently planned. The group could also start to plan an organisation-wide vision for a new CE version of the business.

According to Bioregional, working groups should also create 1, 3 and 10-year roadmaps, in order to fully embed CE thinking within the business. The 1-3-year plan would focus on smaller incremental change, piloting relevant ideas that can be scaled up in the future. This is the opportunity to test out ideas to see what works and what doesn't.

The 3-5-year plan could focus on scaling up successful pilots as well as outlining areas where the organisation could work in partnership with other actors on particular issues. A 3-5-year plan also permits for stating realistic targets with sufficient time to develop more complex ideas and collaborative solutions.

4. Bioregional - <https://www.bioregional.com/cracking-circular-challenge-get-started-circular-economy/>

However, a fully circular business requires a much longer time frame than five years, which is why organisations should also develop a 10-year vision, where a deeper circular transformation of your business can occur. This should be based on the best understanding of the forces, changes and disrupters impacting the company and its sector. This would include taking into consideration CE enablers, such as developments in digital technology and changing consumer preferences.

The learning, decisions taken and plans devised should all be disseminated to the rest of the organisation (to all employees) in the form of capacity building so that the whole business is on board with the CE strategy. Only by having everyone in the company informed, participating and taking some ownership will the organisation optimize its implementation and performance in its CE transition.

7. Process - Product - Business Model Innovation

The WBCSD and BCG argue that it makes more sense for businesses to begin with the least disruptive forms of change on the journey towards CE. This means companies should start with changes to the business processes; once these positive gains have been established it will be easier to transition to a circular way by disrupting the products and finally the business model.

8. Communicate on your Efforts

Disseminating information about circular initiatives can attract new demand, strengthen existing relationships and please investors. Since circular initiatives can translate into greater profits, promoting a company's circular projects is not to be underestimated. Moreover, investors increasingly screen their investment options with sustainability criteria and will divest from companies they consider too risky in terms of sustainability. In short if you're "doing good", then you should communicate about your efforts.

USEFUL

– *Further Resources*

Bioregional

<https://www.bioregional.com/cracking-circular-challenge-get-started-circular-economy/>

BSI Circular Economy standard

<https://www.bsigroup.com/en-GB/standards/benefits-of-using-standards/becoming-more-sustainable-with-standards/BS8001-Circular-Economy/>

Ellen MacArthur Foundation

<https://www.ellenmacarthurfoundation.org>

EU strategy on circular economy

https://ec.europa.eu/commission/priorities/jobs-growth-and-investment/towards-circular-economy_en

EU circular economy action plan

http://ec.europa.eu/environment/circular-economy/index_en.htm

WBCSD

<https://www.wbcd.org/Programs/Energy-Circular-Economy> and
<https://www.wbcd.org/Clusters/Circular-Economy-Factor10/Resources/The-new-big-circle>

3.

Case Studies on Circular Economy

Though circular economy is often associated with just recycling, our chosen cases also innovate via producing, manufacturing and selling their CE.

CE is at the very core of the business strategy and DNA of the organisations.

—

CASE STUDY 1: – *Ananas Anam*

 PIÑATEX

Piñatex, a sustainable alternative. Piñatex is the result of the valorization of an agricultural waste. Ananas Anam vision is material innovation through sustainability.



YEAR, COUNTRY (CITY)

2018 UK (London)



NUMBER OF EMPLOYEES:

10



COMPANY NAME:

Ananas Anam



COMPANY WEBSITE:

<https://www.ananas-anam.com/>



ECONOMIC ACTIVITY:

Textile material



CONTACT PERSON DATA:

Raquel Prado
R&D Science Project | Manager
Raquel.prado@ananas-anam.com



COUNTRIES OF OPERATION:

UK-Spain-Philippines

BACKGROUND

Ananas Anam was born at the Royal College of Art (London) as a start-up. Ananas Anam Ltd, established in 2013, has developed Piñatex®, a natural plant-based and versatile material from a sustainable source. Piñatex follows a strong social and ecological agenda and can be mass-produced, making it a cost-effective textile and alter native to leather.

Piñatex is patent-protected and can be used in fashion, footwear, accessories, upholstery and automotive industries. Similar to Gore-Tex®, Piñatex is a branded material with an identifiable logotype.

Ananas Anam has integrated the circular economy concept since its foundation, by giving economic value to a waste. 13 m tons of leaves waste is generated every year in the Philippines by pineapple plantation and about 54 m tons worldwide. In Philippines, this waste was partially used as mulch, back into the ground, and there is not an estimation of the impact that it may cause. Ananas-Anam uses pineapple leaf fibre to produce Piñatex (a non-woven material). The pineapple leaf fibres that are used in the production of Piñatex represents 2% of the waste. The discarded part can be used as fertiliser and it is easier to degrade as compost under specific conditions. So, in this way economic value is adding to a waste.

Piñatex is an innovative patented ethically produced new material in the same commercial scope as leather and its plastic alternatives obtained from fossil fuels as PU and PVC. Provide a high-performance material able to compete economically in the market can help to reduce the use of non-degradable plastics that are a big problem for the environment nowadays.



Ananas Anam has integrated the circular economy concept since its foundation, by giving economic value to a waste. 13 m tons of leaves waste is generated every year in the Philippines by pineapple plantation and about 54 m tons worldwide.

OBJECTIVES

Ananas Anam is the company behind Piñatex, and its objectives can be summarized in the company's vision and mission: to reduce the environmental impact generated by the textile industry, the cause of one today's biggest environmental problems, by its use of non-degradable materials and polluting chemicals throughout the supply chain. Ananas Anam has established key business practices to counterbalance and improve this:

- The production line is designed to reduce the generated waste and save raw material and energy.
- All the production needs are based on fair trade economy principles, with every single person that forms part of the creation of Piñatex getting fair wages (from the pineapple farmers to Ananas Anam factory partners).
- Increase the biodegradability of the final product and the valorization of the resulting waste, is an intrinsic part of on-going R&D work.

STEP BY STEP

Dr. Carmen Hijosa, the founder of Ananas Anam Ltd

Dr. Carmen Hijosa, the founder of Ananas Anam Ltd, is an ethical entrepreneur with a vision for a more sustainable future that connects people, environment and the economy.

The journey of Piñatex® began while Carmen, a leather goods expert, was consulting for the Philippines Leather Export Industry in the 1990s. Realising the huge social and environmental negative impact created by the fashion industry was key in looking for new ways to develop more sustainable materials, as an alternative to leather and PU derived substitutes. She was driven to research a sustainable alternative.



Inspired by the abundance of natural resources, including the use of plant fibres in traditional weaving such as the delicate Barong Tagalog garments, Carmen sought to create a new, non-woven textile that could be commercially produced, provide positive social and economic impact and maintain a low environmental footprint throughout its life cycle. In addition, the acquired knowledge from working with Filipino farmers and weavers, into their ways of using natural fibres, was the start of the development of a unique nonwoven textile made from pineapple leaf fibres, the waste of the pineapple harvest, which after 10 years of R&D resulted in a new material: Piñatex .

Piñatex is the result of the valorisation of a waste, and the use of renewable materials as main components of the final product. Piñafelt, is the nonwoven base of Piñatex and it is 100% biodegradable and made from renewable sources. Piñatex encapsulates social, economic and ecological responsibilities.

The initial breakthrough came about from developing partnerships with pineapple farming co-operatives, local industry and research partners. This was made possible thanks to the help from the Philippine government supplying the farmers with semi-automated decorticating machines to extract the pineapple leaf fibres, to be able to extract and supply the fibres in an easier way.

Recently Ananas Anam has invested in a fully automatic decorticating machine, which will make the process safer for the workers and will help increase the production to an industrial scale. Ananas Anam is currently in the process of scaling up the production, but always with the concern on keeping the quality standards and having a positive impact in all the areas (social, economic and environment).

Ananas Anam is also looking for the best way of reusing the waste generated in the fibre extraction, the biomass. This can be used not only as compost but also as bio-gas source, which in turn could be used as the energy source in the fibre processing plant. This would again valorise the waste and reduce the carbon footprint.

The research team at Ananas Anam in collaboration with their partners are continuously looking for ways to improve the sustainability of the production process and developing new products with even less impact in the environment.

CONTRIBUTION TO COMPANY PERFORMANCE

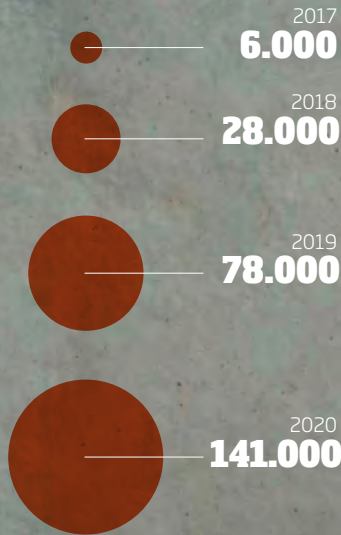
Ananas Anam has attracted considerable attention from market participants, suppliers and investors due to its circular economy model.

Over the past 2 years of trading, Ananas Anam has received over 900 paid production and sample orders across the fashion, accessories, bags, footwear, upholstery and automotive industries. The recent installation of an automated decorticating machine in the Philippines will significantly increase production capacity and provide comfort to international clients that Ananas Anam can service large orders as required.

New additional farmers' communities in the Philippines are collaborating with Ananas Anam year-after-year and other pineapple-producing countries such as Costa Rica or Indonesia are opening their doors for the production of Piñatex.

Sales of Piñatex are estimated at Euro 625,000 in 2018 and Euro 2,900,000 in 2019. The business will break-even in 2019 and finish the year with an EBITDA of c. Euro 153,000. The company has attracted about Euro 2.2 million of funding from private investors and financial institutions since its creation.

Forecast of Piñatex Production (linear metres)



Ananas Anam's environmental and social impact will scale with the growth in its sales. The activity provides a new income stream to some of the poorest farming communities in the world - c. Euro 2 per square meter of Piñatex goes to the farmers.

Ananas Anam has been the recipient of a number of awards:

- 2015 2016 Cartier's Woman Initiative Awards
- 2016 Cartier's 2016 Arts Foundation Award for Materials Innovation
- 2016 InnovateUK Women in Innovation Award
- 2018 MODA-FAD Fashion innovation merit Award

Piñatex is People for Ethical Treatment of Animals (PETA) certified and compliant with AFIRM group (committed to reduce the use of harmful substances) and the Global Organic Textile Standard (GOTS). Finally, Ananas Anam is currently working towards Live Cycle Assessment (LCA) and Cradle to Cradle (C2C) certification.



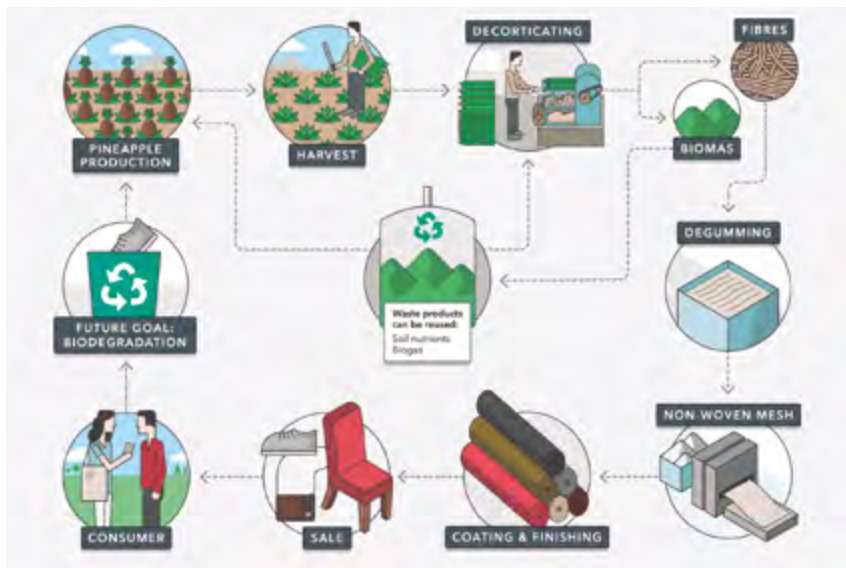
SOCIAL OR/AND ENVIRONMENTAL BENEFITS

The production of Piñatex is based on Fair Trade principles, and has a positive impact in rural, agricultural communities. Farmers get about Euro 2 per m² of material (400gm of fibre approx.). As such, one of the most important social benefits is the creation of job opportunities for farming communities; which then reflects and strengthens the local social networks and communities.

Environmentally, Piñatex uses primarily natural materials, thus reducing the environmental impact caused by its production.

Furthermore, Piñatex uses a natural fibre that comes from a waste. This means that we are reducing the huge waste generated by the pineapple agriculture, thus having a positive impact on the environment.

As a result of the upscaling processes being implemented, the company will be collaborating with other pineapple producing countries, so the benefits that Piñatex brings to society will spread throughout the world. As an example, Ananas Anam has already started negotiations with Costa Rica, where the usual practice of burning the leaves created such an environmental issue that this has been banned by the government. As such they are eager to work with Piñatex as the company will bring a solution to a huge social and environmental problem.



"Design is a connecting tool between people, economics and the environment - and out of this communion, understanding and respect new ideas and products with integrity can come about."

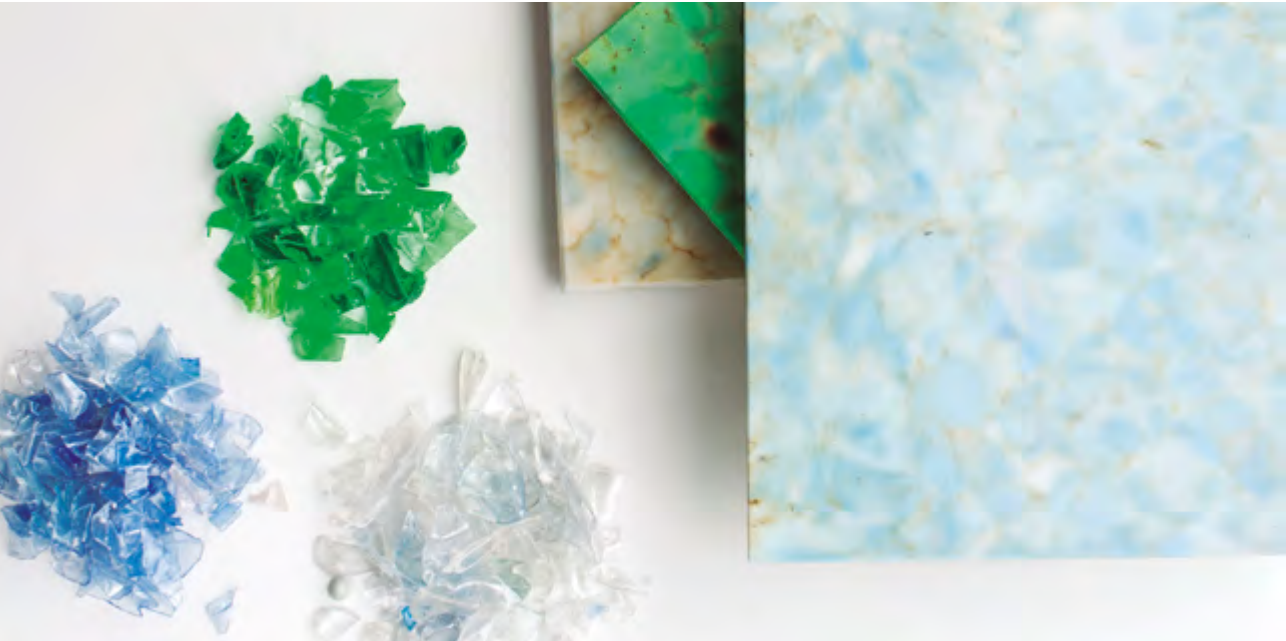
Dr. Carmen Hijosa



CASE STUDY 2: – *Better Future Factory*



Better Future Factory is a **sustainable product design and engineering studio** based in Rotterdam, the Netherlands.



YEAR, COUNTRY (CITY)

2018, Rotterdam, The Netherlands



NUMBER OF EMPLOYEES:

7



COMPANY NAME:

Better Future Factory



COMPANY WEBSITE:

www.betterfuturefactory.com



ECONOMIC ACTIVITY:

Sustainable product design



CONTACT PERSON DATA:

Casper van der Meer

Co-Founder & CEO

casper@betterfuturefactory.com



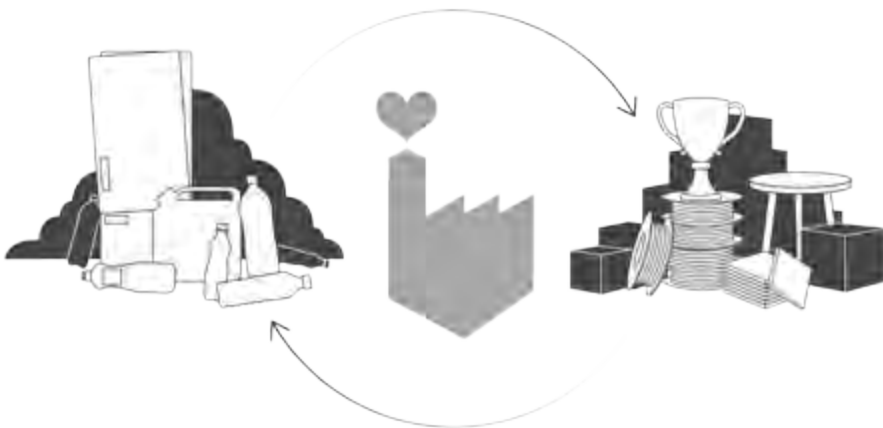
COUNTRIES OF OPERATION:

Netherlands, worldwide events

BACKGROUND

The company helps clients finding new ways for transforming waste streams into valuable and scalable products, in particular plastic waste streams. Next to this the company also initiates their own projects, which sometimes grow into individual start-ups, dedicated to one product or service.

The company was founded in 2013 by 5 industrial designers, which were then all recently graduated or about to graduate from the Industrial Design Engineering department at the Delft University of Technology. The group shared a strong idealistic drive for designing for a better future in terms of sustainability. During studies it became clear that there was still too much focus on linear thinking when it comes to product development, especially plastics. Plastics are mostly designed for one life cycle and reuse or recycling are not taken into account. At the same time plastic is a beautiful material, which has a lot of properties other materials can't match. Therefore, it deserves much more value than just the lifetime like a disposable packaging and being incinerated afterwards.



At the same time plastic also poses a major threat to the environment of which the results becoming more and more apparent. It ends up in our forests, oceans, animals, and via micro-plastics in our food chain. If we continue consuming and producing like now, in 2050 there will be more plastic (by weight) in the ocean than there are fishy. Currently just 9% of our plastic is being recycled globally² and most of it getting down-cycled into products which can't have another lifecycle. This has to change, it's time to start closing loops and re-use and recycle plastics in a better way, providing a sustainable way of living for future generations. We believe in re-imagining products and processes into iconic, sustainable and scalable solutions. Engaging stories and innovative engineering have the power to create a cleaner and better future.

Although the Netherlands is one of the front-runners on plastic recycling there is still a long way to go. It has become evident that plastic pollution does not know nor respect national boundaries: as such, plastic pollution is a global problem, which should be addressed and challenged as such. That's why Better Future Factory operates in countries all around the world. For example, converting plastic waste into building materials in Uganda.

MOTIVATION AND LEADERSHIP

One of the first projects helped as kind of a kick-starter for Better Future Factory; the Perpetual Plastic Project. It's the world's first mobile interactive recycling machine, where people can convert their own plastic waste into a 3d printed object. Initially it was designed for a Dutch Music festival (converting beer cups into a 3d print), but afterwards the company received many requests from both national and international parties. With this machine the company travelled around the world giving workshops at all kind of events, ranging from sustainability events of Heineken and Danone to maker fairs in Dubai. The dissemination of knowledge about plastic recycling via the installation turned out to be so powerful that also copies of the machine were sold to schools and universities. At the same time this machine worked as an acquisition tool for new client assignments around plastic recycling. The Perpetual Plastic project became an individual start up and grew into kind of an event business, still doing 3 to 4 events per month and having 10 copies of the installation worldwide.

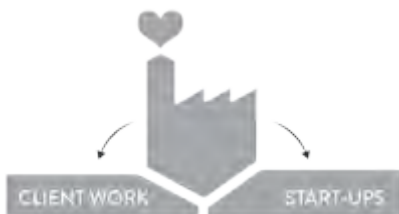
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1. Ellen MacArthur Foundation's <https://www.theguardian.com/business/2016/jan/19/more-plastic-than-fish-in-the-sea-by-2050-warns-ellen-macarthur>
 2. Geyer, Jambeck & Lavender Law (2017). Production, use, and fate of all plastics ever made. Science Advances 19 Jul 2017. Vol. 3, no. 7, e1700782- DOI: 10.1126/sciadv.1700782

“Doing things about sustainability, circular economy, that’s what we try to incorporate in everything we do”

Jonas Martens



Nowadays Better Future Factory has 3 start ups and is doing many projects around plastic recycling for clients. Refil is the second start up which is the industrialized version of Perpetual plastic, making high quality 3d printing filament (input materials for 3d printers) from plastic waste. It’s been in the market for 3 years and is selling globally via resellers and its own web-shop. The newest start up is called New Marble, where old plastic bottles are converted in marble looking wall tiles via a unique process developed by Better Future Factory. With New Marble already from the start collaborations are formed with people outside the company, which have a complementary skill set and give the business development a push. This is one of the reasons why the different start-ups are separate companies, next to that it makes it easier to protect intellectual property (IP), attract investors and at some point sell the start up. Better Future Factory focuses rather on development of innovative and scalable solutions than managing enterprises: as such the company strives towards business development enabling independency.



3d print made from Refil PET from old bottles



New marble wall tiles made from old bottles



The team expanded over the years, the composition of the team also changed. Three of the initial five founders are running the company. Most of the employees have a background in industrial design; next to that there is a close collaboration with social workplaces, they do small-scale production of recycled products. Better Future tries to focus on sustainability in a broad sense and also integrate social sustainability in its way of working.

OBJECTIVES

The connecting factor between the different activities of Better Future Factory and its start-ups is plastic recycling and educating people about its necessity and benefits. For the different business units, the objectives differ.

Better Future Factory - sustainable product design and engineering

Scale is important for making a change, but also communication for impact. Helping organisations innovate by transforming their plastic waste streams into products is the main aim of Better Future Factory. Sustainability or the circular economy are very abstract terms for most people therefore the focus lies on tangible solutions, which people understand. The experience of the start-ups gives valuable insight into market dynamics and scaling up businesses. Currently Better Future Factory is a sustainability partner of several companies. For example, a Dutch coffee roaster, where an internal waste stream of coffee packaging (cutting waste) is transformed into coffee service products like trays.



Coffee tray made from waste packaging cut offs

TPerpetual Plastic - A mobile, interactive recycling installation

This business is about awareness and showing people around the world the value of plastic recycling by converting waste into a 3d printing product like a ring, going from trash to jewellery. Recently a lesson programme for kids between the age of 10 and 14 has been developed around the Perpetual Plastic Project. This helps make kids enthusiastic about the possibilities of plastic recycling, stimulating their creativity and involving them in the future challenges. They in turn educate their parents.



People crushing plastic cups for recycling in the Perpetual Plastic machine.

Refil - Selling recycled 3d printing filament around the world

This is the world's first high quality recycled 3d printing filament which is available round the world via resellers and the refilament web-shop. This enables people with a 3d printer to use a sustainable alternative. The portfolio offers different plastics from different waste sources like ABS from car dashboards, HIPS from refrigerators, PLA from packaging and PET from plastic bottles. The aim of the company is to become the leading brand in recycled filament, offering a broad variety of materials, colours and advice for using the material in an optimal way.

New Marble - Selling Marble looking wall tiles made from plastic bottles

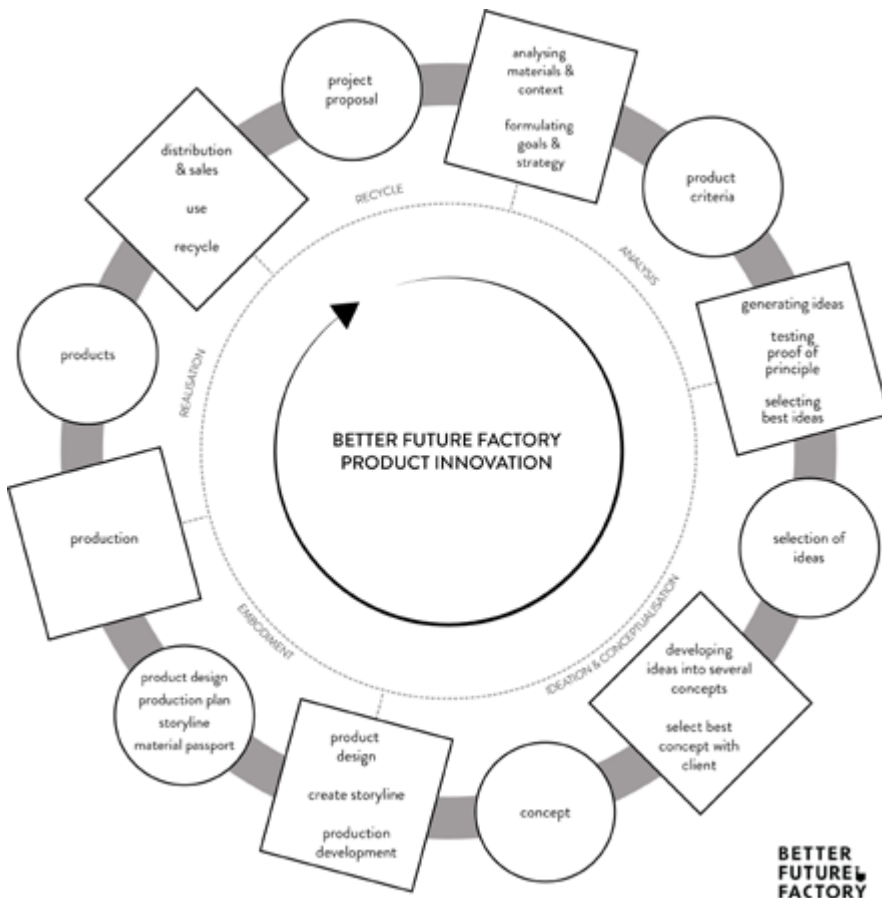
The technique was initially developed as a low-tech solution for developing countries. As a result of positive feedback in the Dutch market it's now also being further developed for large-scale production in the Netherlands. The product is now an officially certified building material in the Netherlands and the technique is further refined production. After an investment round, the building of a pilot factory is planned in the beginning of 2019, which can produce over 3000 m² per month (30 tons of PET). After a successful trial period more production locations are planned.

STEP BY STEP

Better Future Factory

For the Waste to Product trajectories for clients the company works according to its own standard procedure for product development. It consists of four phases:

- I. Analysis.** Research quality of waste streams, explore target markets, creating design criteria for further process.
- II. Ideation & Conceptualisation.** Generating and testing new ideas, translating the best ideas into more detailed concept.
- III. Embodiment.** Detailing the best concept to a final design and build of a prototype.
- IV. Realisation.** The follow up of the prior phase is the production of the product



They work like a funnel, broad orientation and narrowing down along the way into a tangible solution. Next to the new product Better Future Factory thinks about the production technology (does it have to be developed or can we adjust an existing technology), socio-economic impact and storytelling.

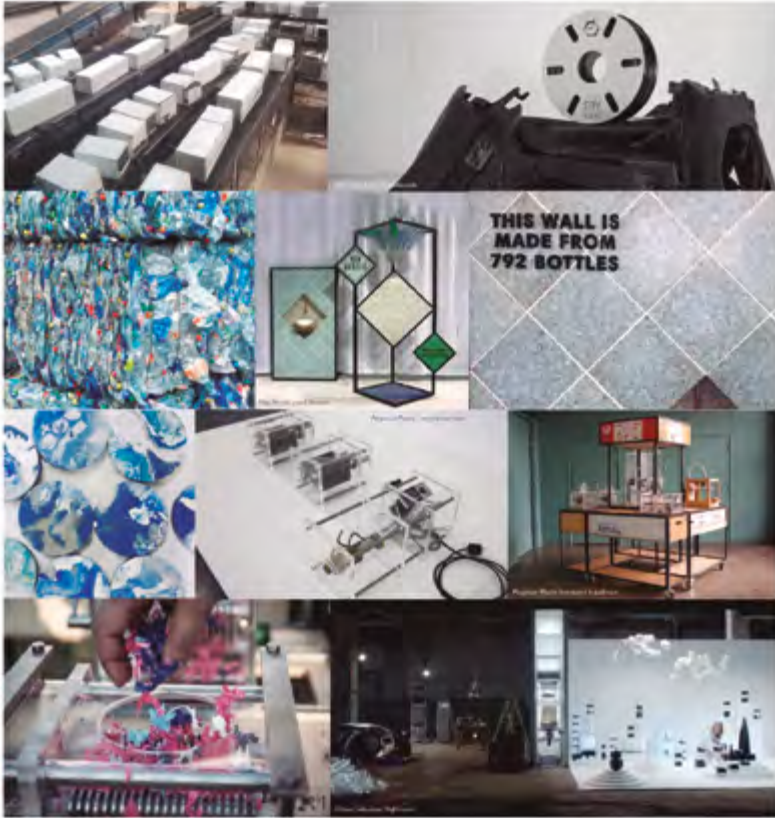
The company works according to a hands on approach and start experimenting in a early stage, based on its extensive plastic knowledge. Better Future Factory builds proof of principle prototypes to see if the processing of a certain recycled plastic works like intended. For this the team has an in-house prototyping lab at Better Future Factory. For advanced prototyping and testing they work together with specialized partners, this could, for example, be testing of UV resistance or the melt flow index for processing.

During this process the team members and partners will diverge and converge many times: researching the market segments, choosing the most relevant target users, exploring needs and experimenting with available techniques, all to come to a wide range of (sub-)solutions which are later converged to a selection of concepts. By then, only one concept will be chosen to be most suitable, which will be detailed, prototyped and tested.

If the prototype has been proven to be successful, the product can be made ready for implementation and production for the client. Depending on the requirements of the client; certification, more extensive testing and also marketing of the product can be further developed. The overall project time ranges from 10 to 24 weeks.

Start-ups

Start-ups are dedicated to one product or service. The initial R&D time for getting to market is over a year. The production process as well as the product itself has to be developed and thoroughly tested. This is done by the Better Future Factory team. New Marble required certification and more elaborate testing, which was done externally. Next to this the supply chain has to be secured for enough material and of a stable quality, which is a real challenge in the field of recycled plastics. This means testing materials from different suppliers and working together with good agreements. Both Refil and Perpetual Plastic are run within the office of Better Future Factory but by a dedicated team. The New Marble team is nowadays a collaboration between people from Better Future Factory and external people which are more experienced business developers.



Better Future Factory builds proof of principle prototypes to see if the processing of a certain recycled plastic works like intended.

CONTRIBUTION TO COMPANY PERFORMANCE

The need for new ways of recycling plastics is picking up, thanks to current themes like ocean plastics people start realizing how much plastic waste is around them. Also companies are starting to take more responsibility within this topic. Some having very ambitious goals like IKEA banning all single-use plastics by 2020.

With the experience in plastic recycling and current portfolio of tangible solutions more and more companies are contacting Better Future Factory for fresh ideas. Furthermore, the combination of tangible solutions and storytelling amplifies the sustainability goals of clients. As a successful result of several projects, the first production series are now in production, like the coffee trays made from old packaging or lighting from old PET bottles. There are many more to come like the recycling of production waste of polyurethane plastic (PU) into furniture and old videotapes (polystyrene plastic, PS) into a stylish shoulder bag.

Next to the Waste to Product projects the team is being asked for their plastic recycling expertise for educational and inspirational presentations, focus groups and expert sessions. The goal is to become the go-to product design company for products made from recycled plastics, in Europe and beyond. So far Better Future Factory has won several prizes and has been mentioned in many publications.

With both clients' projects as with the start-ups the company works together with various partners, schools and universities. For example, the optimization of the 3d printing behaviour of the HIPS filament made from refrigerators was done with research institute Chillabs and Hogeschool Zuyd. The Delft University of Technology has researched possibilities of processing the New Marble material into more elaborate shapes. For the storytelling the company team work closely together with marketing experts.

The starts ups are on different levels of impact. The Perpetual Plastic installation has travelled over 20 countries and has done over a hundred events for corporates like Philips, Heineken, PWC, Corona and Unilever. It has appeared on television shows and is mentioned in various research papers. The estimated reach is over 250,000 people.

SOCIAL AND ENVIRONMENTAL IMPACT

Better Future Factory has done many projects of which the focus point was creating products that explained to people the value of plastic recycling and the circular economy, this product is called the iconic start. These iconic products would travel around companies internally going from marketing department to sales and engineering. It worked as a conversation starter and tangible example of the circular economy. This product proved to be the start of several other products. The impact measured in metric tons per year is still relatively low but increasing by the year.

The start ups are on different levels of impact. The Perpetual Plastic installation has travelled over 20 countries and has done over a hundred events for corporates like Philips, Heineken, PWC, Corona and Unilever. It has appeared on television shows and is mentioned in various research papers. The estimated reach is over 250,000 people.

Besides this, the initiative proves to be particularly interesting for its educational content: through learning by doing, users become genuinely aware not only of the problem but also of the possible solutions that can be adopted thanks to recent advances in technology. Coming September, a brand new Perpetual Plastic lesson program will be implemented in the Netherlands for primary and high school students.

Refil is now operating for over 2,5 years, over 10,000 spools of filament have been sold and sales are increasing. Refil has developed its own unique cardboard spools carrying the filament, which is much easier to recycle than the standard plastic one. Next to this all the sourcing and production is done within a 150km radius. Social enterprises help out with the assembly of the cardboard spool and packaging. Currently Refil is converting car dashboard, pet bottles, refrigerators and food packaging into filament. But there are much more interesting waste sources that could be converted into 3d printing filament.

New Marble is just starting up, so far a few tons of PET have been recycled with the low-tech production technology in Africa (Angola and Cape Verde). However, it brought people new ways for obtaining income, self-esteem and cleaning up complete regions and islands of PET bottles because it's now valued material. The pilot factory, which is planned for beginning 2019, should process 30 tons of PET a month.

CASE STUDY 3: – *Closing the Loop*



What CTL has done since 2012, is to show that it is possible to **collect over 2 million dead phones** in countries that lack the formal infrastructure, the laws and regulation around electronic waste management and the consumer awareness on proper recycling.


YEAR, COUNTRY (CITY)

2018, Amsterdam


NUMBER OF EMPLOYEES:

5


COMPANY NAME:

Closing the Loop


COMPANY WEBSITE:

<http://closingtheloop.eu>


ECONOMIC ACTIVITY:

Circular services based on mobile phone recycling


BEST PRACTICE WEBSITE:

<https://youtube.com/watch?v=sgSqi8P5CeE&t>


COUNTRIES OF OPERATION:

Netherlands, US (California), Cameroon, Ghana, Rwanda and Uganda, Zambia.


CONTACT PERSON DATA:

Joost de Kluijver - Director
joost.dekluijver@closingtheloop.eu

BACKGROUND

Closing the Loop (CTL) collects 'e-waste' (dead phones) in African countries and ensures that this waste is turned into metals. This 'urban mining' is a great alternative for 'virgin mining'. Urban mined metals are arguably the cleanest, lowest CO2-emitting, fairest, inclusive and conflict-free metals in the world (especially considering the e-waste is from places where the waste cannot be recycled properly). Extracting gold from waste saves up to 90% carbon, when comparing to classical mining. And other metals have similar carbon reduction results. So, just looking at carbon, urban mining makes a lot of sense. And what's more: for some metals, there is more stock above the ground, than below it. So all we need to do, is start collecting.

What CTL has done since 2012, is show that it is possible to collect over 2 million dead phones in countries that lack the formal infrastructure, the laws and regulation around electronic waste management and the consumer awareness on proper recycling.

CTL is already benefiting greatly from the fact that it is the only company in the world that can offer 'mobile phone offsetting'. The 'one for one' service we have developed generates an additional income stream out of the work CTL is doing in emerging markets. Next to the value of the materials they produce, there is great value in the story and impact of our approach. Turning that value into cash - selling the impact and story as 'Corporate Social Responsibility' and 'positive impact' to organizations - improves the overall business case for waste collection and allows for higher pay out to the scrap collectors in Asia/Africa.



MOTIVES AND LEADERSHIP

Joost de Kluijver founded Closing the Loop and still leads the organization today. The idea behind Closing the Loop was born during a project Joost undertook in Tanzania, 2010. Joost's former workplace was in the business of taking mobile phones to Africa for reuse. It was there that he saw that mobile phones lead to huge problems at the end of their lifespan. CLT is the result of a long-term effort and strong local networks, something Joost takes great pride in.

Joost has been involved in the telecoms and reuse industry since 2001 visiting Tanzania. Back then he was selling used phones to Africa, which he had bought in the Netherlands. CLT is now the very opposite of that business model as Joost realized he was contributing to a problem of mobile phone waste in Africa. CLT instead collects phones from the emerging markets and ensures they are properly recycled.

The name Closing the Loop describes this process of rounding off the whole lifespan of a mobile phone, first used in Europe and finally recycled in Africa. Upon this self-reflection of seeing his own work as contributing to a problem Joost created the CLT NGO in 2012. His philosophy was very much about focusing on a problem and trying to solve it. Upon starting CLT Joost also saw a huge opportunity due to popularity of circularity and material scarcity on the sustainable development agenda. He also realized this could be used as an important educational tool which could all be converted into a profitable commercial entity. What separates CLT from larger public and private organizations is that CLT is going beyond just articulating visions and ambitions. CLT is implementing these ambitions into actions in the emerging markets, and this requires significant tenacity and perseverance, especially as a first moving leader.

Joost de Kluijver founded Closing the Loop





OBJECTIVES

We want to create a blue print for African e-waste management. The approach, deliverables and failures are already closely being followed by international recycling companies and development banks. CTL has seen in countries such as Kenya that when the business case is proven (and the government allows for a legal framework), the foundation is laid for the involvement of larger organizations. Thus, they will benefit from the structures CTL will set up.

The company believes they should increase the visibility and demand for 'urban mined' metals (and with that, their market value). Especially metals extracted from waste that would otherwise not be collected. Allowing this type of metals - which arguably are conflict-free, 'fair chain', very low on CO₂ and which reduce pollution instead of adding to it - to be more visible, will also add more value to the business model. As they already see a growing demand, for example from jewelers and electronics producers, for 'fair trade' metals such as gold, it leaves little doubt that there will also be a market for urban mined metals, as they greatly outperform any 'sustainable' alternative currently available.

STEP BY STEP

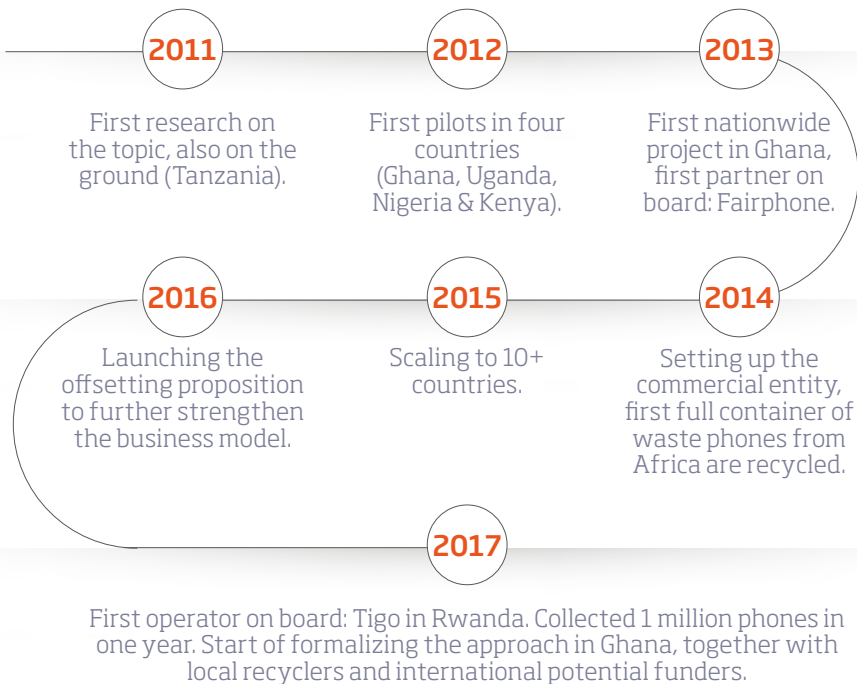
CTL collects and responsibly recycles end-of-life mobile phones from emerging markets, which has resulted in over 2 million scrap phones being saved from the dump since 2014. Through its innovative approach, CTL creates local economies of responsible waste collection, in the more than ten countries where it is active. In most emerging markets, local collection and recycling of 'e-waste' is not facilitated. Moreover, the plants that can recycle this chemical waste, are not connected to the informal waste industries in emerging markets.

The solution is to link a waste issue to a recycling opportunity, hereby matching supply and demand. CTL collects from consumers, via churches and other communities and buys from phone repairers and scrap dealers, provided these are not engaged in illegal or unsafe activities.

CTL was set up as an NGO in 2012. They developed into a social enterprise in 2014, as they saw enormous potential for growth and wanted to work in a commercial way, in order to assure sustainable growth. CTL has 5 employees in Europe and around 12

local partners (one per country) responsible for 'their' country. They have had around 2000 people in our supply chain, that in some way or another financially benefit from this waste collection, in a way that is safe to them and their environment.

Some of our major milestones include:



CONTRIBUTION TO COMPANY PERFORMANCE

The project is about sustainability: CTL creates a business model out of preventing waste from being dumped, burned or improperly 'recycled'. The metals that are extracted from the waste are arguably the cleanest, lowest CO2 emitting, most 'fair' and conflict-free metals in the world. This leads to a huge opportunity: they are now producing items that use 'urban mined' metals, instead of the much more polluting 'virgin mined' metals.

CTL economics are difficult to calculate, as the market they are in (both that of offsetting phones, and that of selling African, urban mined metals) was created by themselves, hence they can not determine its size. But as CTL is being approached by companies like

Samsung, Apple and work for the likes of the Dutch government, ING Bank and T-Mobile, they can state that their proposition is tapping into a market value that is considered big by many accounts. It has led, among many things to winning the Dutch Circular Award: <https://www.circulairondernemen.nl/library/closing-the-loop-wins-circular-award-2018>

CLT is at its transformational stage still, for last two years since refocusing itself into a service provider. In just three years the organizational has gone from just its founder to having now with 3 part time and 3 full time staff members. Revenues have grown from Euro 250.000 to Euro 700.000 in 2017. 2018 should have similar revenue figures and also break even into profit despite the huge investments.

SOCIAL OR/AND ENVIRONMENTAL BENEFITS

CTL's basic value proposition is quite simple: they pay people – consumers, mobile phone repairers, people collecting scrap phones - for their end-of-life mobile phone. This leads to jobs and income for the poor.

The benefits of the overall project are rather broad: from environmental improvements, to societal benefits to increased awareness. Those that benefit of course include the waste phone collectors and their surroundings, but also those that buy waste (e.g. Umicore).

CLT sells different circular services to different customers.

One service allows to offset environmental impacts and make mobile phones 'material neutral' for large buyers such as KPMG or T-Mobile (clients of CLT). They do this by collecting as many mobile phones in Uganda and recycling and placing them back into production cycles. One new phone purchased in Europe leads to one scrapped phone being recycled in Uganda.

There are also educational benefits to their clients such as KPMG. Using CLT's services also helps corporations to comply with new EU legislation related to circular economy. CLT has also helped T Mobile to offset 25,000 mobile phones.

But the work will be done in a way that everyone benefits. This project will show the world that circularity is not just about long term visions; it uses a product of which 2 billion are made per year to prove that the world can act on circularity now. And with that give an example for other industries to follow.



2M

phones saved from African dumps (10 countries).



3,000

people in Africa financially benefitted by CTL work.



1

international operator on board, that offers CTL service to its customers.



30

customers for circular service, which means that these organisations - and their employees - have become more aware on recycling.

CASE STUDY 4:

– Donar

DONAR



Recycled felt as new industrial material of the future.

Design is not just about lines and beauty, but foremost about its social impact. Sustainable design is the only response to overwhelming growth of consumerism.



YEAR, COUNTRY (CITY)

2018, Slovenia, Ljubljana



NUMBER OF EMPLOYEES:

20



COMPANY NAME:

Donar d.o.o.



COMPANY WEBSITE:

<http://www.donar.si/>



ECONOMIC ACTIVITY:

Production



BEST PRACTICE WEBSITE:

<https://www.interregeurope.eu/policylearning/good-practices/item/295/nico-less-chair/>



COUNTRIES OF OPERATION:

UK, Australia, Italy, USA, Denmark, France, Germany.



CONTACT PERSON DATA:

Karla Prelog
Product development
karla.prelog@donar.si

BACKGROUND

The company was established in 1989 in Slovenia, in response to the needs of office interior development. Starting as a small business, Donar has developed in one of key players in design furniture with highest environmental standards. Today Donar employs 20 people and works with several government and non-government associations including universities and institutes to achieve best practice in designing products with minimum impact on environment. Over 70% of products are exported to all continents, mostly Scandinavian countries, UK, US, Australia, and Italy. The goal is to contribute to a carbon neutral and waste free society. Donar follows the 'cradle to cradle' model with design thinking (double diamond) principles and focusing on design management. Design is not just about lines and beauty, but foremost about its social impact. Sustainable design is the only response to overwhelming growth of consumerism. Products that show best practice are NicoLess, ChatLoop, Collodi all made from recycled felt (PES) using trash as an industrial material of the future. It is important to have a clear strategy and goals while developing products. Donar also educates its employees, designers, suppliers and customers in order to achieve maximum impact on society.

MOTIVATION AND LEADERSHIP

The project started as a response of CEO and owner of company Donar to current events about plastics. All Europe is talking about this problem. According to the data that EU Commission published in 2015¹, every day enormous amount of plastic leaks into the environment and the oceans. It is about 5-13 million t/year. In 2014 less than a third of Europe's plastic waste was recycled, another third ended up in landfills and only from the rest energy was recovered. According to Eurostat, although more than 65% of all packaging waste was recycled in EU, less than 40% of plastic packaging waste was recycled in 2014. In the same year the average citizen generated 26 kg of plastic packaging waste, of which less than 9 kg were recycled. Donar tries to find material that will be made out of trash and would be appropriate to produce furniture. Donar is implementing a new approach in furniture production. By applying a technique used in automotive industry, the company has designed and produced several sustainable products made from waste materials.

1. European Commission (2015). Plastic Pollution can make things better.

OBJECTIVES

Nico Less, one of many products of Donar, is made out of recycled PET/PES. 15 tons of plastic waste is expected to be used each year and the same quantity of primary resources use (wood, virgin fibres) will be reduced. With these objectives Donar is close to SDG 12 where responsible and sustainable consumption and production is described. During developing Donar has been thinking also about its effects on humans' health. Thus the company use thermoformation process where no glue is needed. It is strongly related to the SDG 3 where health and good being is described. Donar is presenting products to the costumers in a way that will help them change their perception and to start treating plastic waste as the material of the future. The company is present on several different conferences and fairs. Donar Company wants to become market leader for up-cycled furniture products. The company expects to raise awareness about wide range of possible products made out of plastic waste, and to raise knowledge about life cycle of separate-collected waste. Direct savings are expected due to its simple structure. Another positive economic impact will occur. Donar will hire new people and give them opportunity. All the above-mentioned objectives are strongly related to SDG 8, where is described how to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

STEP BY STEP

Donar's good practice contributes to implementation of the General European Union Environment Action Programme to 2020, by supporting The 7th Environment Action Programme, which has 3 main key objectives which are: to protect, conserve and enhance the European Union's natural capital, to turn the EU into a resource-efficient, green and competitive low carbon economy; and to safeguard the EU citizens from environment-related pressures and risks to health and wellbeing. It also supports the strategy of Roadmap for a Resource Efficient Europe, focusing on product durability, reuse, repair and recycling.

Changes are necessary. That is why Donar tries to integrate sustainability and circular economy into the production processes. Since 2012, Donar is following three simple points to create a strategy that follows implementation of circular economy concepts. The first key point is environmental awareness. Second is social impact, which includes sustainable design. And the third is educating customers and others. The



management and leadership is fully supportive of all green projects that are included. The CEO has been active as speaker at the 1st Sustainable Design Conference

<https://www.interregeurope.eu/retrace/news/news-article/3010/sustainable-design-conference-on-slovenia/>.

The 'Sustainable Design for Transition to Circular Economy' conference celebrated on 27th March in Ljubljana puts sustainable design into spotlight as one of the key enablers of the shift towards a low-carbon society. Company Donar was also a partner in the retrace project where systemic approach for regions transitioning to-



wards a circular economy was presented. Nico Less is a response to the challenge of consumerism and waste pollution that humanity is facing. It is one of many products Donar has in its portfolio and that wants to develop in order to educate people that trash is a material that needs to be reused, upcycled and not land in the environment. When discovering the recycled felt and the ways of how to treat it in order to use it in furniture production, Donar encountered many challenges. The development itself took 2-3 years to be able to produce a chair that is durable, comfortable and accessible to many people. But in the end Donar found sustainable material with small negative environmental impact. The company adjusted its innovative technologies to produce new sustainable products. Approximately Euro 300.000,00 with a help of co-funding from European Union was invested till today. The main goal was to find appropriate material to use innovative technology thermoforming of felt in furniture industry. The main problem was to find proper ratio between fibres in recycled felt, which will enable shape forming with use of heat without added glue or any other binders. Donar can proudly say that in the shell of Nico Less there is no glue.

During the whole time of product developing, Donar has been thinking about packaging possibilities. The product is assembled very simply. It is very important that the frameworks are stackable. There are opportunities to save a lot with transport costs when sending more pieces. Customers can save space if they use chairs only occasionally. Donar uses cardboard packaging when is necessarily. It is completely usable for other purposes or it can be collected separately and recycled.

CONTRIBUTION TO COMPANY PERFORMANCE

As the development took a long time, the chair has not been for sale for a very long time yet. Donar sold the first batch in a month after it was released into the market. That is why we believe it was well accepted and that customers understand and support the company's story. Donar was able to expand and reinforce the market target in Australia and the UK. It took a lot of money and time invested to make this product a reality. Anyway it was designed to be sold in bigger quantities. The company has made a comparison between Nico Less chair production and production of office chair which is still the core business. They can produce 10 times more Nico Less chairs with the same team in the same time as they produce office chairs. Even though the price of Nico Less cannot be compared to the price of standard office

DONAR ::

With every Nico Less made, there are approximately 70 plastic bottles saved from the environment.

With every Nico Less sold at least one person is convinced that recycling is useful.



chairs, with the quantity produced in the same time with the same team, they can earn about 6x times more. It is a great benefit that is expected when the production will run as planned. The product was designed for all people and we believe it was well planned. It has a beautiful design, it is simple to be assembled, can save a lot of space and it can make a great contribution towards the environment. With all these properties Nico Less was awarded with few different awards already:

- Red Dot Design Award Winner: Product Design 2016.
- Design of the year Slovenia 2016.
- Green Product Award Winner 2018: Furniture.
- Finalist for special award in 2018.

SOCIAL OR/AND ENVIRONMENTAL BENEFITS

The Donar Company is working hard to become a company that thinks green. The company wants to follow circular economy principles to become more competitive and more sustainable. They educate employees and teach young people in several different projects how to design products using eco friendly materials, how to design products that are easily assembled, made out of components that can be simply replaced etc.

With every Nico Less made, there are approximately 70 plastic bottles saved from the environment. With every Nico Less sold at least one person is convinced that recycling is useful. Donar has a great story behind it. With better design, Donar can achieve more durability and easier recycling. With its story they raise awareness and encourage responsible behaviour, and encourage the use of recycled plastic. The price is socially responsible, as Donar wants for the good design to be functional and affordable to all people. In case after years of use the chair shell is destroyed, the user simply cuts of the ties and replaces it with the new shell.

CASE STUDY 5:

– *Latu*



LATU Verde Programme - Management of solid recoverable waste in fulfilment of SDGs 1, 8, 10 and 13.

The LATU Verde Programme has the objective of reducing, **reusing and recycling the waste** generated by the Technological Laboratory of Uruguay (LATU in its Spanish acronym), and looks at the management of solid waste from the laboratory and businesses located in the LATU Technology Park and that of the Fray Bentos Unit on the Uruguayan coast.



YEAR, COUNTRY (CITY)

2018, Uruguay (Montevideo)



COMPANY WEBSITE:

www.latu.org.uy



COMPANY NAME:

Laboratorio Tecnológico del Uruguay (LATU)



WEBSITE WHERE MORE INFORMATION ON GOOD PRACTICE CAN BE FOUND:

<http://www.latu.org.uy/wp/wp-content/uploads/2016/07/ReporteSustentabilidad.pdf>



ECONOMIC ACTIVITY:

Innovation, technology transference, analytical services, compliance assessment services, metrological and technological services.



CONTACT PERSON DATA:

Arq. Andrés Olivera
Senior Consultant, Department of Innovation and Development in Management
aolivera@latu.org.uy



COUNTRIES OF OPERATION:

Uruguay



NUMBER OF EMPLOYEES:

500

CONTEXT

The Technological Laboratory of Uruguay (LATU) is a non-governmental organisation under public law, created in 1965 to provide services aimed at the production chain. LATU is a national and international benchmark in innovation, technological transference, promoting the culture of science and entrepreneurship, and developing technological platforms. Its services extend to Peru, Argentina and Paraguay, among other countries of South America.

Within the framework of its cycle of continuous improvement, in 2010 the LATU Verde Programme was created with the aim of reducing, reusing and recycling the waste generated in the institution. This programme looks at the management of solid waste from the laboratory and from the businesses located in the LATU Technology Park and that of the Fray Bentos Unit on the Uruguayan coast.

SOME EXAMPLES OF ACTIONS TO MITIGATE THE ENVIRONMENTAL IMPACT OF LATU ACTIVITY



To implement this, an agreement was drawn up with the Juan Cacharpa Sorters' Cooperative, within the framework of the cooperation agreement for the development of inclusive economic policies signed with the ART-PNUD programme in 2007. The cooperative operates in the area around the laboratory and does the weekly collection of solid recyclable waste, which is then resorted. As this waste has been previously sorted at the LATU facilities, a high percentage of it is marketable material in interme-

diate collection centres or can be recycled at industrial level. Through this programme, LATU participates in drawing up social inclusion policies, proposing a model of working in partnership that helps resolve problems in critical areas of the community.

MOTIVATION AND LEADERSHIP

Economic sustainability, socially responsible management and adapting to change are guiding values in the activity of LATU. Aware of the impact of human activity on the environment, LATU optimises its work dynamic to minimise the consumption of energy and water and the use of solvents and reagents, and manages different types of waste. This strategy is embedded in social responsibility with a focus on colleagues, clients, suppliers and society in general, and its progress and results are reflected in sustainability reports available to the public.

The General Management of LATU has been committed to this programme from the outset, with a guarantee which was formalised by assigning the necessary resources to be able to offer support and present the initiative to the whole managerial team of the organisation. Since then, the reach of the waste management programme has also been extended to hazardous and electronic waste. LATU also participates in various programmes to promote and develop circular economy at national level. The relevance to the plastics industry, that involves technicians and stakeholders of the organisation, is a highlight.

OBJECTIVES

To create an efficient system to manage solid waste, in accordance with the national norms in force, and an example to be replicated in other institutions, to achieve continuous improvement in the quality of the environment and of social and economic matters both in the immediate location and throughout the country.

This involves taking on a series of specific objectives as a basis and to ensure the continuity of the programme in line with the SDGs. Among these we can highlight:

- Continuously investigating regional and international trends in waste management for the purpose of anticipating or aligning with the needs of the organisation or the state of the art in waste processing and actions to mitigate environmental impact, in accordance with SDG 13.



- Developing a pilot experience to manage cellulosic waste and recyclable packaging to then extend it to the different types of waste generated by the organisation, thus achieving integrated and responsible management, also in line with SDG 13.
- Supporting initiatives of social inclusion through an associative working model, helping suppliers in situations of vulnerability to develop, an objective related to SDGs 8 and 10.

Similarly, LATU participates actively in achieving the objectives of the sorters' cooperative. For example, dignifying the sorting and recycling work as a task whose contribution is essential to the whole community; achieving an improvement in quality of life for the employees involved and their families; and finally, eradicating child labour in their area of operation, actions linked to the SDGs ODS 1, 8 and 10.

KEY STEPS

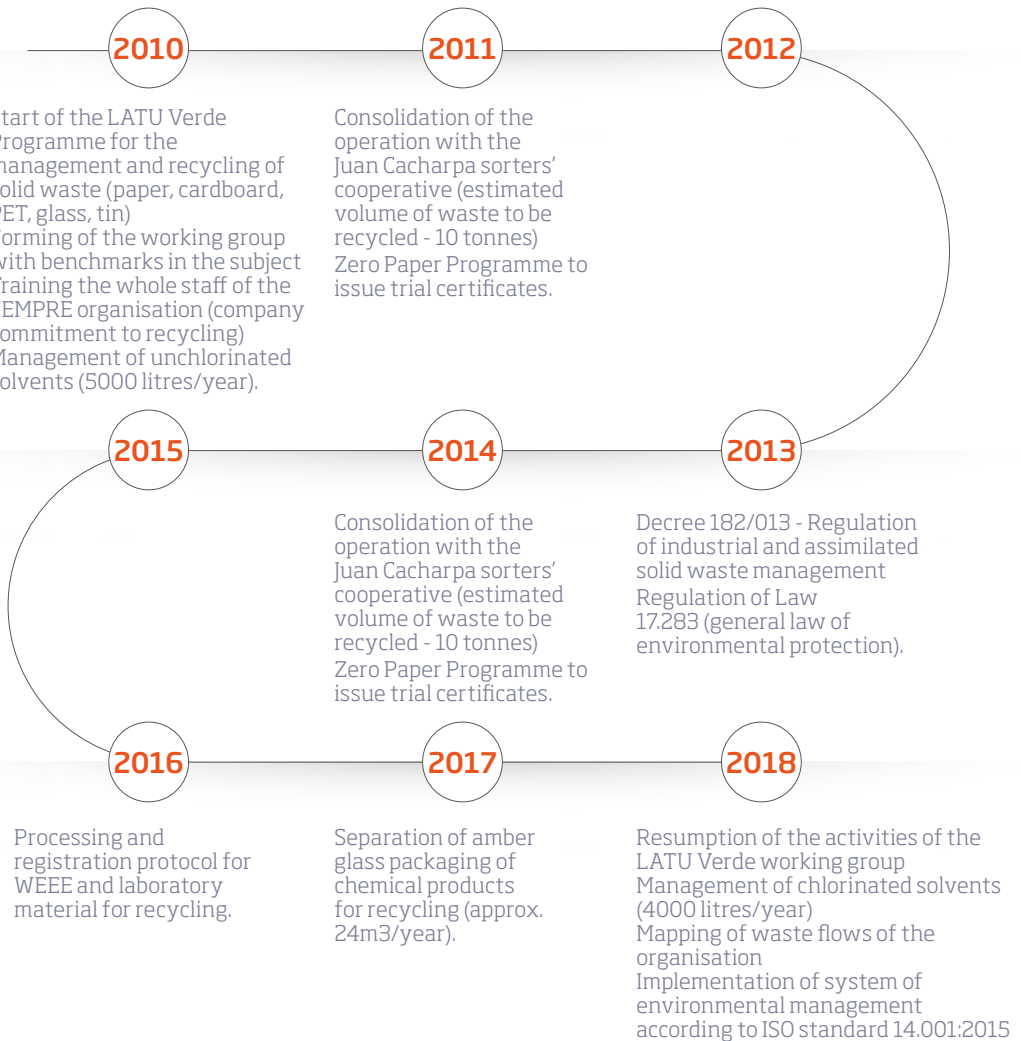
From its beginnings, LATU has incorporated management methodologies and transferred them to stakeholders. Although the term circular economy was not used at national level in 2009, the LATU Verde Programme originated from this rationale. Before implementing the programme, a mapping exercise was done to identify areas and processes in the organisation where improvements could be made to strengthen performance, from the economic, social and environmental points of view. Work was then done to establish the relevant stakeholders when joint initiatives were being created or in order to work on cultural barriers. The following were established as relevant groups: the staff of the organisation, contracted services that interact directly with the cooperative - such as the cleaning and security companies -, the cooperative and associates, other companies that rent offices in the LATU Technology Park, and the local government, as the body that establishes the regulatory standards. One relevant member was the Compromiso Empresarial Para el Reciclaje (CEMPRE) (Business commitment to recycling), an organisation of businesses committed to recycling that offered training and passed on basic knowledge of the subject.

The commitment of the management team was formalised through clear adherence to the programme and by assigning resources to manage and support it. This led to the forming of a multidisciplinary work team with specialists in local development, safety and security at work, communication, maintenance, standardisation and logistics. As for infrastructure, 120- and 240-litre plastic containers were acquired with different colours for different types of waste at each facility. In office areas, cardboard bins for recyclable paper were installed. In order to raise the awareness of the staff of the organisation a series of training sessions were organised by CEMPRE to reach all the staff of the organisation. Through various communication and aware-raising campaigns, the mission, reach and expected results of this programme have been disseminated.

The goals that were set for the programme were to have a single processing system for solid waste from LATU and to make an inventory of the waste from the whole organisation, a clear association of mutual benefit with the sorters' cooperative, the secure destruction of documents with sensitive information from the organisation and decreasing waste and emissions production. To reinforce measurement, work is being done to formalise some quantitative indicators to measure management performance and reinforce the measurement of internal and external impact. The programme's objectives are currently being revised to strengthen the contractual link with the cooperative as a service provider; making the operation more technical and scaling up the volume of work it handles. The new objectives seek to include other companies in the LATU Technology Park in the management of recoverable waste and the use of information technologies for better data handling.

LATU disseminates the results of the programme in the twice-yearly CSR reports. It also takes part in initiatives to promote circular economy at national level. One example is acting as the headquarters of the 2017 Foro de Economía Circular (Forum for the Circular Economy); and from the Centro Tecnológico del Plástico (CTPlas) (Technological Plastic Centre) dissemination and training activities have been created for the industries in the sector.

EVOLUTION OF ENVIRONMENTAL MANAGEMENT ACTIONS IN LATU TRIGGERED BY THE LATU VERDE PROGRAMME





COMPANY INPUTS AND BENEFITS

To design and improve the programme, a working group was formed with benchmarks in the field of the environment and with delegates from the various areas of the organisation. By virtue of a proactive approach, LATU anticipated the environmental management of the organisation when the national environmental regulations came into force as the law on industrial waste. Implementing the LATU Verde Programme achieved successful separation of solid waste that could be recycled such as paper, cardboard, PET and tin with approximately 800 kg per month. As this is removed by the recycling cooperative with their transport unit, no transport costs are incurred by taking business waste to the points made available by municipal vehicles.



This initiative gave rise to systematic environmental management that spread to other types of waste generated by the organisation. Within the organisational objectives of LATU for 2018 are the certification of environmental management, according to ISO standards ISO 14.001:2015, and the alignment of internal practices with the environmental objectives adopted by organisations of the State. There have also been extensive benefits to the sorters' cooperative. This associative undertaking has had support from the Ministry of Social Development to become a social cooperative, which enables it to formalise its activity. Once the activities with LATU and the Chamber of Industries of Uruguay began, both supported the management of the cooperative in improving the working conditions of their employees.

SOCIAL, ENVIRONMENTAL AND/OR GOVERNANCE BENEFITS

Developing a methodology to ensure the frequency and minimum amount of the supply of recoverable waste has facilitated the planning and fulfilment of agreed commitments, and reinforced lasting links of mutual benefit between the cooperative and LATU. Training members of the cooperative in areas of management such as working with customers, administration and logistics has formalised their work and given it specialist significance and dignity.

CO2 emissions have decreased because of the rationalisation of vehicle use, the optimisation of routes between user locations, the frequency of collection of solid recoverable waste and the extension of the lifecycle of these materials, among other factors. The volume of solid waste going to the municipal landfill site has decreased by approximately ten tonnes per year. This last factor has a positive impact on reducing soil pollution.

Developing procedures, as well as communication and awareness-raising campaigns concerning good environmental practice, has enabled actions to be performed in synergy across all areas of the organisation and integrated with other organisations operating in the area which are committed to environmental management



**CYCLE OF CONTINUOUS IMPROVEMENT ASSOCIATED WITH OPERATING
THE LATU VERDE PROGRAMME**



CASE STUDY 6: – *Neptuno Pumps*



Circular Economy and Industry 4.0 to fulfil SDGs 9, 12 and 13
Neptuno Pumps developed the first circular economy model in the pump industry at the global level, reusing and recycling material from its old equipment and scrap, providing innovative, efficient and sustainable solutions by reusing, recycling and re-manufacturing.



YEAR, COUNTRY (CITY)
2018, Chile (Iquique)



COMPANY WEBSITE:
www.neptunopumps.com



COMPANY NAME:
Neptuno Pumps



WEBSITE WHERE MORE INFORMATION ON THE GOOD PRACTICE CAN BE FOUND:
www.neptunopumps.com/economiacircular
<http://solutions.sustainia.me/solutions/water-saving-pumps-made-from-recycled-materials/>
www.petarostojic.cl



ECONOMIC ACTIVITY:
Engineering and Manufacturing



COUNTRIES OF OPERATION:
Chile



NUMBER OF EMPLOYEES:
150




CONTACT PERSON DATA:
Petar Ostojic
ostojic@neptunopumps.com

CONTEXT

Located in the most arid place on the planet - the Atacama Desert in Chile - Neptuno Pumps understands the importance of the efficient use of resources. Established in 1972, it was the first manufacturer of pumps in the world to develop highly reliable, energy efficient equipment, 100% customized to client requirements by the use of industry 4.0 technology such as computer simulations, 3D printing and advanced manufacturing. However, the company was convinced that this was not enough to fight climate change and the over-exploitation of natural resources. This is why it developed the first circular economy model in the pump industry at the global level, reusing and recycling material from its old equipment and scrap, providing innovative, efficient and sustainable solutions by reusing, recycling and re-manufacturing. Neptuno Pumps is the only manufacturer of pumps in the world that has won the "Innovation of the Year" prize three times and also won the "Manufacturer of the Year" at the prestigious Pump Industry Awards in Oxford, England. In addition, as a pioneer of the circular economy, Neptuno Pumps is the first company in Latin America to be recognised as a Runner Up at the awards known as The Circulars at the World Economic Forum, held in Davos. It is currently considered one of the 300 most sustainable solutions in the world in the Global Opportunity Explorer by Sustainia of the UN SDGs, fulfilling SDG 9, 12 and 13.

MOTIVATION AND LEADERSHIP

Neptuno Pumps is a Company with circular economy in its DNA, as ever since it was established it has continuously developed a circular model for design and manufacture based on recycling, re-manufacturing and reusing its products. However, until a few years ago this business model was not valued or considered innovative as there was no real awareness of the economic, social and environmental problems the prevailing linear economy model was generating on our planet. All this changed in 2014 when the Company CEO, Petar Ostojic, took the decision to extend the circular model at Neptuno Pumps and began to highlight and promote the circular economy in Chile and Latin America, sharing success stories from Neptuno Pumps in international journals, creating original content on social networks and giving talks to businesses, universities and events all over the world. Neptuno Pumps and its CEO are now considered the main promoters of the circular economy in Latin America by the World Economic Forum, collaborating with various public and private organisations, such as UNEP, UNIDO, UNFCCC, CTCN and various Ministries in Latin America, to develop policies and business models promoting the circular economy in several countries.

A worker wearing a white protective suit and a helmet with a red visor is working on a large, circular industrial component. The scene is dimly lit, with a bright light source illuminating the worker and the component, creating a strong contrast and highlighting the textures of the equipment. The worker is focused on the task, and the overall atmosphere is industrial and technical.

Neptuno Pumps has understood the importance of re-manufacture, and offers re-manufactured products that are up to 25% more energy efficient, 30% cheaper and with the same guarantee as new equipment.

OBJECTIVE(S)

To develop a new circular business model, incorporating industry 4.0 technologies, typical of the fourth industrial revolution, and to contribute at the same time to the development of the SDGs, in particular Goals 9, 12 and 13. This is achieved with an innovative and sustainable circular model with its clients and strategic partners, designing pumps that are up to 30% more efficient and up to 1000% more reliable, producing 60% of their products with material reused and recycled from scrap equipment, reducing their carbon footprint by 70%, and reducing waste by up to 75%. In addition, by being a company with all its engineering and manufacturing processes vertically integrated, Neptuno Pumps has understood the importance of re-manufacture, and offers re-manufactured products that are up to 25% more energy efficient, 30% cheaper and with the same guarantee as new equipment. By creating new partnerships with its clients, the company intends to make 90% of its products from recycled and reused materials in the next five years. This practice is linked to SDG 9 through the development of innovative products and processes, creating an efficient and sustainable infrastructure, to SDG 12 by promoting responsible production and consumption through a circular business model and finally to SDG 13 by reducing greenhouse gas emissions and being an alternative to fight climate change.

KEY STEPS

Neptuno Pumps has been developing a circular economy model for 46 years, based on the design and manufacture of pumping equipment that is highly energy efficient and on the recycling, re-manufacturing and reusing of resources, materials and products. However, since 2014 the company has begun a total transformation of its processes in order to become a leading light in circular economy at global level:

- The first step was to incorporate and develop design and manufacturing technology 4.0, transforming the company into a model based on innovation and circular economy, helping it to use its resources in an efficient and competitive manner, using Computational Fluid Dynamics (CFD) software, Finite Element Analysis (FEA), metal smelting simulation, and 3D printing to design and make its highly energy efficient industrial pumps. This made it possible to produce equipment that optimises the use of materials and energy, reducing manufacturing costs as well as greenhouse gas emissions.

- Data collection and generation in the industries where the company operated was another important step in measuring the economic, social and environmental impact the circular model could have. A specific study was therefore undertaken by the company to determine what happened at the end of the life cycle of its pumps, as well as those of other manufacturers, and it was found that industries in Chile and countries where Neptuno Pumps operates generate up to 400 tonnes of metallic waste per month, much of it valuable material from scrapped pumps. This data confirmed the potential for developing the first circular economy model for industry in Latin America.
- The next step was to quantify the benefits to the Company for the purpose of convincing its directors, professionals and employees to take this route, by demonstrating that this model would mean a decrease in energy consumption and carbon emissions of up to 70%, as well as a reduction in waste of up to 75%. This made it possible for 60% of Neptuno Pumps products to now be manufactured from recycled materials, reusing material from worn-out pumping equipment to make new, highly efficient products, and standing out as a success story in the circular economy of the industry.
- These results enabled the Company to continue backing the circular economy, committing to reaching levels of 90% recovery and recycling in the next five years. Furthermore, Neptuno Pumps is aiming for the digitalisation of its products and services, in order to make the most of the benefits of the circular economy, developing projects related to the Internet of Things and Blockchain, to give its clients control and traceability of all its processes and products, ensuring optimal use of resources and an intelligent preventive administration of maintenance and repairs.
- Finally, communicating efforts made and stories of success, principally through social networks, has been key to ensuring that the company and its CEO rapidly become leaders in circular economy in Latin America, which has not only had a great impact on the company's financial and environmental results, but has also been an inspiration to help other entrepreneurs in the region follow the circular economy route.





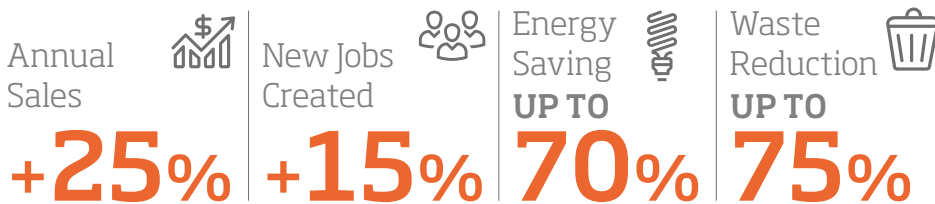
COMPANY INPUTS AND BENEFITS

Pumps represent a market of Euro 40 billion per year and consume 10% of the energy generated annually on the planet, transporting 80% of the water we use every day. However, 80% of pumps operate with energy efficiency below 50%, as they generate significant quantities of CO₂ in their operation, as well as of waste once their useful life is over. These effects can be reduced by using industry 4.0 technologies and circular economy, a strategy that has placed Neptuno Pumps in the position of world leader.

Results are better explained through success stories, and three of these have been recognised as “Innovation of the Year” with another reaching finalist in “Environmental Contribution of the Year” at the most important awards in the pumping industry worldwide, Pump Industry Awards in the United Kingdom.

The first article for World Pumps Magazine (5/2012) presented an increase of 31% in pumping capacity with energy saving of 34%, saving Euro 1.5 million per year in energy; the second (10/2014) showed how re-manufacturing produced a saving of Euro 560,000 per year and a 600% increase in the availability of pumps; the third article (8/2015) demonstrated how the circular model allowed for an annual energy saving of Euro 500,000, reducing annual carbon emissions by 3,798 tonnes; the fourth (December 2015) showed how an innovative design and the re-manufacturing of equipment enabled an annual saving of approximately Euro 4.3 million in maintenance and repairs. Finally, the fifth article (1/2016) shows how the circular economy has enabled a client to save Euro 120,000 in the re-manufacturing of four pumps, with a 60% reduction in energy consumption, 75% in waste and 70% in carbon emissions by choosing to re-manufacture rather than to buy new equipment.

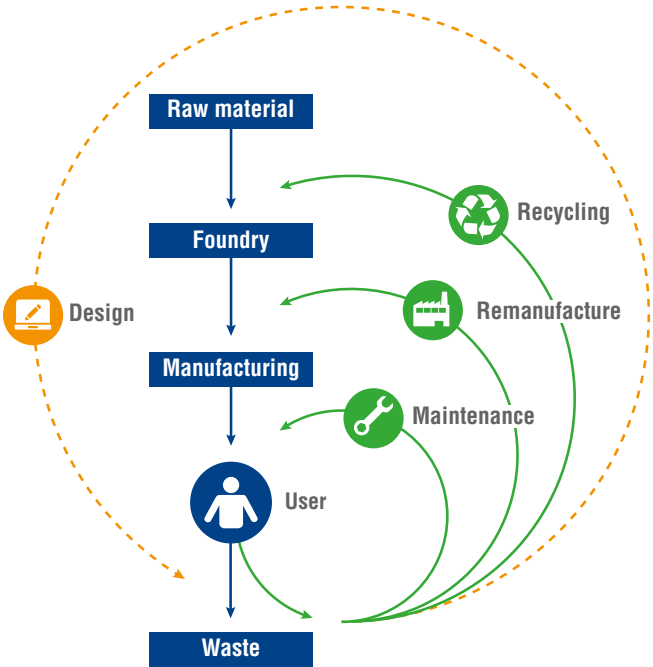
These case studies of success have enabled the company to position itself as a leader in innovation and in circular economy in Latin America, achieving the following annual results for the period 2016-2018:



SOCIAL, ENVIRONMENTAL AND/OR GOVERNANCE BENEFITS

The circular economy, as part of the SDGs, aims for the triple effect of creating new businesses, generating high-quality new jobs and fighting climate change. These have been the benefits generated by Neptuno Pumps at national and international level since adopting a circular model.

The circular model and the achievement of SDGs 9, 12 and 13 by Neptuno Pumps have made it possible to recycle hundreds of thousands of cubic metres/hour of water which previously was wasted in various industries of Latin America, reducing annual carbon emissions in their manufacturing processes and the processes of their clients by thousands of tonnes, reusing and recovering thousands of tonnes of valuable pump material which previously had been thrown away and wasted.



This new business model has enabled high-quality new jobs to be created in a region of Chile which had been one of the three worst areas of the country for unemployment over recent years. Extending this model will mean increasing job creation for qualified workers in Chile and in countries such as Peru and Mexico, where Neptuno Pumps now has a presence.



More info: <https://www.youtube.com/watch?v=sv5BopIFY9Y&t=22s>

CASE STUDY 6:

– Pulpo S.A.



Pulp: triple impact on waste

Pulpo carries out various industrial processes, from the provision of recycling services to the value generation of waste and its subsequent reinsertion into the productive circuit, creating new products that are also introduced into the market.



YEAR, COUNTRY (CITY)

2018, Argentina, (Tierra del Fuego)



COMPANY NAME:

Pulpo S.A.



ECONOMIC ACTIVITY:

Industrial



COUNTRIES OF OPERATION:

Argentina



NUMBER OF EMPLOYEES:

100



COMPANY WEBSITE:

www.pulpak.com.ar

www.ecopulpo.com.ar



WEBSITE WHERE MORE INFORMATION ON GOOD PRACTICE CAN BE FOUND:

www.pulpak.com.ar

www.ecopulpo.com.ar



CONTACT PERSON DATA:

Marcos Ros Rooney

Development Manager

marcos.rosrooney@pulpak.com.ar

CONTEXT

Based on a geopolitical goal, in the decade of the 1970s Argentina set about creating a technological industry hub in the southernmost area of the world, the province of Tierra del Fuego.

This measure has led to the province experiencing a process of development that has turned it into the Argentinian technology mecca, with almost all of the electronic companies now located there.

This development and the consequent demographic explosion had a direct impact on the social and environmental fabric of the province.

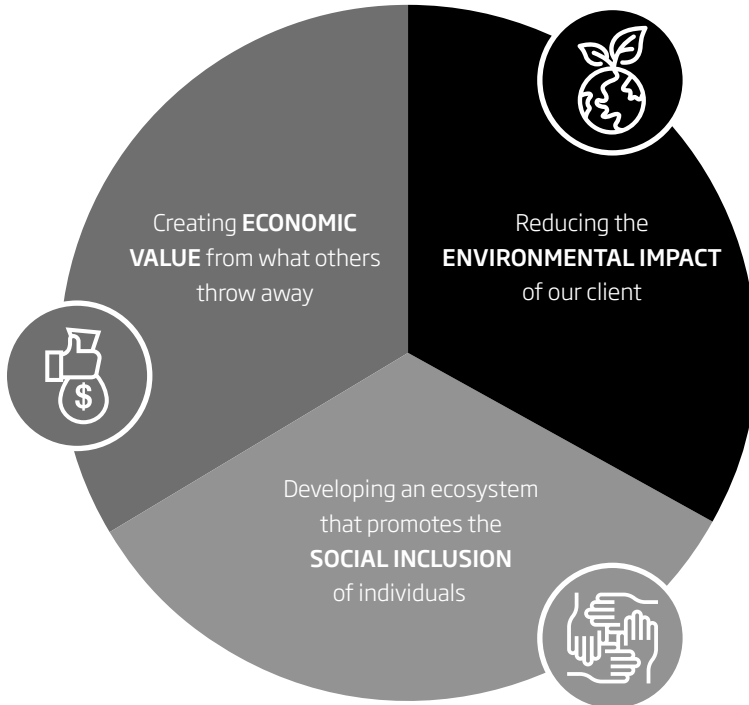
One specific example was seen in the major city of Ushuaia, which reached its maximum capacity for waste handling in 2012, when the landfill site reached a saturation point.

At the same time, various people excluded from the formal labour market began to create work for themselves by sorting and selling goods from the waste, on an informal basis and in climatic conditions (local temperatures range from -4 to 12 C°) that were highly prejudicial to their health.

This is the context in which Pulpo emerged, a company dedicated to providing an integrated solution to the issues of consumables in their post-consumption period, designed from a triple impact perspective.

This is a large-scale project which began with an initial investment of Euro 1.8 million and has the capacity to perform various industrial processes, from the provision of recycling services to the value generation of waste and its subsequent reinsertion into the productive circuit, creating new products that are also accepted onto the market.

Our impact model



“Being a viable and ecological alternative for the industrial segment by generating economic value from materials that are traditionally thrown away. The aim is to reinsert them into the productive chain of client industries.”

PULPO has two business units that make a real impact:



ECOPULPO seeks to generate positive impacts on the reduction of scrap originating in the industrial processes of its clients and which would otherwise end up in landfill or be incinerated. The company currently processes paper and cardboard and plastic (PEBD, PEAD, PS, PSAI, PP, ABS, PET), among other materials.

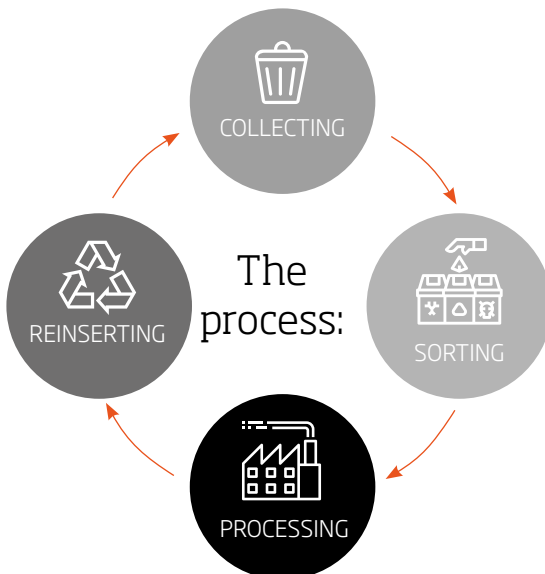
Ecopulpo has achieved a 95% reinsertion into the productive circuit for consumables discarded by its principal clients. Over 300,000 m³ of material goes through its plant to be recycled. In this way many products made locally (for example pipes, hangers, chairs) are made out of this recovered material, thereby avoiding the use of virgin raw materials derived from oil.

Value:

“Being a viable and ecological alternative for the industrial segment by generating economic value from materials that are traditionally thrown away. The aim is to reinsert them into the productive chain of client industries.”

Environmental impact:

By reducing the volume of material that is incinerated or sent to landfill, the environmental footprint and greenhouse gas emissions are reduced.



ECOPULPO BIOCYCLE

- Collecting waste material from clients' factories.
- Separating and sorting the waste by material, quality and colour.
- Reducing and processing the materials.
- Adding value by various processing methods.
- Reinserting.



PULPAK is a unique product. It involves various packaging models with a zero environmental impact and is an excellent alternative that enables the clients' consumers to dispose of the packaging responsibly when they buy a product, without leaving any footprint on their environment. PULPAK is made from a base of cardboard pulp, recycled paper and water, moulded by sprinkling. It is an excellent replacement for EPS (expanded polystyrene) with certain conditions allowing its rapid biodegradation and having properties of absorption and protection that are even better than those of other commonly used materials. Whereas EPS (expanded polystyrene) packaging takes 100 years to biodegrade, PULPAK takes only 8 - 12 months.

PULPAK is produced locally, using a design adaptable to the needs of the client. It is widely used by many industries including electronics, wine, pharmaceuticals, agriculture, textiles and food.

Since it came into operation, it has produced solutions to replace the use of EPS (expanded polystyrene) equating to the volume of more than 100 Olympic swimming pools. It is the greatest ally of businesses that understand success to be the generation of positive impacts in the environmental and social spheres as well as the economic.

Value:

"Its major focus is on maximising opportunities for its clients to opt for sustainable solutions from selecting consumables to their final disposal, thus preventing the value chain from leaving a footprint on the environment."

Environmental impact:

The very nature of this product is environmental. It is produced from biodegradable materials and is a sustainable option made from recycled materials.

Economic impact:

This is a product made from a raw material (paper and cardboard) that does not depend on fluctuations in the price of oil. The moulding itself is done with 3D moulds, making it possible to reduce costs and produce small quantities. This in turn improves efficiency in logistics; as they are stackable hollow parts, the space required in storage and transport is considerably reduced.



PULPAK BIOCYCLE



BIODEGRADABLE

- The end user who buys a product packaged in PULPAK can throw it away without causing damage to the environment. The natural fibres in the cardboard and paper degrade in the atmosphere and return to nature.

RECYCLABLE

- The end user who buys a product packaged in PULPAK can dispose of this at a recycling centre, so it can be made into a new raw material for PULPAK products and other recycled cardboard products.



The annual volume of EPS (expanded polystyrene) waste replaced by biodegradable material is equivalent to 500 waste collection lorries.



Reducing the space it takes up enables useful space on site to be maximised. It's like having a bigger factory, without having to invest in one!



As they fit inside each other they occupy half the space of other packaging products. If you had to transport all that packaging separately, logistics costs would be three times as high!



By choosing this product, you are favouring a model that includes people in the formal economy circuit. Break the poverty cycle!

The value chain

Within the value chain we can identify:

- Companies, who are offered recycled products to use as raw materials, thereby providing a responsible way of getting rid of their own industrial waste.
- Governments, providing a practical solution to the problem of waste and offering a source of quality employment for people who find themselves outside the formal labour market.
- Former urban waste collectors, offering the opportunity to dignify the work of rubbish collectors and also decrease the existing amount of waste.
- Consumers of products that use ecological packaging, who have the advantage of being offered packaging that is 100% recyclable and biodegradable.



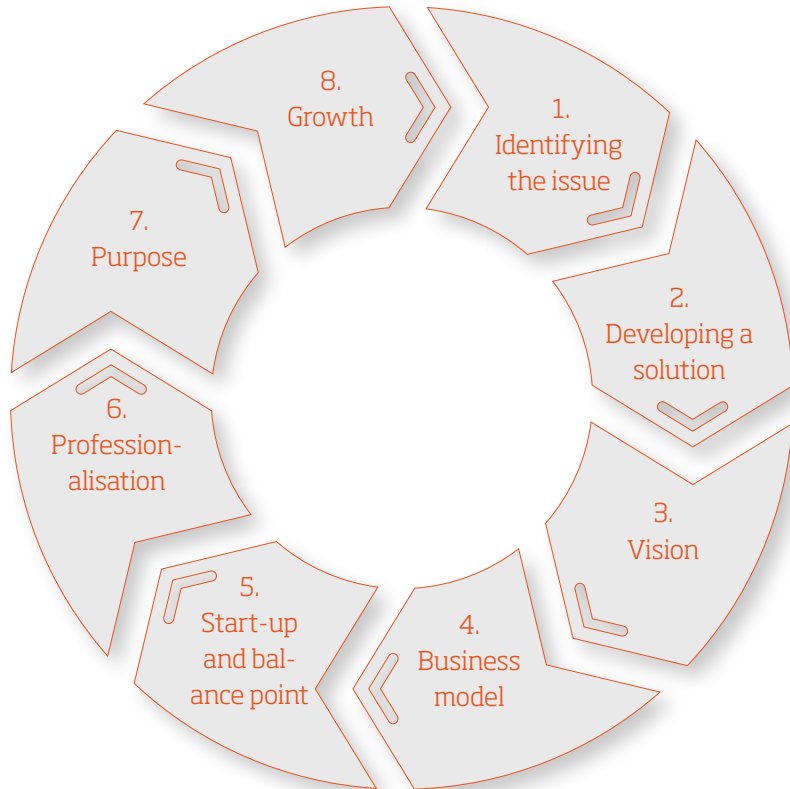
"Its major focus is on maximising opportunities for its clients to opt for sustainable solutions from selecting consumables to their final disposal, thus preventing the value chain from leaving a footprint on the environment."

OBJECTIVES

- To develop a viable productive activity, with a high level of positive environmental impact, offering balanced development to the community.
- To increase gender equality in management roles by 15%.
- To increase the number of people with a disability in the structure by 5%.
- To be the first Latin American company with certified bio-compostable products.

Strategic intervention approach	Principal contribution to the SDGs
 <p>Social inclusion: we provide training and employment opportunities for people who previously worked in collecting urban waste.</p>	<p>Goal 8: To promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.</p>
 <p>Environment: we work on creating products that from their very design offer triple impact generation by responsible waste management.</p>	<p>Goal 12: To ensure sustainable consumption and production patterns.</p>
 <p>Local development: we promote the development of a sustainable ecosystem by offering solutions allowing the environmental impact of post-consumer waste to be reduced.</p>	<p>Goal 11: To make cities and human settlements inclusive, safe, resilient and sustainable.</p>
 <p>Partnerships: we share in the dialogue and create partnerships with stakeholders in civil society, academia and government with a view to deepening the impact of our management model and having a shared vision.</p>	<p>Goal 17: To build partnerships based on principles and values that prioritise people and the planet.</p>

KEY STEPS



Phase 1: Identifying the issue

Identifying an issue with negative social and environmental impact (saturation of Ushuaia landfill site). Then identifying the principal components of this issue (generation of high environmental liability for the city and an informal and low-value economy developed by people in a context of high vulnerability).

Phase 2: Developing a solution

Developing a solution by focussing efforts on the process of transforming waste with low nominal value into a new product of high added value. To this end various cases in the world were visited and studied (Germany, Japan, China and Spain), and a project matrix developed.

Phase 3: Developing the vision

Developing a clear vision for the project, which seeks to generate economic impacts that ensure the financial stability of the solution, yet does not neglect to create positive value for the environment. It also represents a change in the social circuit.

Phase 4: Business model and financing

Appraising the project and developing a private finance model. With its own capital and with contributions from the first client, the initial capital was obtained for the start-up of the project (Euro 1.8 million). Then instruments from a private bank were used to underpin a growth model.

Phase 5: Start-up and balance point

Six months after start-up the first production batch began. Later a balance point was established of 10% per month, thereby reaching 100% use of the installed capacity within twelve months.

Phase 6: Professionalisation of the management

With a view to the continuing increase of the proposal value, a battery of actions was implemented that enabled the company's capacity to increase towards the planned growth.

Phase 7: A brand with purpose

As for the products, a brand was developed with a clear purpose (triple impact) that was easy to communicate and of high value for its clients.

Phase 8: Growth

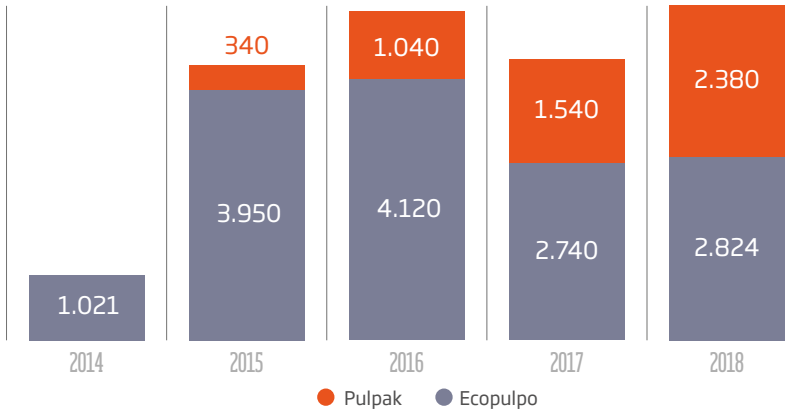
By way of a commercial process, and by supporting this process with the development of new capacity (new businesses and new channels), they became strategic partners of their clients in managing their waste (increasing the value of products they previously threw away and offering a solution with high positive impact for the environment).

COMPANY INPUTS AND BENEFITS

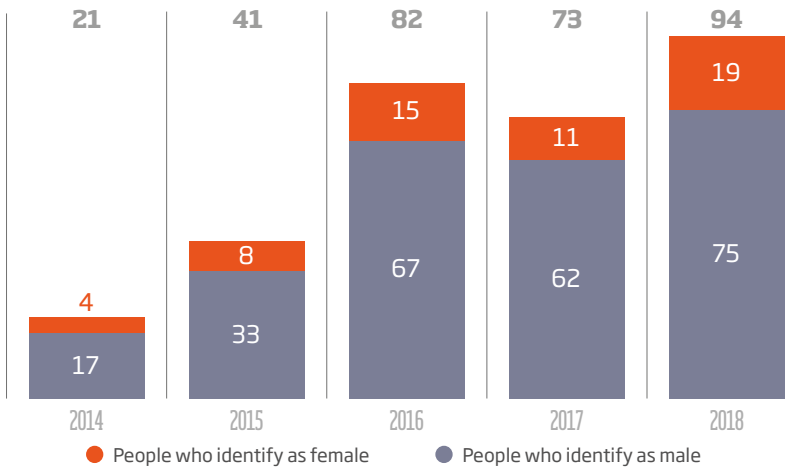
For any project to generate impacts, it must be financially sustainable in the long term. Below the principal results for the business are presented:



Turnover:



Employment generation:



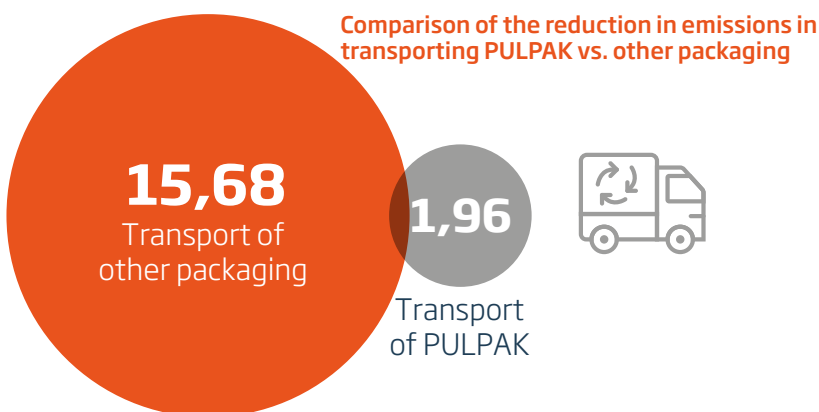
SOCIAL, ENVIRONMENTAL AND/OR GOVERNANCE BENEFITS

Social:

- Pulpa is a source of employment, especially for sectors of high social vulnerability, such as people who live off waste. At the present time over forty people have given up this activity to join the formal economy with secure, regulated employment.
- Workers begin to use technology and become skilled at it for the management of waste, although they were historically excluded from its use.
- The development of the project promotes the regional economy. The company currently has over 84 suppliers in sectors such as logistics, consultancy, cleaning, security, among others; this makes it possible to generate a virtuous circle for the economy through its operations.
- It represents a solution to a social issue that exists around waste, and helps raise awareness in the population regarding the 3R processes.

Environmental:

- Thanks to the development of this innovative model, the landfill site of the city of Ushuaia has been decompressed, with its use reduced by 38.7%.
- Pulpak represents a healthy option for the environment, since the biodegrading process takes no longer than eight months. It is an excellent replacement for EPS (expanded polystyrene), a material that takes over one hundred years to biodegrade.
- It now offers its clients materials with a recovery level of 98%, which means that their production processes leave hardly any footprint on the environment.
- The way this material can be stacked and nested has benefits for logistical efficiency, producing a significant reduction in costs and in the carbon footprint:





Implementation Guide for the Sustainable Development Goals

“Business is a vital partner in achieving the SDG. Companies can contribute through their core activities, and we ask companies everywhere to assess their impact, set ambitious goals and communicate transparently about the results.”

—

WHAT ARE THE SDGS

– and their Benefits?

The SDGs, also referred to as the 2030 Agenda, were agreed upon by all 193 UN Member States. The goals continue the efforts on from the Millennium Development Goals with regards to poverty elimination and achieving sustainable development. The SDGs process at the UN involved the participation of multiple actors including businesses via the UN Global Compact (and its 1500 plus members) who played an active role in the process. Though the SDGs are designed for governments to implement at the national level, it has stated that the private sector’s role is crucial to their eventual success. Secretary-General of the UN Ban Ki Moon remarked that “Business is a vital partner in achieving the SDG. Companies can contribute through their core activities, and we ask companies everywhere to assess their impact, set ambitious goals and communicate transparently about the results.” It should be remembered that the SDGs are applicable to businesses of all sizes and from all sectors.

SUSTAINABLE DEVELOPMENT GOALS



-
- Goal 1** End poverty in all its forms everywhere
-
- Goal 2** End hunger achieve food security and improved nutrition and promote sustainable agriculture
-
- Goal 3** Ensure healthy lives and promote well-being for all at all ages
-
- Goal 4** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
-
- Goal 5** Achieve gender equality and empower all women and girls
-
- Goal 6** Ensure availability and sustainable management of water and sanitation for all
-
- Goal 7** Ensure access to affordable, reliable, sustainable and modern energy for all
-
- Goal 8** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
-
- Goal 9** Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
-
- Goal 10** Reduce inequality within and among countries
-
- Goal 11** Make cities and human settlements inclusive, safe, resilient and sustainable
-
- Goal 12** Ensure sustainable consumption and production patterns
-
- Goal 13** Take urgent action to combat climate change and its impacts
-
- Goal 14** Conserve and sustainably use the oceans, seas and marine resources for sustainable development
-
- Goal 15** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
-
- Goal 16** Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
-
- Goal 17** To build partnerships based on principles and values that prioritise people and the planet
-

The SDGs encourage businesses to minimize their negative impact whilst⁵ maximizing their positive impact to sustainable development. Companies can use the SDGs as an overarching framework for their existing corporate sustainability or responsibility strategies.

The SDGs also enable companies to communicate their efforts on sustainability and responsibility in a consistent manner with their stakeholders. This is due to the fact the SDGs provide a consensus on the priorities across all dimensions of sustainable development, the SDGs may also aid in establishing more effective partnerships with governments, civil society organisations and other companies.

According to a survey conducted by PwC in 2015, 71% of businesses stated they were already planning to address the SDGs and 41% aimed to embed them into their core business strategy. The survey also found that society expects business to tackle the SDGs as 90% of citizen respondents affirmed.



5. See the UN Guiding Principles on Business and Human Rights for minimizing business impacts to human rights.

IMPLEMENTING

– *the SDGs*

Companies are expected to address all 17 SDGs in a holistic and integral manner, however, they can identify which goals are most material or relevant to their value chains. The following guidelines on implementing the SDGs are loosely based on the guidance offered by the SDG Compass in combination with the authors' own knowledge and experience. It is worth mentioning that the SDG Compass consists of key actors on the subject of corporate sustainability and responsibility including Global Reporting Initiative (GRI), the UN Global Compact and the WBCSD, who together developed their guidance on adopting the SDGs from three consultations with companies, government representatives, academics and civil society organisations worldwide. The following guidance is broken down into seven key steps, which do not need to be adhered to in chronological order:



1. Senior Leadership Buy-In

Without senior leadership's vision and enthusiasm, little progress can be made in the long term by a company in adopting the SDGs as part of the corporate strategy. Senior leadership must be on board with addressing the SDGs from an organisational and value chain perspective.



2. Defining Priorities

According to the SDG Compass it is imperative that companies conduct an assessment on the current, potential positive and negative impact that their business activities have on the SDGs throughout the value chain. The greatest impact a business may have on the SDGs is most likely to be beyond the business itself and within the value chain (both up and downstream). This entails assessing the supply chain, inbound logistics, across production and operations, to the distribution, use and end-of-life of products.

The SDG Compass recommends companies start their impact assessment by doing a high-level mapping of their value chain to identify areas with high likelihood of

either negative or positive impacts on the issues that the SDGs represent. It is important to note that at this stage companies are not required to conduct a detailed assessment of each SDG at each stage of the value chain. Here organisations should consider it more of a high level scan to determine where impacts (positive and negative in relation to the SDGs) are expected to be greatest.



3. Companies are also recommended to take into consideration the importance of the local context of their own operations, as well as that of their suppliers.

For example, if operations occur in labour intensive areas with low wage workers or in localities with needs that the company can contribute towards (such as medical or food producers) then this is an indication of potential high impact area. Companies should always seek to obtain the input from external stakeholders such as local communities, relevant expert civil society organisations and government officials at this stage to help ascertain the priority areas for tackling the SDGs.

Once organisations have identified potential high impact areas on sustainable development from their business and value chain, it is important to track performance. SDG Compass offers an inventory of business indicators mapped against all 17 of the SDGs, and is a highly recommendable source for identifying which indicators to select (<https://sdgcompass.org/business-indicators/>).

Ideally companies should use existing business systems and processes for collecting the necessary data to measure their indicators. If such processes and systems do not exist, companies can also implement reporting systems for their operations or suppliers' operations, conduct site visits, questionnaires, focus groups, interviews, among others. For each data collection action, companies should identify the risks of misreporting and establish controls to ensure data quality and integrity. Internal and external verification can assist with enhancing data reliability.

It is also important to select several Key Performance Indicators (KPIs) for each indicator that can help with the monitoring of each indicator, providing specific, measurable and time-bound targets.



4. Further Priority Definition

Once impact areas and indicators for key SDGs have been identified, companies should consult with external (expert) stakeholders to discuss the magnitude, severity, and likelihood of current and potential negative impacts. Opportunities to strengthen competitiveness or gain advantage from its current or potential positive impacts across the SDGs should be assessed.



5. Embedding the SDGs within the Business

Once again senior leadership's visible steering is crucial for this stage of anchoring the SDGs into the business. It is important to convey a shared understanding across the business of how the SDGs will contribute towards enhancing value. Companies are also well advised to integrate sustainability goals into performance reviews and remuneration schemes across the organisation, with additional incentives for workers in making progress towards the SDGs.

The SDGs priority areas for each company will bear a different relevance for each business unit/department. It is highly recommended for companies not to centralise their SDGs efforts with their sustainability departments. Instead companies should create cross-functional sustainability working groups/committees with representatives from business areas material to the SDGs. This may include human resources, supply chain and operations, among others. In these committees, members from sustainability departments may play a key role in the coordinating, monitoring, follow-up and reporting to ensure the effective functioning. This should ideally lead towards progress in the performance of the priority SDG areas for the business.



6. Engage in Cross-sector Partnerships

This subject deserves much attention especially as SDG 17 addresses it explicitly. Cross sector partnerships are now commonplace in the quest to attain sustainable development. Companies can aim for three different types of partnerships:

1. Value chain partnerships
2. Sector initiatives
3. Multi-stakeholder initiatives - which also include governments as well as civil society actors.



7. Reporting and Communicating

Once the company has determined its key SDG priorities, it should communicate this message via a policy commitment, ideally made by the most senior leader. This will help steer the company to live up to its public commitment. Companies are strongly encouraged to utilise internationally recognised reporting standards such as the GRI or the UNGPs reporting framework. The GRI framework stresses the importance of identifying material sustainability issues, and this should also apply to the SDGs. Companies should develop an SDGs materiality matrix box which can map issues by the level of importance to stakeholder expectations and sustainable development impacts⁶.

For each SDG identified as important companies could report under the following criteria:

- Why the SDG is considered relevant and how the decision was made (for example through stakeholder engagement);
- The significant positive or negative impact the SDG;
- The chosen goals for the relevant SDG and progress made in achieving them;
- The strategies and practices to manage impact related to the SDGs, including the embedding of results within the organisation (for example, a description of policies, controls, systems and processes such as due diligence).

6. See <https://g4.globalreporting.org/how-you-should-report/reporting-principles/principles-for-defining-report-content/materiality/Pages/default.aspx> for further information.

USEFUL

– *Further Resources*

Official UN SDGs website

<https://sustainabledevelopment.un.org/sdgs>

Global Reporting Initiative's Materiality section

<https://g4.globalreporting.org/how-you-should-report/reporting-principles/principles-for-defining-report-content/materiality/Pages/default.aspx>

PWC SDGs section

<https://www.pwc.com/gx/en/services/sustainability/sustainable-development-goals/sdg-research-results.html>

RobecoSAM–3 steps ahead in mapping, measuring, and monitoring the SDGs

<http://www.robecosam.com/images/2018-05-robecosam-3-steps-ahead-on-measuring-sdg-impact-en.pdf>

SDGs Compass

<https://sdgcompass.org>

SDG Hub (one stop shop for SDGs and Business related resources)

<https://sdghub.com>

5.

Case Studies on SDGs

The SDGs encourage businesses to minimize their negative impact whilst maximising their positive impact to sustainable development.

CASE STUDY 1:

– Bagó



Gender Actions to eradicate all types of violence and discrimination at work

Bagó implements a policy for the prevention of domestic violence to tackle gender violence, one of the most brutal manifestations of discrimination and one that affects over one third of women in Chile with a high human, social and economic cost to society.



YEAR, COUNTRY (CITY)

2018, Chile, Santiago



COMPANY NAME:

Laboratorio Bagó de Chile S.A.



ECONOMIC ACTIVITY:

Pharmaceuticals



COUNTRIES OF OPERATION:

NUMBER OF EMPLOYEES:

The Corporación Bagó has a presence in 18 countries of the region and exports medicines and raw materials to five continents. In Latin America, Laboratorio Bagó de Chile not only produces medicines for the national market, but also works for Bolivia,

Paraguay, Ecuador and Peru, as the second largest exporting laboratory of the country.



COMPANY WEBSITE:

www.bago.cl



WEBSITE WHERE MORE INFORMATION ON

GOOD PRACTICE CAN BE FOUND:

<https://www.unglobalcompact.org/participation/report/cop/create-and-submit/active/420720>



CONTACT PERSON DATA:

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Social Assistant
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CONTEXT

The history of Laboratorio Bagó in Chile goes back to 1947. The Company was established as Laboratorio Profarma, dedicated to the production and marketing of Andreu medicinal products, with a parent Company in Barcelona, Spain. In the beginning the staff consisted of 35 people, mainly men who made up 75% of the workforce. In 1978 it was acquired by the Organización Bagó, a Company which at that time ranked 40th among Chilean pharmaceutical companies (as measured in value and units produced by IMS Health) and it manufactured 400,000 units per year. Laboratorio Bagó is currently ranked in fourth place for unit sales on the ethical market (medicines sold by means of medical prescription)¹.

As part of the CSR framework, a policy was implemented as a management tool for the prevention of domestic violence to tackle gender violence, one of the most brutal manifestations of discrimination and one that, according to official statistics, affects over one third of women in Chile with high human, social and economic costs to society. The tool has been brought up to date and further refined by commitment in 2017 to SDG 5, which concerns the achievement of gender equality and the empowerment of women and girls. In addition, the Company finds itself leading the working group of this SDG in conjunction with the Asociación Nacional de Avisadores de Chile (ANANDA) (= Chilean National Association of Advertisers). This working group proposes incorporating good practice into advertising by avoiding gender stereotypes and discrimination. It also held the Inclusive Language Workshop for public and private companies in conjunction with the Servicio de la Mujer y la Equidad de Género (SERNAMEG) (= Women and Gender Equality Service) among other activities.

1. Ranking by IMS Health Laboratories (2017).

MOTIVATION AND LEADERSHIP

The policy originates in the identification of several specific cases: the murder of a female worker in 2007, then the suicide of the sister of a female worker following an incident of Intra-Family Violence, and repeated cases of domestic violence occurring within the Company. The Company noticed that domestic violence affected the world of work, having an impact on the working environment, productivity and the accident rate and that it even increased the use of supplementary health insurance. It therefore decided to support the Domos Corporation in launching a Manual/Guide on the Prevention of Domestic Violence, a major work for companies to consult when wishing to adopt concrete measures.

There are currently over 80 monitors trained in these matters, whose principal role is to identify, control and refer back to the person responsible for the Gender Equality Management System with academic training in Gender Issues, who then carries out risk assessment, referral, monitoring and closure as appropriate. In this way, there is a positive impact on the working environment of the Company, on health and on productivity. In addition, these measures enhance corporate reputation, and enable the organisation to be an active social player in building a fairer, more equal and more inclusive society.

The role of the Company CEO has been fundamental in embedding these paradigm shifts in the culture of the organisation.

OBJECTIVE(S)

Bagó stimulates the development of actions and practices aimed at the goals of SDG 5, which concerns the achievement of gender equality and the empowerment of all women and girls, achieving this through the personnel of its organisation.

1. To continue promoting the early detection of family and gender violence at Bagó, seeing it as a health problem that has a negative impact at family and work level.
2. To identify the frequency, types and characteristics of intra-family violence most affecting the Bagó workforce in the periods 2016/2017 and 2018/2019.
3. To eliminate bias that may prevent women accessing selection processes.
4. To reinforce protective factors so as to reduce gender violence by developing workshops and training monitors in violence issues.

5. To provide continuity and keep internal processes updated with measures to give joint responsibility to male and female employees.
6. To ensure full and effective participation by women and equal opportunities for leadership at all levels.

KEY STEPS

The key steps in identifying the SDGs appropriate to Bagó were the following:

1. Strategy and Analysis

The CEO of Laboratorio Bagó recognised in the Sustainability Reports (2015-2016 periods and 2017 period) the Company's commitment to the SDGs.

G4-1 and G4-2

Message from the Managing Director

During 2015, global economic activity continued to progress at a steady rate, in particular in the United States of America where growth and job creation increased, as it did in China, while the Eurozone achieved a certain stability and a slight economic upturn thanks to the aggressive support of the Central European Bank.

Within this international context Chile has been one of the economies showing greatest economic growth in Latin America over the last decade. Nevertheless, it ended the year of 2016 with an increase in GDP of only 1.6%, its worst performance since 2009.

Against this background, and despite the low growth of our economy where unit sales in pharmaceuticals have ending up decreasing, sales for Laboratorio Bagó in Chile grew in 2016 by 11.8% in units and 0.8% in value. With these sales, Bagó achieved a market share of 3.64% in units and 2.51% in value, ending a good year for the laboratory.

This Sustainability Report is especially important to Laboratorio Bagó in Chile, as it is a management and communication tool that creates trust among our stakeholders and transparency for the business. The information in the report covers the period from January to December in 2015 and 2016. In this report, just as in the previous one, content from the Reporting Guidelines for the Global Reporting Initiative (GRI) has been included and the guidelines of the United Nations Global Compact have been

followed, fulfilling its ten Principles on human rights, labour rights, the environment and the fight against corruption, and Company goals have been incorporated to fulfil the Sustainable Development Goals that are most strategic to the organisation.

It contains information relating to the social and environmental performance of the Company and its commitment to sustainable development with explanatory information for the major stakeholders: health professionals, government bodies, non-governmental organisations and the community in which it operates.

We are grateful for the commitment, dedication and passion of all the employees who have made it possible to manage the year 2015-2016 with such success.

Juan Araneda Angulo

Managing Director | Laboratorio Bagó de Chile S. A.

2. The definition of priorities showed the following order of importance of the SDGs in the company:

- SDG 5
- SDG 3
- SDG 4
- SDG 8
- SDG 13



3. Diagnosis.

According to the Survey on Intra-Family Violence against Women carried out in Chile, the figure for intra-family violence rose to 21% in the year 2017. One of the features of this study was the inclusion of concepts of economic violence, in the areas of work, education and public spaces. With respect to the last point, 8% of the women consulted said they had suffered some form of violation in public spaces during the previous year and 25% said they had experienced such a situation at some time in their lives. Bagó included topics on the prevention of violence when it detected

some cases among its staff, and after the experience of a dramatic event that motivated it to extend the development of skills among the psycho-social teams and monitors dealing with violence and discrimination, as a way of minimising risk. Following this, the Company committed to the Women's Empowerment Principles of UN Women, especially principle No. 3 linked to ensuring the health, security and well-being of all employees, male and female, and to SDGs 3 and 5.



Bagó
Monitors of
Intra-Family
Violence

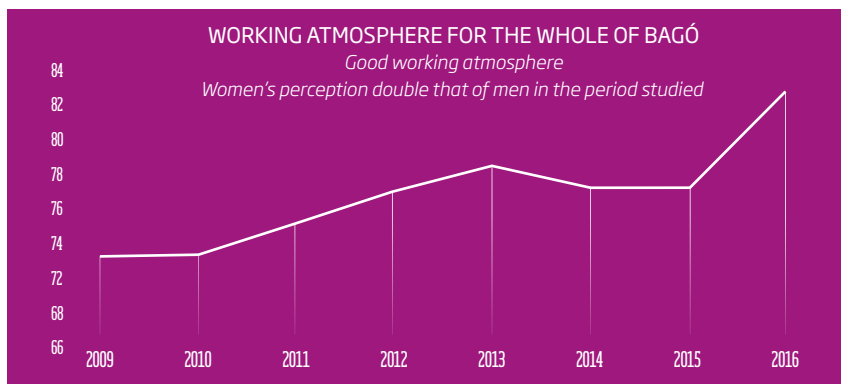
4. Additional priorities were defined as the scale, seriousness and probability of current and potential negative impacts.

Domestic violence generates various impacts, both on the victims and on the aggressors, which affect performance at work, and therefore have consequences for the fulfilment of Company goals. These are reflected in rates of absenteeism, a decrease in productivity, mistakes at work, proneness to accidents, staff turnover, and, for the victims, a feeling of insecurity and of being at risk because of threats and harassment from the aggressors. This often has costs to the organisation that are never evaluated. Work teams are also affected because these situations alter the working atmosphere and create tensions among colleagues (who do not know what to say or how to offer support); there may therefore be rumours circling, ill-feelings because of the increased workload, misunderstandings and distortions in interpersonal relations at work that inhibit staff from seeking support within the organisation.

COMPANY INPUTS AND BENEFITS

The initiative has had the following results for the Company:

1. Improvement in the working atmosphere, especially for women.



2. Making gender violence visible, by providing access to information and training for employees to enable them to make informed decisions.
3. Identifying and making visible cases of bullying at work and sexual harassment.
4. Increasing the percentage of women in positions of responsibility, especially between 2015 and 2018.
5. Maintaining the balance of the Bagó workforce.
6. Certification and Re-Certification with the Chilean Norm NCh: 3262, as a pioneering Company in the implementation and certification of the Chilean Norm NCh: 3262-2012, which establishes the requirements for an organisation to set up and implement a Management System for Gender Equality and the Reconciliation of Work, Family and Personal Life.





7. Recognition with the "Iguala Conciliación" label, awarded by the Women and Gender Equality Service, certifying that it is a Company which has implemented good practices in gender equality at work, within the framework of a gender equality and work-life balance management system under the norm NCh:3262-2012.

SOCIAL, ENVIRONMENTAL AND/OR GOVERNANCE BENEFITS

The implementation of gender actions to eradicate every type of violence and discrimination at work creates good work practices, which go beyond the norms and promote equality of opportunity for men and women.



At Bagó a commitment has been made to permanently establish an organisational culture free from discrimination, bullying, sexual and gender harassment, as well as to take positive action for all employees to facilitate equal conditions and opportunities between men and women, by adherence to the fulfilment of SDG 5 and to the continuous improvement of the Sistema de Igualdad de Género y Conciliación (SIGIGC) (= Gender Equality and Work-Life Balance System) implemented in the organisation.

CASE STUDY 2: – FEMSA



The route towards Water Security in the Latin American Water Funds Partnership (Alianza Latinoamericana de Fondos de Agua)

In line with the SDGs, FEMSA is working to provide access to affordable drinking water, and to protect the related ecosystems by the efficient use and conservation of this resource. To this end, the FEMSA Foundation is part of the Latin American Water Funds Partnership. Coca-Cola FEMSA is committed to the goal of reducing its water consumption and returning to the environment and to communities the same quantity of water as that used in beverages by 2020.



YEAR, COUNTRY (CITY)

2018, Mexico (Monterrey)



NUMBER OF EMPLOYEES:

295,027 (FEMSA and Business Units)



COMPANY NAME:

FEMSA



WEBSITE:

<http://fondosdeagua.org/esp/>



ECONOMIC ACTIVITY:

Industrial Manufacturer (Beverages and Beers) and Retail



CONTACT PERSON DATA:

Iraís Bermea Pérez
Public Relations and Awareness Coordinator
irais.bermea@femsa.com.mx



COUNTRIES IN WHICH COMPANY OPERATES:

Argentina, Brazil, Chile, Colombia, Costa Rica, Philippines, Guatemala, Mexico, Nicaragua, Panama and Venezuela.

CONTEXT

At its origins in 1890, the founders of FEMSA had a very clear vision, that sustainable companies exist only when their communities are sustainable. Thus began a long history of encouraging people and their development.

At the turn of twenty-first century it was necessary to review the way this goal could be achieved. In 2008 the reinforced version of this idea crystallised as the FEMSA Foundation, an instrument that helps create long-term social value for FEMSA. With the individual always at the centre, positive impacts are achieved by social investment in sustainability along three lines of action: water, early childhood development and the promotion of Latin American art and culture.

This vision of social investment led to the launch of the Latin American Water Funds Partnership in 2011 with the Inter-American Development Bank (IDB), The Nature Conservancy and the Global Environment Facility (GEF), with a view to conserving sources of water. Innovation is in FEMSA's DNA and this means having to measure and evaluate. In 2016 it was considered important to question the impact achieved towards reaching the long-term objective set. This was the origin of the conservation route towards an integrated vision, that of water security.

The initiative leveraged Euro 89.5 million with over 250 strategic partners. These partnerships have made a positive impact on the lives of over 9 million people in 1,600 communities of 12 countries of Latin America, the Caribbean and the Philippines.



89.5

million
Euro
leveraged



250

strategic
partners



9

million
people
benefited



12

countries of Latin
America, the
Caribbean and
the Philippines



MOTIVATION AND LEADERSHIP

The Water Funds are multi-sectoral organisations that provide governance structures to boost systemic change with solutions for the sustainable management of water sources based on science.

FEMSA Works to innovate and create solutions to make a major impact on the challenges of the twenty-first century. These principles also apply to the Latin American Water Funds Partnership, analysing the project and evaluating its real impacts. Learning from the experience of five years of operation, the vision was structured in 2016 to make conservation evolve into an integrated strategy: water security to build a sustainable relationship between cities and water.



The concept of Water Funds was redefined with the help of partners and experts to guide this vision and increase the impact. A methodology was thus structured to create and strengthen the Funds.

A systematic process was designed that could be replicated in various contexts, with five phases of development: feasibility (defining the problem and, with the support of the management team, ensuring the involvement of multi-sector local partners); design (developing a strategic plan and establishing governance); creation (legally formalising the Fund as an independent organisation and launching it to the public); operation (implementing annual plans and projects); maturity (ensuring long-term viability and guaranteeing large-scale impact).

OBJECTIVE(S)

To promote SDGs from the point of view of water security and governance strategy, through collective action.

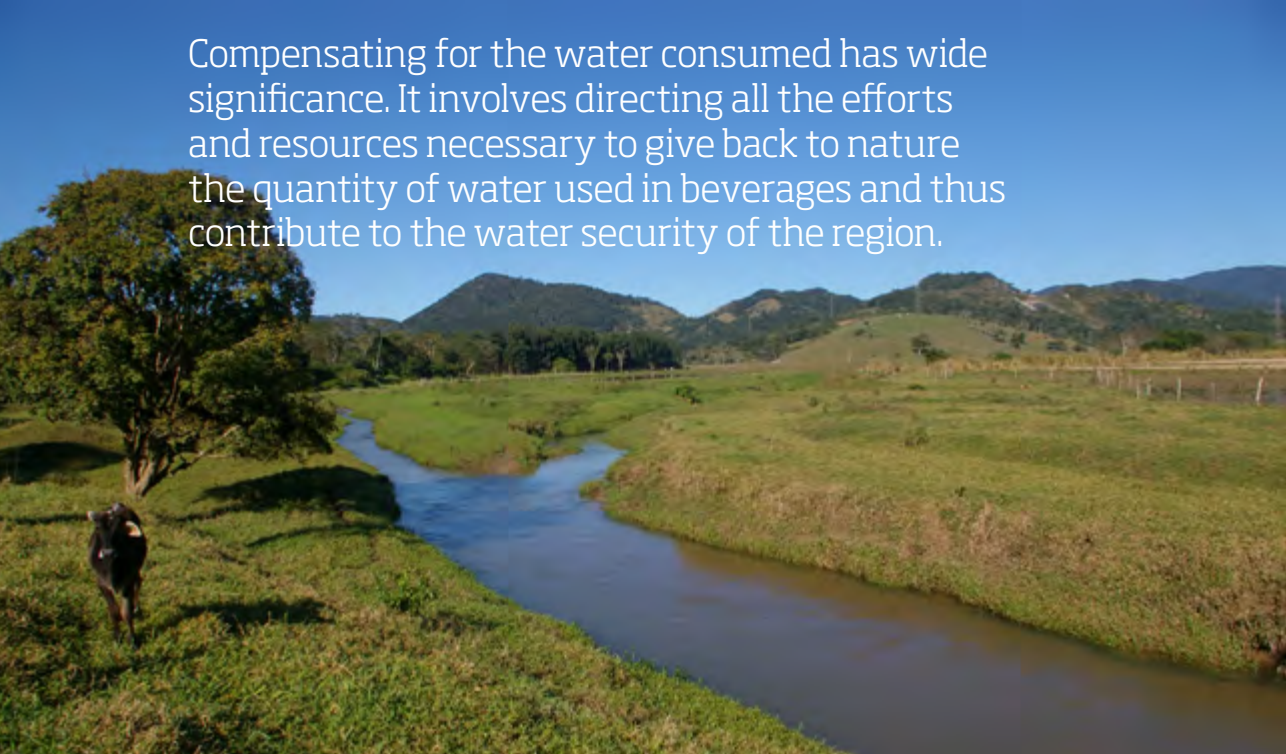
To provide governments, businesses and civil society with a platform to guarantee water stability to cities. For example, in the Monterrey Metropolitan Water Fund, work is done with various sectors to draw up the State water plan that extends and protects water sources, and at the same time seeks to reduce demand through efficiency strategies. Using these strategies helps towards SDG 6, which concerns guaranteeing water availability and managing it in a sustainable way, as well as providing sanitation for all, SDG 11, which relates to ensuring that cities and human settlements are inclusive, secure, resilient and sustainable and SDG 15, which involves the sustainable management of forests, fighting desertification, halting and reversing land degradation and halting the loss of biodiversity.

Promoting inclusive and multi-sector spaces for dialogue which can, through governance mechanisms, bring the initiative into water management and to support the correct structuring of public policies to optimise the use of water resources and thus contribute to SDGs 13 and 17, concerning the improvement of the Global Alliance for Sustainable Development, supplemented by partnerships between multiple interested parties.

KEY STEPS

The first step was to establish the new impact vision. After examining various perspectives and results, the concept of water security was developed. Water security involves the provision of water in sufficient quantity and quality for cities and for the whole population, ensuring that economic sectors dependent on water can operate, conserving nature, rivers and lakes, and preventing natural disasters.

This concept involves a systemic change in water management and requires the participation of all sectors of society to work as a united whole towards a common objective. This is how the concept of collective impact came about, and it involves five conditions: a shared common vision of change, generating and measuring results in a shared manner, individual recognition with coordinated actions towards the objective, continuous internal and external communication, the aligning of joint objectives and motivations, and the creation of an independent organisation dedicated to achieving the coordination of agendas and actors, as well as the implementation.



Compensating for the water consumed has wide significance. It involves directing all the efforts and resources necessary to give back to nature the quantity of water used in beverages and thus contribute to the water security of the region.

To ensure that water security was achieved through the collective impact, it was necessary to create a systematic process that could be replicated to help any member of the Partnership structure successful Water Funds, independently of the context.

Euro 947,853 million were invested to develop a learning-by-doing process during the in situ implementation of Agua Capital, the Water Fund of Mexico City. Consultants from the ANTEA Group, members of the Latin American Water Funds Partnership and a group of experts in corporate, environmental and business sustainability, from organisations such as AB InBev and Bristol-Myers Squibb, among others, all took part in this process. The process was produced in three workshops held in 2017, to include theoretical updates and the development of Agua Capital.

The new strategy to create and reinforce the Water Funds, a result of the learning-by-doing process, was put into practice in Water Funds being set up in 2018. At the same time, in existing Water Funds, technical assistance was offered to incorporate the work strategy that had been created, by establishing agreements with the management teams and operators in each context.








The methodology is in use in Mexico City, is being implemented in Monterrey and Bogotá, and a further two Funds are being created in Brazil and Mexico. The lessons learned from these efforts will continue to be incorporated in the rest of the platform and in future updates of the process.

COMPANY INPUTS AND BENEFITS

The benefit to the company is in line with the mission to create social value through companies and institutions. Achieving water security represents benefits to the business in terms of ensuring the continuity of the processing operation and the supply chain of Coca Cola FEMSA and HEINEKEN Mexico, both dependent on water, which in turn helps maintain the potential to continually increase the volume of business in the regions, as well as profitability. In addition, regions that can count on water security have greater potential for economic development as risks of economic losses related to water are eliminated, whether they stem from infrastructure, health or productivity, among other things. This presents greater opportunities for the growth and well-being of both the business and the community.

One example is the work done by Coca-Cola FEMSA since 2013, on various projects for the replenishment of water in Colombia, Costa Rica, Guatemala and Panama.

Compensating for the water consumed has wide significance. It involves directing all the efforts and resources necessary to give back to nature the quantity of water used in beverages and thus contribute to the water security of the region. It also means working with communities living upstream to implement joint actions and boost their development.

Locality		Hectares affected	Thousands of cubic meters of water recovered
			
Colombia		1718	1949
Costa Rica		609	632
Guatemala		513	674
Panama		406	357

SOCIAL, ENVIRONMENTAL AND/OR GOVERNANCE BENEFITS

By August 2018, 24 Water Funds had been launched in eight cities in Latin America.

The methodology for work and cooperation in the Water Funds has made it possible to involve 200 partners at regional level, which come from all sectors: public, private, academic and civil society. These partnerships have made it possible to leverage over Euro 134 million to achieve long-term impacts.

Through conservation strategies, reforestation, and others, the water sources of over 200,000 hectares have been impacted, enabling the processes of nature to continue operating. In addition, over 19,000 families living in these regions have benefited, promoting their development through involvement in actions that take place in the field as payment for ecosystem services.

Ecosystem services are those that human beings obtain from nature, such as clean air and water, food and others. Through the Water Funds, agreements are set up with operators and landowners in areas of water stress to ensure their activities are focussed on conserving the natural infrastructure so that ecosystems can continue generating their services.



24

Water
Funds



8

cities in Latin
America



200

partners at
regional level



134

million Euro
leveraged



200,000

hectares impacted



19,000

families benefited

CASE STUDY 3:

– Iskraemeco, d.d.



FAIR METER - fair smart electricity meter produced on sustainable and circular economy principles.



The Fair Meter concept focuses on five main issues the electronics industry is facing today. It is a wholesome approach to sustainability and circularity with the goal to implement a fully transparent supply chain in a company. It involves all company departments and sectors and involves both, product and process aspects.



YEAR, COUNTRY (CITY)

1945, Slovenia (Kranj)



NUMBER OF EMPLOYEES:

800



COMPANY NAME:

Iskraemeco, d.d.



COMPANY WEBSITE:

www.iskraemeco.com



ECONOMIC ACTIVITY:

Smart metering solution provider



BEST PRACTICE WEBSITE:

<https://www.fairsmartmeter.com/>



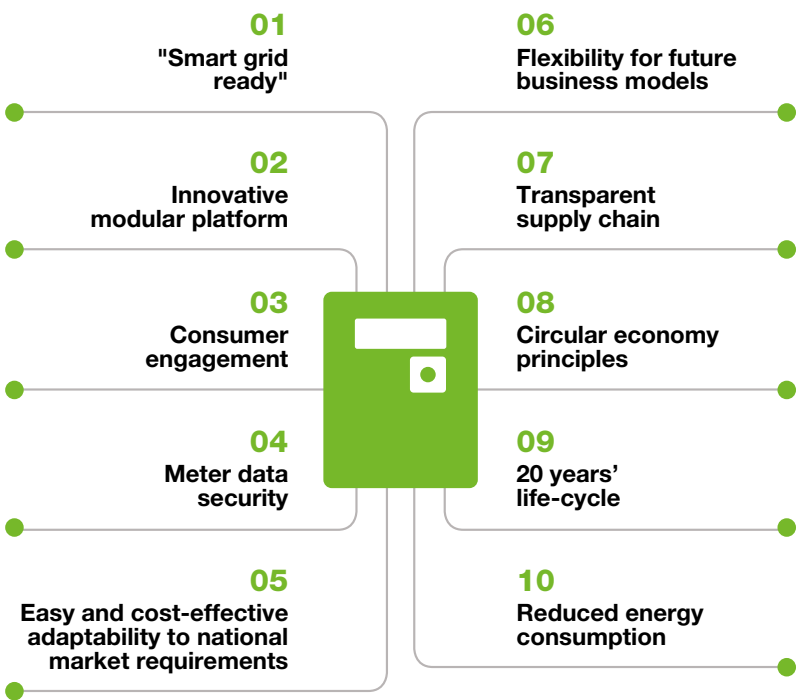
COUNTRIES IN WHICH COMPANY OPERATES:

Europe, Middle East, Africa, Latin America, Russia



CONTACT PERSON DATA:

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MARCOM Manager
Natasa.hartman@iskraemeco.com



More about: www.fairsmartmeter.com

BACKGROUND

Iskraemeco is a manufacturer of electricity meters and a smart metering solution provider. The company was founded in 1945 and is based in Kranj, Slovenia. Iskraemeco has production facilities in Slovenia, Bosnia and Herzegovina and Egypt. We have a worldwide customer base and a global partner support network. Iskraemeco produces over 2 million electricity meter per year and is the second largest provider in EMEA, comprising Europe, Middle East and Africa.

Iskraemeco is part of the United Nations Global Compact initiative, a network of like-minded entities that act in accordance with ten universally accepted principles in the areas of human rights, labour, environment and anti-corruption. Sustainability is integrated in the company strategy and involves all departments and processes in the business.

The Fair Meter concept is a wholesome approach to sustainability and circularity and involves all departments and processes in the company. To support the concept, a three-tier sustainability strategy was designed that focuses on internal processes, our supply chain and partnerships. This project is aimed at incorporating sustainability and circular economy practices on the product as well as on the process level in the company. At the same time, there is a focus on driving "change" (understanding and implementation of sustainability and circular economy principles) with suppliers and customers. By introducing a fully transparent supply chain the company will be able to plan its development and support its suppliers` development when it comes to using recycled materials and component production.

The **Fair Meter concept** is a wholesome approach to sustainability and circularity and involves all departments and processes in the company.



MOTIVATION AND LEADERSHIP

The electronic industry is very dynamic in nature; it uses various (also conflictive) materials and its supply chain in metals, plastic and electronic components is very widespread. Globalisation has opened up many opportunities but unfortunately also put a certain percentage of the population in situations where their basic rights are compromised. Child labour, unsuitable working conditions, unfair pay, among other problems, affect a person's dignity. Material scarcity, pollution and excessive use of energy resources continue to remain a major issue.

Smart Metering is one of the vital elements of the EU's 20-20-20 goals and is aimed at profoundly changing the energy infrastructure in Europe. With understanding the above facts and with the emergence of new business models, sustainability and circularity are not a luxury, but a must in metering. Iskraemeco's mind-set towards these topics was welcomed by Dutch utilities (Stedin and Alliander) in 2015 within a smart metering project - and this was the start of a strategic, systematic change.

The engagement of the management board was crucial to the project from the start. The decision to lead the company on such a path needs to come top-down, the understanding needs to be profound. The managers of the company are the best advocates of the sustainability approach.

"My objective is to build on the momentum of the companies' transformation with a commitment to **excellence in offering quality Smart Metering solutions to customers**. With Digital Transformation, the Metering industry is facing exciting times ahead and I believe that Iskraemeco is in a position to make a significant impact."

Luis Goncalves CEO of Iskraemeco, d.d.



OBJECTIVES

Iskraemeco efforts within the Fair Meter project not only promote the 20-20-20 smart metering goals set by the European Commission, but also take them a step further. The smart meter is a single (although a very important) component in the future smart grid. The efforts in this matter emphasize and focus on the component side of smart metering: the material, processes and activities behind it. Iskraemeco believes this is the starting point for introducing a smart grid. Smart grid must be based on smart components.

Within the Fair Meter project, Iskraemeco is devoted to:

- a 3 % reduction of energy and water required to produce the product on a yearly basis.
- reducing CO2 emission by introducing more efficient production processes and technologies.
- improving waste management.
- increasing the amount of recyclable material in the end product.
- trace the material to their sources.
- having control over scarce material usage.
- a 3TG (use of conflict material) free supply chain.
- proactively creating responsible working conditions for employees and improving health and safety measures.
- proactively creating responsible working conditions for people involved in the supply chain (implementing audits, Fair Labour Association principles, ILO compliance, cooperating with NGOs on the subject).
- integrate eco-design/circular economy principles (Life-Cycle, use less materials, product flexibility, adaptability, upgradability, recyclability, material innovations, smart packaging & logistic).



STEP BY STEP

The Fair Meter project is focused on implementing sustainable practices in the production of fair electricity meters, including material and social aspects. The aim is to ensure that the products are fair in all aspects. The fair meter project addresses all four major issues that the electronic industry is facing today - labour standards, use of conflict materials (3TG), material scarcity, e-waste and energy efficiency.

After developing the Fair Meter concept, Iskraemeco devised a three-pillar sustainability strategy that involves the introduction of sustainable development in the company, in its supply chain and in partner relationships. This has been coupled with an approach to innovation incorporating systems thinking; resulting in the development of an innovative modular smart meter platform, enabling seamless integration of next generation smart metering functions into the smart grid concept. The platform addresses key challenges customers face during their transition into a smart grid environment, while supporting and improving the operation of their smart meters. In the aspects of development, the company have added sustainability principles; the meter, AM550, that was developed in line with the Fair Meter principle is lighter, smaller and more energy efficient. Iskraemeco adjusted the packaging of the meter as well. Compared to previous products it is minimised in size and consequently has smaller impact on the environment. With lean production they produce the meter with minimal waste. The life-cycle of the meter is 20 years, the device is updatable, upgradable, modular and recyclable at the end of its life-cycle.

In order to achieve the above, education of all sectors in the company was needed, but an even more important aspect within the project is spreading the awareness among customers and other stakeholders. This approach is revolutionising the way used to tackle sustainability and circularity issues in metering and the electronic industry in general. To take responsible actions on a local, national level, as well as internationally, the company is actively involved in improving its environmental and social footprint. Cooperation has a significant role - major impact can be reached through close transfer of knowledge and collaboration.

Up to now, Iskraemeco has invested 0,5 million euros to the project. Iskraemeco has one of the largest R&D departments in the industry in Europe. It encompasses more than 100 people and a large majority of them were working on the project at some point in time, on the supply chain, sales, marketing, technology and production. For the purposes of the project, Iskraemeco employed a professional in the field of sustainability to lead the project.

CONTRIBUTION TO COMPANY PERFORMANCE

Iskraemeco is the second largest smart metering solution provider in EMEA and the leading provider in the Netherlands and Germany. It's are also active in Latin America and Russia.

Iskraemeco`s current market share is 18 %. With the Fair Meter project, the company managed to increase the market share for 3 %.

Due to the Fair Meter project the company employed 150 new employees from the start of the project.

As part of the project Iskraemeco plan to increase its profit for Euros 30 million until 2020 (30 % growth).

The company goal is to introduce the Fair Meter approach and the smart meter platform on all markets that will be or are about to introduce smart metering into their infrastructure. After two years of systematic activities, the company managed to awaken the interest of utilities in Italy, Poland, Lithuania, Tunisia, Sweden, Iceland and Germany. The interested utilities have or will include sustainability as an important aspect in their tendering process. The approach towards sustainability has become the competitive advantage and a unique sales proposition.

Iskraemeco is very active when it comes to awareness spreading. In 2016 the company managed to present the project with two speeches during European Utility Week - the largest event in the industry that hosts more than 10.000 visitors each year. A year later Iskraemeco co-developed the conference program on sustainability together with our partners. Also in 2017 the company presented the concept during a conference in Germany - Metering Days. Moreover, Iskraemeco implemented several workshops (with companies working in other areas) and presentations on a local level. The company was also part of the Slovene governmental delegation during Circular Economy Week in the Netherlands and was part of the RETRACE project, convened by European Commission. A website was developed, together with partners, that educates other stakeholders : www.fairsmartmeter.com



The approach towards sustainability has become the competitive advantage and a unique sales proposition.

Awards and recognitions received include:

- the Environmental Award for the Best International Environmental Partnership in 2016 (awarded by the largest media house in Slovenia).
- nomination for the European Business Awards for the Environment.
- a Golden Award for the Best Innovation of the year in 2017 in Slovenia (smart meter).
- a Golden Award for the Best Innovation of the year in 2018 (Fair Meter concept).
- The company is also very active when it comes to cooperation with the media (newspaper and magazine articles).

SOCIAL OR/AND ENVIRONMENTAL BENEFITS

As part of the process, the company measures the consumption of water, energy and calculate its CO2 footprint. Iskraemeco have decreased all three for approximately 25% from 2013 to 2016. In 2017, the structure of the production changed to more complex products, consumption of electricity decreased slightly and CO2 footprint stayed the same, which is a good result. The company achieved 85 % transparency of the supply chain to date. The meters can be recycled after they are no longer in use. Their average life-cycle is up to 20 years and they are upgrade-able for future utility requirements. Currently we are investigating all possibilities to introduce 100% recycled plastics in the meter cover.

This case study is related to contribute solving the following problems and SDGs:



Identified problem	United Nation Global Compact Sustainable Development Goal
<p>Worker exploitation, slavery and child work are present in all industries. That is the case in the electronic industry as well. Poverty is closely connected to mentioned issues. Iskraemeco is doing his best to enforce and monitor labour standards through the supply chain. They have adjusted contracts, policies and are constantly educating suppliers and buyers on the issue.</p>	<p>SDG 1 No poverty</p>
<p>Similar as above, health and well-being is in direct connection to working conditions, and Iskraemeco enforces and monitors working standards.</p>	<p>SDG 3 Good health and well being</p>
<p>Iskraemeco has integrated sustainability and circularity into innovations, processes, to develop higher standards in the industry and contribute to better and more sustainable infrastructure of smart meters.</p>	<p>SDG 9 Industry, innovation and infrastructure</p>
<p>Smart meters are important components of a city infrastructure. Sustainable, innovative, circular meters can help save energy, optimize energy use and be sustainable.</p>	<p>SDG 11 Sustainable cities and communities</p>
<p>It is very important to lower energy and material consumption in the production process, to develop meters that have a long life-cycle and can be used as a tool to save energy at end user side.</p>	<p>SDG 12 Responsible consumption and production</p>
<p>Iskraemeco has managed to lower energy consumption, material use, water consumption and CO2 footprint-this all contributes to climate issues. The life-cycle of the meters is 20 years and they are fully recyclable.</p>	<p>SDG 13 Climate action</p>
<p>There is very little Iskraemeco can achieve on his own with such complex problems. In their actions they are connecting and working together with NGOs, learning and helping other companies and working together with buyers and suppliers. They are part of the Fair Meter Initiative (www.fairsmartmeter.com), the team is active educator on the issue (European Utility Week 2016, 2017, Circular Economy Week ,...)2018.</p>	<p>SDG 17 Partnerships for the goals</p>

CASE STUDY 4:

– Las Tacuaras S.A.



Microfranchise programme for women at the bottom of the pyramid



nutriHUEVOS
Nutrición al alcance de todos

A microfranchise is a small-scale business in which an investor and a company with a brand established in the market participate. The model is simple to replicate and requires a low level of investment on the part of the franchise holder and a training programme and basic managerial advice on the part of the franchisor.



YEAR, COUNTRY (CITY)
2018, Paraguay (San Lorenzo)



NUMBER OF EMPLOYEES:
308



COMPANY NAME:
Las Tacuaras S.A.



PAGE OF THE INITIATIVE:
https://www.facebook.com/NutriHuevos/?fb_dtsg_ag=Adw-I0A06px9Xn3VuHo1G7U2BlyrrvtwrkFFtxMYzi6pvDA%3AAyC93nJXEzkin4BzMelCbxWUuFviOd0IT-H6oRxT1ZZHA



ECONOMIC ACTIVITY:
Poultry farming



COUNTRIES IN WHICH COMPANY OPERATES:
Paraguay



CONTACT PERSON DATA:
Latifi Chelala
Gerente de Calidad y RSE.
latifi.chelala@nutrihuevos.com.py

CONTEXT

Las Tacuaras began its activities in the poultry field in the decade of the 1970s, with the rearing of broiler chickens, then almost immediately (1974) turned to industrial egg production. Up to 1997 the company was managed by its founder, Antonio Koo, Korean by nationality, until it became a limited liability company and the managerial role was passed on to his children, whom he asked to support education. For the founder, education is a way the company can help reduce poverty in the country and he is convinced that this is the best way of improving opportunities for the people. Since then, there has been no end to changes in the company. There are increasing demands every day from the production, the market and from consumers and a constant challenge to rethink the business from the point of view of sustainability.

Almost five decades after it was founded, Las Tacuaras is firmly on the way to sustainability, defining and implementing concrete processes and initiatives that will produce results in this area. Being one of the Paraguayan industries that has committed to a way of doing business based on social responsibility represents a challenge that is very relevant to the food industry sector, and to poultry in particular.

In the middle of the second half of 2015, the Nutrihuevos Microfranchise was launched. This initiative is a way of generating shared value. In this sense, the Nutrihuevos Microfranchises improve the quality of life of families in the community, focussing on women who are in charge of the home. The programme is being implemented in nine cities in Paraguay: Caacupé, San Lorenzo, Chaco, Luque, Mariano Roque Alonso, Villa Elisa, Lambaré, Villeta and Asunción.

According to the Permanent Household Survey (General Directorate of Statistics, Surveys and Census, 2017), the population of Paraguay considered to be in a situation of poverty represents 26.40% of the total inhabitants of the country, which means that around 1,809,000 people live in homes where the basic per capita income is lower than the cost of basic living expenses. The Nutrihuevos Microfranchise initiative empowers women and provides them with essential economic stability to help their families' progress. At the same time, the venture generates income for the family home that facilitates and extends the reach of the Las Tacuaras Company, thereby contributing to the SDG 1, related to ending poverty.



MOTIVATION AND LEADERSHIP

Since 2015 the company has sought to develop strategies of shared value that make it possible to recognise the opportunities for innovation and growth that are found when trying to solve social problems with a business focus. Leadership is required for things to change and happen. There are still 12 years left of the time set for the fulfilment of the SDGs. In theory this may seem like a long time, but the changes required are structural and linked to the culture, beliefs, education and moral values of the people making up the companies, the society and the country.

Structural problems are not resolved with more economic growth but with specific, inter-sectorial and territorial public policies, aimed at reducing the risk of falling back into poverty and eradicating the social exclusion that goes beyond economic income.

Aligning the CSR strategy with the growth strategies of the company takes time and requires a high level of commitment from the senior management and all the people who make up the organisation in order to embed the strategy in the operational management, creating real and profound change.

OBJECTIVES

General objectives: To do business and help end poverty.

Specific objectives:

- As the company is seeking to fight poverty, establishing platforms that can enable more people to generate their own income.
- To apply the shared value strategy with a focus on redefining productivity in the value chain. The aim is that people at the bottom of the pyramid can access decent employment, forming part of the company section linked to sales and distribution.
- To build business models that generate economic value for the organisation but also make a contribution to society.

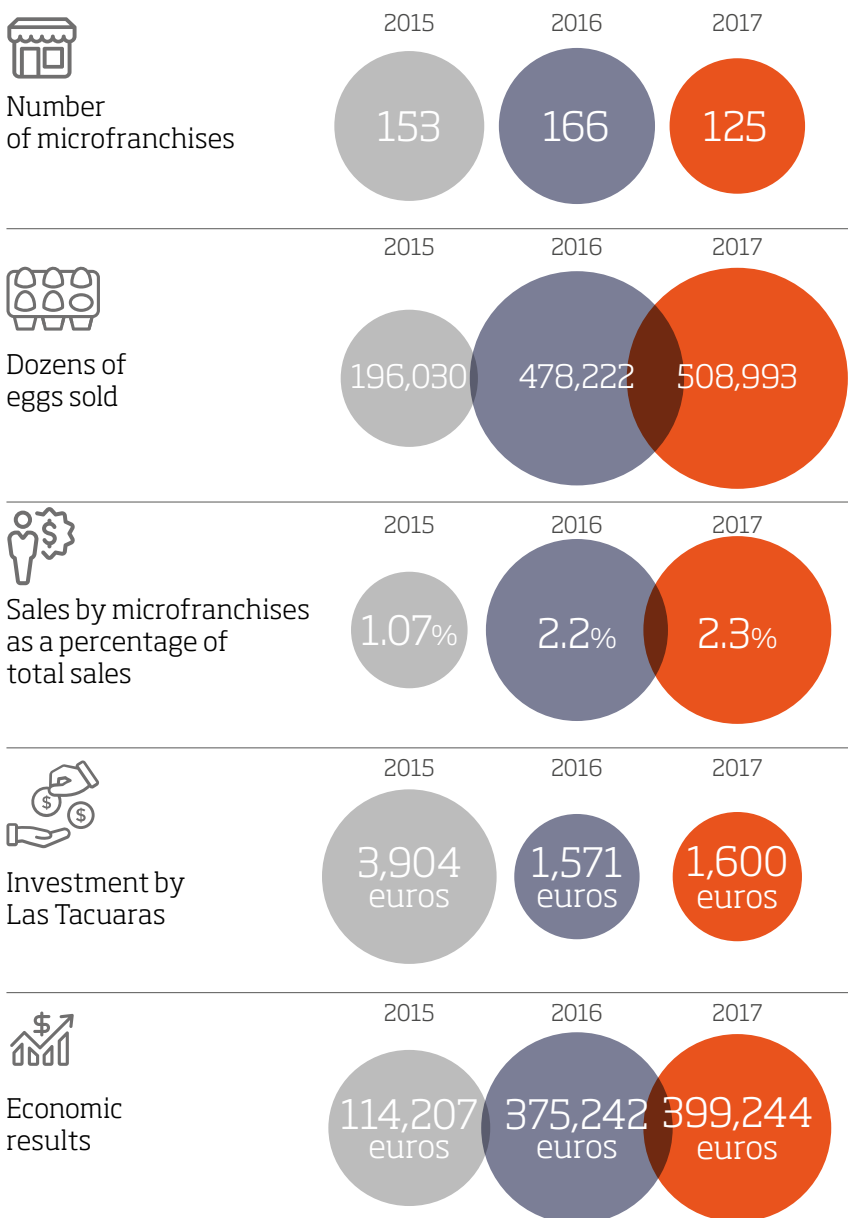
KEY STEPS

The model involves 6 steps:

1. Identifying opportunities to create value by analysing the company's process chain. Focussing on the critical process which in this case is external sales. Through microfranchises it is possible to reach unattended markets.
2. Building the case, the microfranchise Nutrihuevos business model, with the support of students working on theses at the Faculty of Engineering of the National University of Asunción.
3. Measuring the results. Indicators were established such as the number of eggs sold, new markets reached, the number of women involved, and the amount of employment sources created.
4. Generating commitment from the senior management. The directors of Las Tacuaras are the principal promoters of this business model.
5. Adapting the organisation to the new business model. The women buy eggs at a differentiated price, a new sales point has been established in the town of Villeta to make purchasing easier, time and personnel are devoted to running the microfranchises.
6. Seeking a strategic partner to design and implement the model. This is the Fundación Paraguaya (Paraguayan Foundation), an expert in the field.
7. Implementing the model. Franchise holders have to commit to maintaining a quality standard previously established by the franchise. Some of the appropriate behaviours required by Las Tacuaras S.A. include taking care of product presentation and dealing with customers in a professional manner. At the beginning of the project, each franchise holder receives an identity card that gives them representation at Nutrihuevos sales points. The card has the identification number and name of the person, which are also registered on the Company system. When new products are needed for sales, the participant goes to any Nutrihuevos sales point with their card, and can make a purchase at wholesale prices. Their purchase is registered on the system so the project can be monitored. If it is the first purchase, the total can be bought on credit. The Fundación Paraguaya pays the company the money corresponding to the first sale and the participant then pays the amount of the credit directly to the Foundation. Sales are by the dozen and every two weeks the CSR department of the company provides a sales report.

COMPANY INPUTS AND BENEFITS

The benefits achieved by the company can be seen below.



SOCIAL, ENVIRONMENTAL AND/OR GOVERNANCE BENEFITS

The social benefits of the model are:



Microfranchises that became wholesale clients (purchases greater than 500 dozen eggs) from the beginning of the programme in February 2015 to August 2018.

12



People who are still in poverty (from a total of 77 people surveyed in 2018).

6



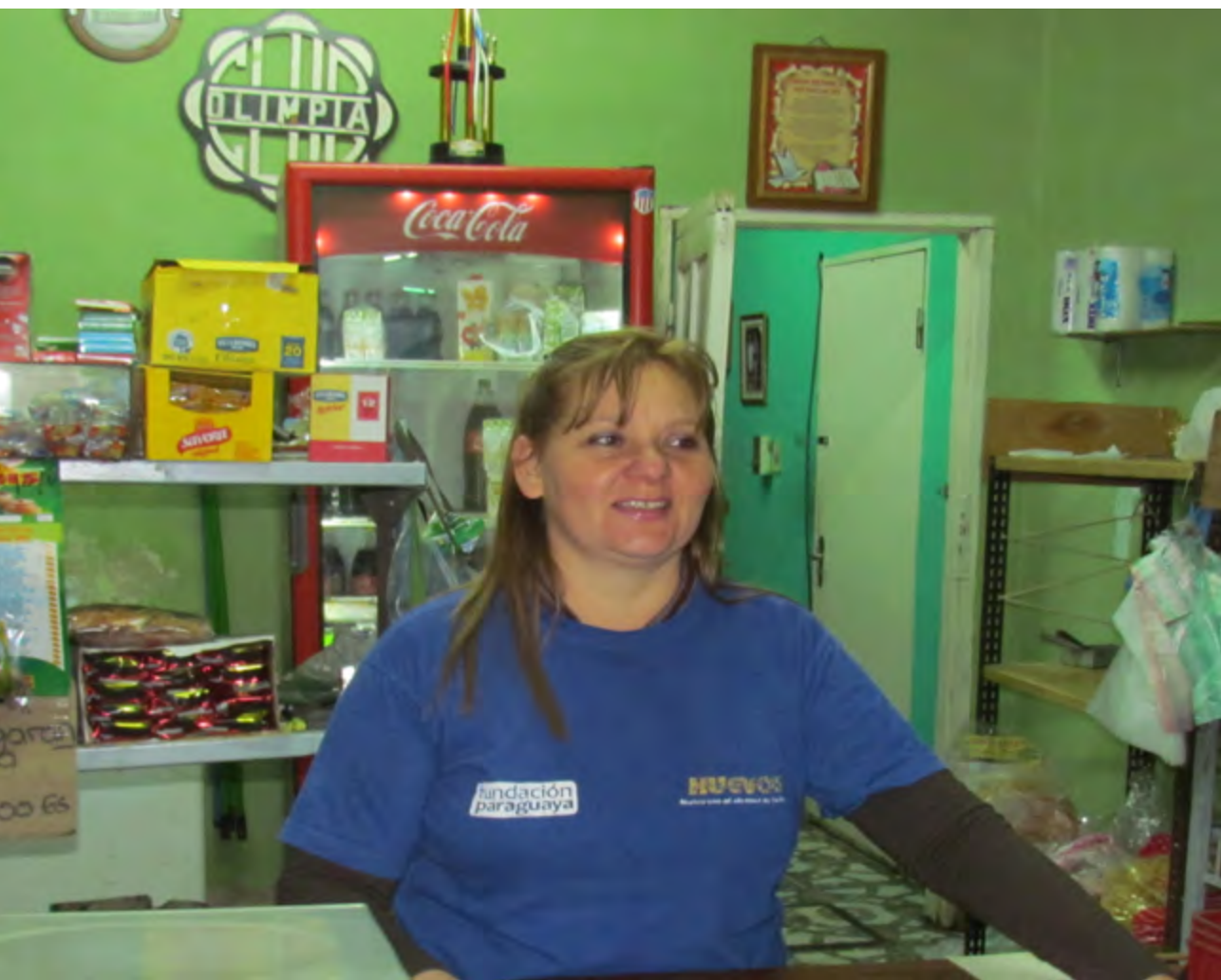
Microfranchises active up to today

77

nutriHUEVOS
Nutrición al alcance de todos



In its third year of implementation, the Nutrihuevos Microfranchise programme is significantly outperforming expectations and the objective for which it was created, that is, to boost self-employment through retail sales.



More info:

<http://www.abc.com.py/edicion-impresa/economia/alianza-para-iniciar-micro-franquicia-1338514.html>

<http://www.lanacion.com.py/2015/02/20/nutrihuevos-se-suma-al-modelo-de-negocios-de-microfranquicias/>

<https://www.facebook.com/NutriHuevos/videos/909263775778178>

<http://www.ultimahora.com/instan-hacer-negocios-partir-problemas-sociales-n938616.html>

CASE STUDY 5:

– *Lipor*



LIPOR “3.M – Less waste, less carbon, more climate”.

The Lipor 3.M strategy implements the guidelines of the 2020/2030 National Climate Change Plan, in line with the European and international GHG emission mitigation objectives. It reflects Lipor’s commitment to SDG 13 – Climate Action, and to the commitment made by Portugal to ensure the carbon neutrality of its emissions by 2050.



YEAR, COUNTRY (CITY)

2018, Portugal (Porto)



COMPANY WEBSITE:

<https://www.lipor.pt/en/>



COMPANY NAME:

LIPOR - Intermunicipal Waste Management of Greater Porto



BEST PRACTICE WEBSITE:

<https://www.lipor.pt/en/sustainability-and-social-responsibility/sustainability-projects/3m-less-waste-less-carbon-more-climate/>



ECONOMIC ACTIVITY:

Waste Management



COUNTRIES IN WHICH COMPANY OPERATES:

Portugal



CONTACT PERSON DATA:

Susana Lopes | Environmental Technician /Senior Technician
susana.lopes@lipor.pt
 Filipe Carneiro | Environmental Technician /Senior Technician
filipe.carneiro@lipor.pt



NUMBER OF EMPLOYEES:

194

BACKGROUND

LIPOR - Intermunicipal Waste Management of Greater Porto, Portugal, is responsible for the management, recovery and treatment of the Municipal Waste (MW) produced in the eight associated municipalities. LIPOR was founded in 1982 as a Municipalities Association and it has implemented an integrated waste management system in line with the national and European guidelines and objectives, supported by a communication and awareness programme for all the stakeholders. Every year, LIPOR treats about 500,000 tons of MW that are produced by around 1 million inhabitants. Based on modern municipal waste management concepts, LIPOR associated the circular business model to its integrated system, under the motto of LIPOR's strategy - Towards Sustainability - which depicts a sustainable management, that combines the three main principles of sustainable development and defines LIPOR's current and future action. Lipor is responsible for direct and indirect greenhouse gas (GHG) emissions, whether originated from waste management activities (WtE- water to energy, composting, sorting, landfill) or complementary activities (as transport and mobility, e.g). Lipor assumes its responsibility for the management of the impact of its activity by calculating those GHG emissions and implementing measures to reduce them. Since 2010, LIPOR has voluntarily incorporated the fight against climate change in its strategy and action. LIPOR has been acting in two areas: mitigation and adaptation (involving information, action, mobilisation and cooperation). While in the mitigation area, LIPOR addresses the causes, by reducing its GHG emissions, in the adaptation area, it strives to reduce risks caused by the consequences of climate change in its management value chain.



MOTIVATION AND LIDERSHIP

The increasing impacts associated with GHG emissions and the continuous involvement with the community have motivated Lipor to materialise a response to climate change, an inexorable reality and one of the greatest challenges facing humanity. That commitment was made publicly in 2010 with the adoption of the Less waste, Less carbon (more climate) Strategy. Lipor published the Climate Change Handbook (free distribution), a guide on climate change issues, the objectives of the Kyoto Protocol and the relevant role of the citizen.

Lipor's activity has been guided by the commitment of the top leadership. Being a public entity and acting on environmental issues, values such as transparency, ethics and a strong sense of responsibility are fundamental and lead its policy and initiatives.

In all its activities and in relationships with stakeholders, LIPOR defined, as part of its sustainable management strategy, the commitment with the standards of Quality, Environment, Energy, Health and Safety, Social Responsibility and Innovation, with the focus to consolidate the organisation as a reference entity, promoting circular economy practices. The strong engagement of the CEO and the Lipor's Board Directors led the Association to achieve and maintain the several certifications, assuring, to the community, its principles and rules.

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OBJECTIVES

LIPOR and its Municipalities, in line with the Kyoto Protocol and the 2030 Agenda for Sustainable Development, consider as a main commitment the need to fight against climate change. This compromise is consolidated by the 3.M Strategy for Greater Porto area, in alignment with SDG 13 - Climate Action. The strategy and its initiatives and objectives were defined as follows: to have and share information and reliable data, improve education, awareness-raising on climate change, and capacity-building to implement adaptation and mitigation measures. The Lipor GHG emissions inventory was prepared according to the Greenhouse Gas Protocol (World Business Council for Sustainable Development and the World Resources Institute) with the appropriate methodologies for the waste sector. Lipor also has analyzed the potential of GHG emissions avoided by sustainable waste management options. Lipor has set quantitative targets for reducing its emissions, compared to 2006 emissions: 12% in 2012; minus 16% in 2016; and minus 20% by 2020 and promoting the use of compensation instruments to avoid unavoidable emissions (related to the GEE emissions of the Lipor fleet), favouring actions with a high potential for public awareness. Examples of implemented GEE emission reduction measures: use of biodiesel, natural gas and electric vehicles in the Lipor fleet; energy efficiency measures at Lipor facilities, including ISO 50001 certification; promotion and use of renewable energies (solar and photovoltaic); biogas energy capture and recovery systems in closed landfills; biodiversity strategy and promotion of the use of organic soil improver; promoting organic farming and fight against food waste (right meal portion and healthy meals) and promoting recycling.

The organisation's corporate strategy, which aims to fulfil our mission and bears in mind our approved vision, is focused on the assumption that "Waste is a resource" and the objective of "zero waste", i.e., A society without wastage.

Aires Pereira | Chairman of LIPOR's Board of Directors

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STEP BY STEP

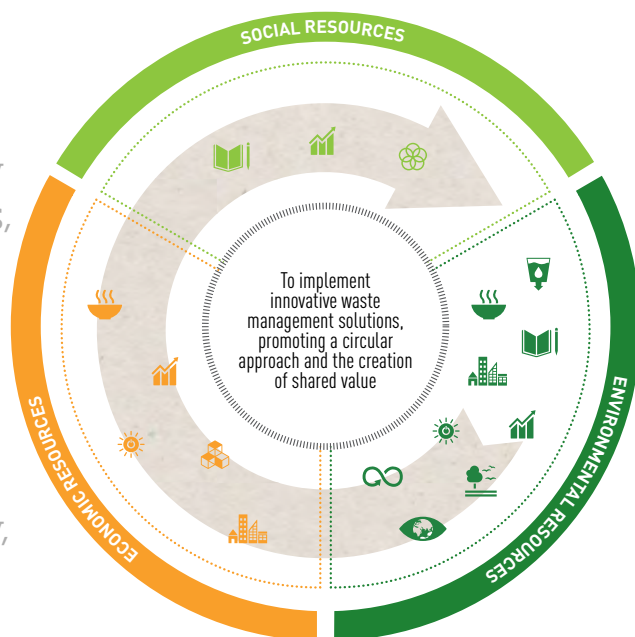
Waste treatment is both responsible for the emission of GHG and an instrument for its mitigation (with suitable strategies and best available technologies). To ensure the best performance of LIPOR's operational processes and services, adequate and optimized waste management is crucial.

- **The first step towards sustainable waste management, and responsible and transparent action:** LIPOR commitment to an integrated system of Quality, Environment and Health and Safety. Ensuring the eco-efficiency of the processes - producing more with less resources and having the lowest impact on the environment has been the great challenge since the 2000s.
- **The corporate vision:** in 2004 LIPOR published its 1st Sustainability Report, "Sustainability. Our commitment, the future of all".
- **The engagement:** LIPOR initiated its strategy to combat climate change, assuming a commitment to reduce GHG emissions. The recovery of environmental liabilities from the old landfills, through the planting of native plants and promoting maintenance practices without the use of chemicals, as well as the recovery of biogas in electric power, were essential for the rehabilitation of those habitats. In 2010, LIPOR established Commitment 12-16-20, with a view to reducing LIPOR's Carbon Footprint through the reduction of CO₂e emissions, compared to 2006.
- **The action:** several initiatives, such as assess the GHG emissions directly linked to the Waste Management activity (WtE, composting, landfill) and complementary activities (determination of the LIPOR Carbon Footprint and respective updating in predefined time cycles); energy efficiency practices, rationalisation and emission compensation mechanisms, holding seminars and other communication events to increase the participation of the population in the project. Developing projects for the community related with prevention, reuse and recycling.
- **A good practice:** LIPOR began in 2010 to compensate for its inevitable emissions, resulting from the promotion of events and the use of the LIPOR fleet, through reforestation practices. Tree planting actions in the associated municipalities have become part of the community awareness and mobilisation actions. Two Multidisciplinary Groups (Zero Carbon and Energy) were set up to better design strategies for the GHG Emissions mitigation of LIPOR and different attitudes in citizens and in all community and study and evaluate the issues related to LIPOR's energy

consumption and to present proposals for improving performance. An energy audit was performed (initial diagnosis) and has been elaborated an energy consumption rationalization plan, where were planned rationalization measures, which contribute to the improvement of energy efficiency of the facilities. Other measures to try to reduce indirect energy consumption was LIPOR's informal commitment to prioritize, whenever possible, the use of the train over the plane in job trips and promoting teleconferences and more recently, attendance in webinars. Sustainable construction (new building or rehabilitation works).

- **Community involvement:** the low carbon school project (raising awareness and engaging of the school community, through the implementation of sustainable measures and the promotion of actions to reduce emissions of GHG), conception of a carbon calculator for schools. Sustainable Consumption Guide and Green Shopping Guide.
- **The results:** the emissions associated with waste management can be significantly reduced through the prevention of waste production and promoting recycling and reduce waste going to landfill.

To implement the strategy to combat climate change, Lipor was advised by external consultants, taking advantage of the availability of applications for national and European funding (application on biodiversity strategy, communication programs for citizen, waste management).



CONTRIBUTION TO COMPANY PERFORMANCE

With its “3.M - less Waste, less Carbon, more Climate” strategy, LIPOR voluntarily committed itself to reduce its GHG emissions by 20% as compared to 2006. By the end of 2017, LIPOR had reached a 19.4% reduction, representing a 2.2% reduction in comparison with the previous year, thus avoiding the emission of 7.173tCO₂ e, maintaining equal levels of productivity and efficiency.

GHG emission reduction is still mostly due to the strategic decision to recover biogas produced in landfills, minimise waste disposal in landfill and carry out an efficient energy management. This is related to SDG 7, increasing the share of renewable energy in the global energy mix and by improving energy efficiency).

LIPOR carries out activities that aim to replace other activities with higher carbon intensity and have an indirect impact, due to the use of recovered waste in economic activities. In this context, since 2015, LIPOR calculates potential GHG emissions avoided in its several activities. Since 2015, activities developed by LIPOR avoided the emission of 163,630 tCO₂ e. In 2017, LIPOR enhanced its energy performance by 12.12% and reduced its energy consumption by 28.30%, as compared to the reference year of 2010.

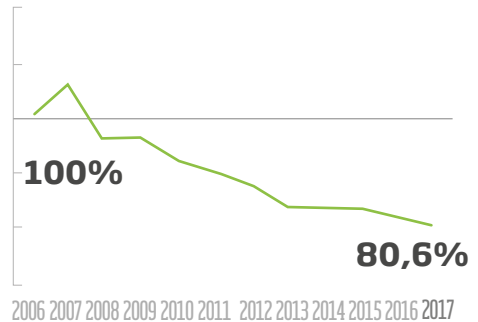
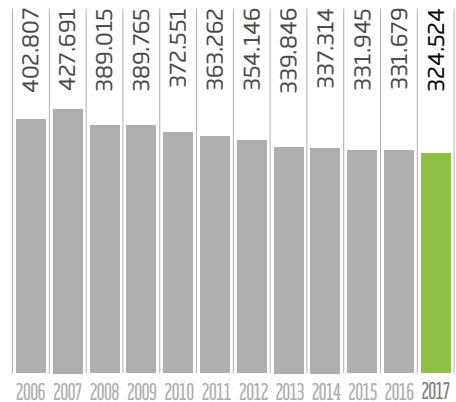
Since 2009 all the facilities are certified by the standards ISO 14001, ISO 9001 and OHSAS 18001, all related to SDG 8, promoting decent, safe and fair work for all. In 2018 Lipor will expect to obtain the ISO 50001 certification.

According the 3.M strategy, Lipor introduced the Low-Carbon Purchases program by purchasing green energy produced from 100% renewable energy sources.

Lipor’s climate adaptation strategy focuses on the implications of vulnerability and risk associated with climate conditions in the future of LIPOR (organizational structure and business), covering aspects as collection, transport, recycling, energy recovery and landfilling allows the appropriate definition of adaptation measures, mitigating the potential adverse effects (economics, social and environmental).



Emission GEE Lipor - 2006 =100%

Emission GEE Lipor - (tCO_{2e})

Since 2015, activities developed by LIPOR avoided the emission of 163,630 tCO₂ e. In 2017, LIPOR enhanced its energy performance by 12.12% and reduced its energy consumption by 28.30%, as compared to the reference year of 2010.

SOCIAL OR/AND ENVIRONMENTAL BENEFITS

The 3.M strategy has a positive environmental and social impact. Open events, as conferences, workshops, public debates, reforestation programs and school activities, related to SDG 4, namely education for sustainable development and sustainable lifestyle, aims to mobilize and get the community involved and raising-awareness on climate change. Other benefits are related with better consumption patterns, reducing the waste and the need of raw material and their impacts on climate change. The 3.M strategy has had an effective role in reducing the GHG emissions related with the MSW facilities:

Lipor GHG Global Inventory

Valores em t CO ₂ e	2013	2014	2015	2016	2017	%		Δ 2016/17
Total emissões GEE Lipor	345.557	344.829	400.948	394.904	392.239	100%	100%	-0,7%
Ambito 1 - Emissões directas	337.204	334.799	337.539	329.594	327.274	83,4%	100%	-0,7%
Tratamiento e Valorização de Resíduos	336.173	333.890	328.771	328.417	326.068	83,1%	100%	-0,7%
Confinamento Técnico	126.448	122.253	115.958	108.925	103.728	26,4%	31,7%	-4,8%
Valorização Orgânica (CVO)	7.842	8.349	8.611	8.486	9.042	2,3%	2,8%	6,5%
Valorização Energética (CVE)	201.882	203.288	204.202	211.007	213.299	54,4%	65,2%	1,1%
Consumo Combustíveis em Instalações	404	290	8.216	588	586	0,1%	0,2%	-0,3%
Transportes e Mobilidade (Frota Própria)	628	619	553	588	619	0,2%	0,2%	5,2%
Ambito 1 - Emissões directas	337.204	334.799	337.539	329.594	327.274	83,4%		-0,7%
Ambito 2 - Emissões indirectas	2.254	2.355	2.166	2.837	1.832	0,5%		-35,4%
Ambito 3 - Outras Emissões indirectas	6.099	7.675	61.242	62.473	63.133	16,1%		1,1%

Emissões de GEE	2013	2014	2015	2016	2017	%		Δ 2016/17
Lipor 3M	339.846	337.314	331.945	331.679	324.524			-2,2%
Lipor Global	345.557	344.829	400.948	394.904	392.239			-0,7%

TOTAL LIPOR GREENHOUSE GASES EMISSIONS (GHG) (305-1; 305-2; 305-3)

VALUES IN TCO ₂ E	2006	2015	2016	2017	Δ 2016-17	Δ 2006-17
TOTAL LIPOR GHG EMISSIONS – 3M TARGETS	402,807	331,945	331,679	324,506	-2.2%	-19.4%
Scope 1 – Direct Emissions	401,011	329,597	328,697	322,479	-1.9%	-19.6%
Waste Treatment and Recovery	399,635	328,771	327,520	321,292	-1.9%	-19.6%
Technical Confinement	191,464	115,958	108,925	103,728	-4.8%	
Organic Recovery (CVO)	4,393	8,611	7,589	7,264	-4.3%	
Energy Recovery (CVE)	203,778	204,202	211,007	210,300	-0.3%	

Lipor's fleet meets the requirements of the brand Carbono Zero™, a national entity in the context of the voluntary carbon market. The certificate attests the offsetting of GHG emissions through carbon sequestration projects in certified national forest. This is an important communication vehicle and shows the Lipor commitment with reducing GHG emissions and with the SDG 13, referring to address climate actions.

Lipor, by promoting sustainable waste management practices, reinforcing waste prevention, related to SDG 12, sustainable consumption regarding SDG 12 and selective collection, reduces the need to use WtE and landfill solutions and the associated carbon emissions. Another environmental benefit is the application of organic compost in agriculture, replacing the use of chemical fertilizers; the application of one ton of compost reduces the emission of 140 kg of CO₂e. Lipor sold to farmers around 10,000 ton of compost during 2017, connected to SDG 2, improving land and soil quality and promoting sustainable agricultural practices as organic farming.



i More info:

https://www.youtube.com/watch?v=Sh5858eNjwI&feature=youtu.be&utm_source=Masteraudience&utm_medium=email&utm_content=link_8&utm_campaign=Marque%20j%20na%20sua%20agenda!_732:1&newsletter=73

https://www.youtube.com/watch?v=LgJZW6TcdDw&feature=youtu.be&utm_source=Masteraudience&utm_medium=email&utm_content=link_28&utm_campaign=j%20chegou%20o,%201%20BA%20Peixe%20ao%20rio%20Tinto_630:1&newsletter=73

https://www.youtube.com/watch?v=vQp5oQcsZss&feature=youtu.be&utm_source=Masteraudience&utm_medium=email&utm_content=link_24&utm_campaign=Conhe%20nos%20melhor!_625:1&newsletter=73

CASE STUDY 6: – *Pacari Chocolates*



From the Tree to the Chocolate Bar: Opting for a Rural and Ecological Development Model that Begins with the Small Producers

Pacari Chocolate is a family business created in 2002 by Santiago Peralta and Carla Barbotó with the aim of changing the history of chocolate in Ecuador. What began as a family business, very soon became a Company that revolutionised the industry, not only in the country but in the whole of Latin America.



YEAR, COUNTRY (CITY)

2018, Ecuador (Quito)



COMPANY WEBSITE:

<https://www.pacarichocolate.com/>



COMPANY NAME:

Pacari Chocolates (Productos SKS Farms)



BEST PRACTICE WEBSITE:

<https://www.pacarichocolate.com/conocenos>
<https://www.ccq.ec/pacari-continua-demostrando-que-es-una-empresa-social-y-ambientalmente-responsable/>
http://www.wwf.org.ec/noticias_publicaciones_y_multimedia/noticias_programa_galapagos/?uNewsID=326130



ECONOMIC ACTIVITY:

Secondary



COUNTRIES IN WHICH COMPANY OPERATES:

Ecuador



NUMBER OF EMPLOYEES:

86 in office and plant. Direct trade with over 3500 farming families.



CONTACT PERSON DATA:

Santiago Peralta | CEO
 Santiago@pacarichocolate.com





Seventy per cent of the fine cocoa of the world is grown in Ecuador; this farming activity is undertaken by around 150 thousand families of small producers.

CONTEXT

Seventy per cent of the fine cocoa of the world is grown in Ecuador; this farming activity is undertaken by around 150 thousand families of small producers. However, although the world demand for fine flavour cocoa known as Arriba Nacional, used to make premium chocolates, is increasing year by year, the income and living standards of the small-scale farmers has seen no such increase.

Only eight per cent of the cocoa produced in Ecuador is exported in the form of chocolate as an end product. This export dynamic of raw material (92%) means that prices in the cocoa sector vary according to global supply and demand (ANECACAO, 2016) (Footnote 1). This instability in the prices paid to small producers has a serious effect on their finances. The situation is particularly acute at times when the price may even fall below production costs.

On the other hand, it is calculated that approximately 86% of the cocoa production is marketed through intermediaries (FAO and IICA, 2007) (Footnote 2). This marketing system means that the producer receives less than 50% of the value per quintal of dry cocoa by the bag. This dynamic has also meant that, historically, levels of productivity and profits in the rural family farming sector could be so low that they did not cover production costs. For example, according to figures from the Ministerio de Agricultura y Ganadería (MAG) (Ministry of Agriculture and Livestock), the average production in provinces such as Manabí is 6.38 qq per hectare (ha) per year, with a price of 568 Euro per bag at the end of August 2018. This level of production and price scarcely meets the running costs, which according to the MAG are between 763 and 1300 Euro per ha.

In addition to this problem of low profitability and productivity, around 90% of the farmers have no access to credit (Mipro, 2011) (Footnote 3) which makes it difficult for them to make improvements to the production process or take advantage of technological progress that would be advisable to improve quality.

MOTIVATION AND LEADERSHIP

Pacari originated from the exchange of ideas and proposals between two adventurous entrepreneurs, Santiago y Carla, who met while surfing at the beach of Canoa. This meeting led not only to love but also to a mission to generate real change in the way private companies were run. After exploring various types of businesses, they finally found in the cocoa fields and in the lack of innovation in the chocolate industry, the opportunity to define a business model to break down the bad practices that had become embedded in the industry.

Pacari seeks to break up the dynamics of the market and of brokering, paying a higher price than that dictated by the market, and thus recognising the organic quality and giving family farming prospects for the future. Pacari focusses on contacting and setting up a direct trading relationship with small producers in the provinces of Manabí, Esmeraldas, Los Ríos and Napo, comprising around 3,500 families. By having a direct trading model, not only does the farmer receive a better price, but he is also supported in the process of improving the quality of his life, through training and social projects.

The motivation for small producers is not simply economic, but also lies in their participation in workshops and training courses. Education and empowerment are tools used by Pacari to encourage the active participation of the small producers in the direction the cocoa sector is taking.

Finally, Pacari is recognised as a business leader in Ecuador and Latin America, and its philosophy provides inspiration for more new ventures to be started with the aim of recognising the work of small producers and replicating what Pacari has done in their own areas.

-
1. ANECACAO (2016). Asociación Nacional de Exportadores e Industriales de Cacao del Ecuador. Exportación Ecuatoriana de Cacao. (National Association of Cocoa Exporters and Manufacturers of Ecuador. The Ecuadorian Export of Cocoa) Available at <http://www.anecacao.com/index.php/es/estadisticas/estadisticas-actuales.html> Accessed: 3 September
 2. FAO & IICA. (2007). Estudio de Caso: Denominación de Origen "Cacao Arriba". Asociación Cámara Nacional de Cacao Fino de Costa Rica (Case Study: Designation of Origin "Cacao Arriba". National Chamber Association of Fine Cocoa of Costa Rica). Available at http://www.canacacao.org/uploads/smartsection/19_Denominacion_Cacao_Arriba_Ecuador.pdf Accessed: 3 September
 3. Ministerio de Industrias y Productividad (Mipro) (Ministry of Industries and Productivity) (2011). Cadena del cacao (The Cocoa Chain). Quito.



ANUAL DEL TALLER
TÉCNICAS PRÁCTICAS EN LA CONSTRUCCIÓN



OBJECTIVES

To increase productivity and quality of fine flavour cocoa known as organic Arriba Nacional. To achieve this aim, three specific objectives have been defined:

1. To promote ways of organic production deriving from ancient practices. Pacari offers the families of small producers regular training and technical support from experts on organic methodologies, biodynamics and pest control through the use of microorganisms.
2. To improve the living conditions of small farmers in a sustainable way. Pacari has facilitated access to green energy and clean water resources. It has also promoted the construction of anti-seismic schools in rural areas of the coast in Esmeraldas. In June 2018, once the locations with greatest need had been identified, around 250 water filters were distributed to various rural communities in Ecuador.
3. To manage training and technical assistance to strengthen partnerships institutionally. Pacari has managed various projects of technical assistance and governance training within partnerships. In July 2018 it initiated a programme implemented by Pacari and financed by the Programa Re-Emprende (= Start Again Programme), which has been managing funds from a trust for the reconstruction and reactivation of productivity in Manabí and Esmeraldas since the earthquake; this programme will benefit 60 small producers from Manabí. The company has served as a way of connecting the farming community and funds from international cooperation organisations. The aim of the project is, along with technical support, to generate a partnership structure that will be able to manage a system of fair collection, control of the production process and financial management so that quality and productivity increase. Pacari will benefit by being able to buy better quality cocoa and satisfy all its demand.



KEY STEPS

Pacari was founded in line with the vision of its creators, Santiago Peralta and Carla Barbotó, who wanted to place the producer as the point of reference and to innovate with premium organic products derived from cocoa. The leadership and constant enthusiasm of its founders has been the key factor in maintaining these practices over 16 years and ensuring that they are still present at Pacari.

When the issue within the cocoa production chain was recognised, the next step was to define priorities and actions to break the chain of brokerage between small producers and the company. For Pacari it is essential that the collaborators in the provision of raw materials and ingredients should be able to access programmes and projects that would reinforce and improve their production, social and organisational processes. Because of this sustained practice, the Pacari Foundation has collaborated with institutions that are both public and private, national and international. Some of these institutions are: PRODEL, USAID, GIZ, VECO-ANDINO (now Rikolto), Ministry of Heritage, CORPEI, KIVA, The Waterbearers, the Catholic University of Ecuador, COPADE, PROECUADOR, AL Invest 5.0 Programme, Programa Re-Emprende de la Alianza para el Emprendimiento y la Innovación (Start Again Programme of the Partnership for Entrepreneurship and Innovation), among others. The appearance of these partnerships within a practice that prioritises the small producer is reflected in



projects dealing with topics such as agro-tourism; anti-seismic construction; renewable energy and drinking water; technical assistance to improve productivity and quality; generational succession, institutional reinforcement of partnerships; biodynamic agriculture; promotion of gender equality; and traceability via a blockchain.

The company identifies its impact on society by using qualitative methods, based on which it schedules action plans and monitoring. First, it carries out mapping of problems and baselines with a methodology named MetaPlan. This methodology enables the sharing of opinions anonymously between small producers so that every aspect of the problems they face can be understood. In addition, reports of field visits are produced to verify the well-being of the small farmers and to monitor the application of polyculture and organic practices. The baselines jointly established with producers enable better monitoring of good agricultural practices and the skills involved.

Another key point that differentiates Pacari from other companies has been the accreditation of international verification bodies, which recognise the good practices that Pacari has implemented since it was founded. Among the international certifications Pacari holds are Kosher, SPP, and being part of the 'B Companies'. The brand is now recognised for its high-quality organic products and its commitment to the development of small partner suppliers. This public recognition has led to increased interest from NGOs, financial and governmental bodies, wishing to support and join the vision of Pacari.

COMPANY INPUTS AND BENEFITS

One of Pacari's principal contributions to the cocoa sector and one of its main differentiating factors is that it pioneered the cultivation of organic cocoa and the manufacture of premium organic chocolate. This differentiation has generated a growth in international demand for Pacari products of approximately 10% per year.

Pacari has been recognised over seven consecutive years by the International Chocolate Awards, winning over 200 prizes. This has earned it the title of the best organic chocolate in the world. It also holds certifications for its organic quality and for good practices in its manufacture.

By dealing directly with associations of small producers, Pacari can offer its customers a guarantee of 100% traceability. This is an advantage compared to other companies in the chocolate trade and would not be possible with intermediaries.

Price stability and control of the production capacity of each association are other key aspects. A base price is maintained of no less than 130 Euros per quintal of cocoa. With stable prices for the raw material, the company can establish strategic prices for the insertion of the brand in new markets in an efficient and functional manner.

For its social projects and for the direct way the trade is organised with farmers and the community, Pacari is an Empresa B (B Company), a recognition awarded to companies that use the power of the market to provide concrete solutions to social and environmental problems.

Sistema



SOCIAL, ENVIRONMENTAL AND/OR GOVERNANCE BENEFITS

The first impact was the re-evaluation of ancient practices in growing crops. These practices keep the cocoa crops, for example, free of chemicals but resistant against potential pests. By providing incentives and regular training to the farmers, practices are developed for diversifying organic crops that are less invasive for the environment.

Another aspect is that the self-esteem and perception of the agricultural sector have also changed. Farmers do not only taste the chocolate they have helped create, they now also know the value of their work and how special their crops are. Pacari has revolutionised the cocoa industry by giving small farmers direct and active participation. Trade that is transparent, fair and direct is encouraged. In the beginning, an association of only 400 families of farmers accompanied Santiago and Carla in this undertaking yet now there are seven associations, representing 3,500 families of small producers, and many more wish to join and are in the process of accreditation.

In addition, with the growth and recognition that Pacari has experienced, the resources the company can invest in social projects are now much greater, as in the new agreement with the World Wildlife Foundation (WWF) for wildlife conservation.

Greater recognition from governmental authorities towards the needs of farmers has also been achieved. This gives greater support to the practices Pacari employs and which are now beginning to become more mainstream. Pacari helps with finance so that small producers can form associations, buy technology and cover the costs of obtaining international certifications.

In the traditional cocoa production chain, the price farmers receive for the cocoa varies between 25 and 120 Euros per quintal. Pacari decided not to be bound by market norms and to pay no less than 130 Euros per quintal. In addition, it gives financial recognition to the efforts of producers' associations in terms of quality, social responsibility and the development of the community. This is verified by field visits and support with the organic certification process.

Company practice	SDG positively impacted
Direct trade practices with associated small producers. Direct trade is a strategy to fight rural poverty as all profits remain with the farmer and do not go to third parties.	Goal 1. Ending poverty in all its forms throughout the world
Seeking out and promoting polycultures. By having diversified cocoa plantations, the farmer also has his source of food.	Goal 2. Ending hunger, achieving food security, improving nutrition and promoting sustainable agriculture
Using only organic ingredients in the manufacture of the end product.	Goal 3. Guaranteeing a healthy life and promoting well-being for everyone at all ages
Monitoring women's access to the resources generated by cocoa in the associations. Women's involvement as associates is actively sought so that they can benefit from training and play an active role within the various associations.	Goal 4. Guaranteeing high-quality education that is inclusive and equitable and promoting opportunities for continuous learning for all
Promoting projects to improve the well-being of producers in rural areas. Providing water filters for areas that do not have reliable drinking water.	Goal 5. Achieving gender equality and empowering all women and girls
Seeking out renewable energy projects such as the provision of solar lanterns.	Goal 6. Guaranteeing the availability and sustainable management of water and sanitation for all
The whole production chain is based on the idea of maintaining sustainable growth. The key is working for the well-being and development of the associated and independent small producers.	Goal 7. Guaranteeing access to affordable, reliable, sustainable and modern energy for all
Helping with education in the subject of anti-seismic construction in cocoa-producing areas with a high risk of natural disasters and encouraging the improvement of the collection centres of each association in order to improve their productivity.	Goal 8. Promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
	Goal 9. Building resilient infrastructure, promoting inclusive and sustainable industrialisation and encouraging innovation

Company practice	SDG positively impacted
To produce end products derived from cocoa with added value. By manufacturing chocolate in the country where the cocoa originates the percentage profit received by the farmers is approximately 12%, compared to the 4% they receive when the chocolate is made in a different country from the one the cocoa comes from.	<p>Goal 10. Reducing inequality within and between countries</p> <hr/> <p>Goal 11. Making cities and human settlements inclusive, safe, resilient and sustainable</p> <hr/> <p>Goal 12. Guaranteeing sustainable methods of consumption and production</p>
Working with farmers so that they can have polycultures; in this way they have their food source and the cocoa production does not affect the land.	<p>Goal 13. Adopting urgent organic measures to fight climate change and its effects</p> <hr/> <p>Goal 14. Conserving the oceans, seas and marine resources and using them sensibly for sustainable development</p> <hr/> <p>Goal 15. Protecting, re-establishing and promoting the sustainable use of land ecosystems, sustainably managing forests, fighting desertification, halting and reversing land degradation and halting the loss of biodiversity</p>
Leading education campaigns for the conservation of 'Arriba Nacional' fine flavour cocoa. Promoting product diversity on cocoa-producing farms to avoid the practice of monoculture.	<p>Goal 16. Promoting peaceful, inclusive societies for sustainable development, facilitating access to justice for all and constructing effective, inclusive and accountable institutions at all levels</p> <hr/> <p>Goal 17. Strengthening means of implementation and revitalising the Global Partnership for Sustainable Development</p>



More info:

YouTube Channel: <https://www.youtube.com/channel/UCXYMK4AndLOW-2p070XN2SKw/videos>

TedxQuito: <https://www.youtube.com/watch?v=-W3BdtHjbKs>

https://www.youtube.com/watch?v=LgJZW6TcdDw&feature=youtu.be&utm_source=Masteraudience&utm_medium=email&utm_content=link_28&utm_campaign=J%20E1%20chegou%20o,%201%20BA%20Peixe%20ao%20Orio%20Tinto_630:1&newsletter=73

https://www.youtube.com/watch?v=vQp5oQcsZss&feature=youtu.be&utm_source=Masteraudience&utm_medium=email&utm_content=link_24&utm_campaign=Conhe%20E7a-nos%20melhor!_625:1&newsletter=73

CASE STUDY 7: – *Produbanco*



Líneas Verdes (Green Lines) Programme

It is a product that promotes environmentally friendly production via funds to finance energy efficiency projects and/or changes of machinery with the aim of improving infrastructure and incentivising the development of industry within a framework of sustainability.



YEAR, COUNTRY (CITY)

2018, Ecuador (Quito)



COMPANY WEBSITE:

www.produbanco.com



COMPANY NAME:

Banco de la Producción S.A. -
Produbanco



**WEBSITE WHERE MORE
INFORMATION ON GOOD PRACTICE
CAN BE FOUND:**

<https://www.produbanco.com.ec/banca-minorista/banca-pyme/líneas-verdes/>
<https://www.produbanco.com.ec/quiénes-somos/responsabilidad-social/>
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ECONOMIC ACTIVITY:

Financal



**COUNTRIES IN WHICH COMPANY
OPERATES:**

Ecuador



CONTACT PERSON DATA:

Lorena Salgado
Marketing Manager
salgadoml@produbanco.com



NUMBER OF EMPLOYEES:

2,298

CONTEXT

Produbanco is committed to contributing to the Agenda 2030, promoted by the UN, and is aware of the serious damage caused to the planet by the excessive consumption of non-renewable resources and the pollution produced by industrial and business sectors at global level.

Faced with this scenario, the Líneas Verdes Programme forms part of the socially responsible vision of Produbanco and its commitment to offering innovative financial solutions with added value that contribute to the sustainable development of Ecuador. The programme focuses on specialised credit to finance environmental projects in energy efficiency, renewable energy and measures to protect the environment, with the aim of supporting the country's productive and sustainable sector.

Credit is mainly directed at six sectors: food and drink, leather, textiles, chemicals, metal-mechanic and agribusiness. It focuses on sustainable industrial development: energy efficiency, equipment and machinery that reduce the use of resources, using IT tools. It offers preferential conditions concerning capital and term of operation, making this an affordable means of credit for the small and medium business.

The industries selected come from the results of a study carried out by the Centro Ecuatoriano de Eficiencia de Recursos y Producción Más Limpia (Ecuadorian Centre for Resources Efficiency and Cleaner Production), that used the methodology standardised by the United Nations Industrial Development Organization (UNIDO) which seeks to identify, evaluate and perform technical/economic feasibility analyses on the resource optimisation that may be found in companies in order to find opportunities to invest in environmental areas.



Líneas Verdes

Produbanco 
Grupo Promerica

MOTIVATION AND LEADERSHIP

Produbanco is an institution that has become established in the financial market of Ecuador thanks to the trust all its stakeholders have placed in the company as a consequence of its ethical, transparent and effective actions. Against this background, the company supports the sustainable development of all these groups. For Produbanco it is of vital importance to develop products and services that facilitate the productive development of the society within a framework of respect for the environment and seeking to ensure the well-being of future generations.

In this context, with the leadership of the Chief Executive and the enthusiasm of the team of specialists in green business, in August 2016 the market launch of the Líneas Verdes Programme was finalised. This is not only the result of a business vision but also meets the sustainability strategy of Produbanco, whose reference framework is the Agenda 2030.

OBJECTIVES

- To facilitate access to new technologies and modern infrastructure for small and medium industries to enable them to achieve maximum efficiency in their processes.
- To distribute the social, environmental and economic benefits of sustainable production in a pragmatic manner.
- To ensure the stability of all players in the production circle through the sustainable growth of the productive sectors.
- To structure a programme that not only seeks profitability and financial success but also the strict, measurable and visible fulfilment of environmental goals and objectives.
- To consolidate various processes which now have the objective of ensuring that all means of production come within a framework under which the whole value chain acquires benefits based on sustainable management to benefit society in general, according to the equation $R + D = \text{Sustainability}$.
- To finance projects through affordable credit, enabling a transition to new technologies involving not only care for the environment, but also analysis to prove the social and economic benefit. This is a definitive innovation in the context of Ecuador.



We associate the successful achievement of these objectives with support for the goals of SDG 9: To build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. This is the basis on which these objectives are structured.

KEY STEPS

The Líneas Verdes Programme has its origins in 2013, when the Development Bank of Latin America (CAF in its Spanish acronym), through a contribution of economic resources that did not need to be repaid, financed the drawing up of the first inventory of CO2 emissions for the Carbon Neutrality certification of the two main buildings in Quito and Guayaquil, as well as studies to structure a finance portfolio for projects in sustainable energy efficiency.

In addition, in 2015, with the approval of the Agenda 2030 for Sustainable Development, the fundamental bases for constructing the Líneas Verdes Programme were ratified. This comprised multi-disciplinary work analysing all the essential factors for structuring a financial solution to deal with the need to provide the market, especially small and medium business, with financial products and services to support the evolution of production towards efficient and sustainable management from an economic, social and environmental point of view.

In August 2016 the Líneas Verdes Programme was launched on the financial market of Ecuador. It was financed by a credit facility of USD 10 million granted by the FMO (the Dutch development bank). The Líneas Verdes Programme was initially aimed at the retail banking market, and was then gradually introduced to the business and corporate segment. For commercial management, Produbanco implemented a training programme, aimed at producing highly specialised executives who would take charge of coordinating the whole process of requesting, analysing and granting credit.

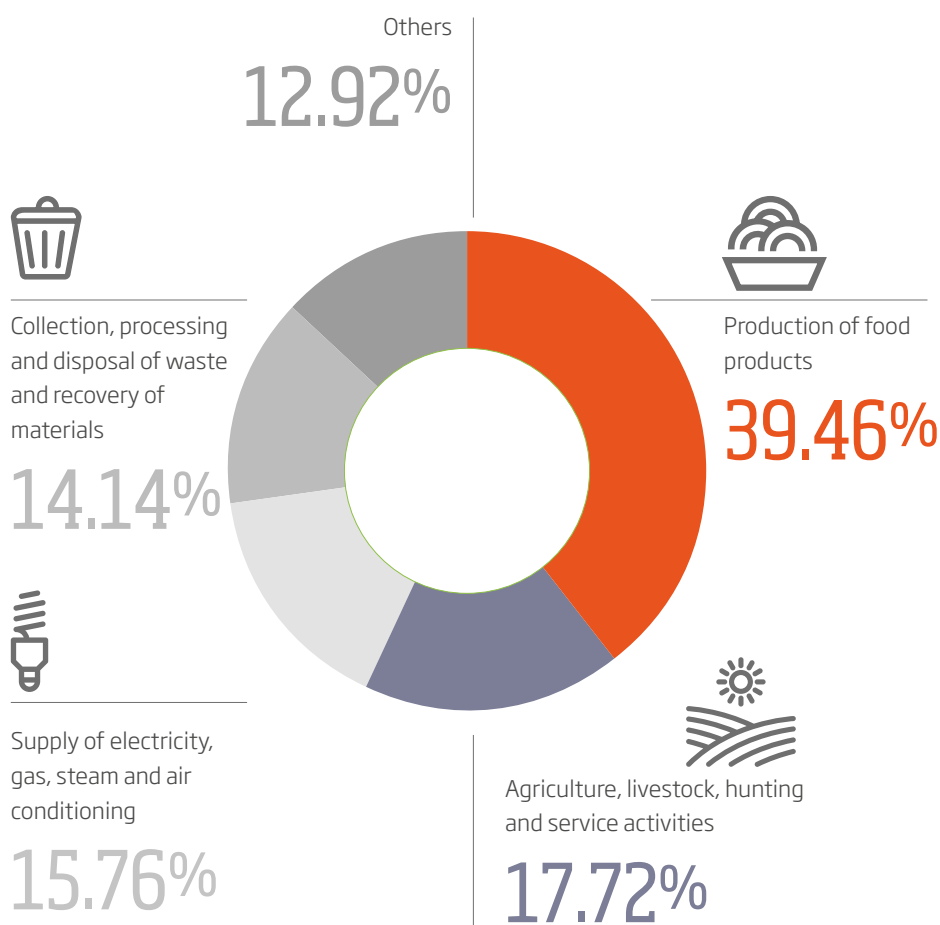
At the close of 2016 it was recorded that 92% of the credit had been distributed in three different sectors: industry 54%, agribusiness 35%, food and drink 11%.

During 2017, the programme succeeded in opening two credit facilities from the International Finance Corporation (IFC) and the Inter-American Development Bank (IDB), which provided one-off transactions or credit facilities with preferential terms and rates. Under these agreements, Produbanco committed to place a certain sum in specific segments and to apply international standards of environmental and social risk analysis.

As the programme grows, new features are added that secure quality management, such as the application of a rigorous examination of the risk aspect, which

has led to the compulsory use of SARAS methodology for credit scoring. This enhances the product as it makes it possible to see the viability of the project to be financed, not only from the economic aspect, but also in the social sphere with its repercussions on the surrounding community (employees, neighbours, work, local area, and others) and the environmental impact (climate change, CO2 emissions, implementation of the carbon footprint and water footprint, and others)

In June 2018, USD 50.4 million were distributed to the following sectors:



Strategic partnerships

CAF, FMO, IDB,
IFC, CEER

Analysis

Analysis to evaluate market opportunities in the following sectors: food and drink, textiles, tannery, metal-mechanics and chemicals.

Study

Study with clients in various sectors to validate the interest of this type of product in the market.

Diagnosis

Analysis of the bank's portfolio to identify potential clients of the Líneas Verdes product.

Creation

Creation of the Líneas Verdes product as alternative financing with terms, grace periods and environmental analysis alternatives, creating an attractive product for the market.

COMPANY INPUTS AND BENEFITS

From the launch of the programme in August 2016 until April 2018, 50.4 million US dollars have been allocated. The number of transactions during the period sums up to 74, distributed in the following segments: SMEs 40, business 26 and corporate 8.

These went into renewable energy and energy efficiency projects. The total distributed to date has gone to the following sectors of production: 50.99% to recycling, 22.06% agriculture, 15.36% hydroelectricity, 6.60% drinks, 3.08% metal-mechanics, 1.51% poultry and 0.40% chemicals. The portfolio of Líneas Verdes corresponds to a 1.3% share of the total portfolio of Produbanco.

From the financial point of view, impacts are reflected on the high indices of product recovery which no doubt has a direct effect on the scoring of this portfolio and on the income generated by interest on finance. Good management of the whole process helps present an excellent image to international finance bodies, which open the doors to further work with other strategic partnerships, allowing this programme to continue expanding.

In November 2017 the Líneas Verdes Programme received recognition for good practice in sustainable development from the Ecuador Global Compact, highlighting SDG 9 To build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

SOCIAL, ENVIRONMENTAL AND/OR GOVERNANCE BENEFITS

The Líneas Verdes Programme seeks to support fulfilment of the SDG 9 goals by promoting inclusive and sustainable industrialisation, facilitating the transition towards clean production, which encourages companies to achieve maximum efficiency and economic savings. It also helps reduce the environmental impact produced by organisations because of their activities since one of the conditions to qualify as a beneficiary of credit requires that projects reduce the impact on the environment by 20%.

It aims at helping companies to work towards a future of efficient and sustainable production that will give:

- **Their share-holders:** the results they expect and the opportunity to contribute to the generation of resources for the prosperity of the business and of the country.
- **Their clients:** innovative financial solutions based on a transition towards new technologies to enable them to work on a basis of sustainability for growth as they develop and in the future. To bring productive development to the country in a similar way.
- **Human capital:** the security of working in an organisation that provides stability, a healthy work environment and the pride of belonging to a company that cares about sustainability, and
- **The community:** the best production practices to guarantee good environmental and social performance that ensures benefits are returned to society.

The second phase of the programme is in the process of implementing products which will be offered to clients and whose sole purpose will be to channel these resources to financing the Líneas Verdes projects.

CASE STUDY 8: – Telefónica

Telefonica

Investment in Sustainable Innovation Initiative (IIS) at Telefónica

IIS is an initiative on the part of Telefónica to finance and stimulate projects likely to have a positive social and/or environmental impact in addition to creating value for the company. The projects may be new products and services, modifying products already in existence, improving internal processes or even marketing or sales initiatives. They must also be in line with the strategic change process at Telefónica, and must therefore be innovative, disruptive and able to tackle real problems with market potential.



YEAR, COUNTRY (CITY)

2018, Spain (Madrid)



COMPANY NAME:

Telefónica



ECONOMIC ACTIVITY:

Telecommunications



COUNTRIES IN WHICH COMPANY OPERATES:

COUNTRIES IN WHICH COMPANY OPERATES: Germany, Argentina, Brazil, Chile, Colombia, Costa Rica, Guatemala, Ecuador, El Salvador, Spain, Mexico, Nicaragua, Panama, Peru, United Kingdom, Uruguay and Venezuela.



NUMBER OF EMPLOYEES:

122,000



COMPANY WEBSITE:

<https://www.telefonica.com/es/web/negocio-responsable/ods>



WEBSITE WHERE MORE INFORMATION ON GOOD PRACTICE CAN BE FOUND:

<https://www.telefonica.com/es/web/negocio-responsable/nuestros-compromisos/innovacion-sostenible/inversion-sostenible-2017>



CONTACT PERSON DATA:

José María Bolufer Francia, Head of Sustainable Innovation - josemaria.bolufer-francia@telefonica.com
Natalia Jerónimo García
Sustainable Innovation
natalia.jeronimogarcia@telefonica.com

CONTEXT

Telefónica is a private telecommunications company, established in 1924, with its headquarters in Madrid, Spain. Telefónica operates in 17 countries and has 122,000 employees.

For Telefónica, the Internet and digital solutions - based on connectivity - are essential to its sustainability strategy and the achievement of the goals it has set: to improve people's lives, to protect the planet and to facilitate sustainable growth.

The SDGs constitute the most ambitious programme in history to tackle the principal social and environmental problems facing humanity and for Telefónica they have become indispensable guidelines to help build a world where nobody is left behind.

The challenge for technological and digital transformation is expressed in SDG 9, which consists in building resilient infrastructure, promoting inclusive and sustainable industrialisation and encouraging innovation. This is the principal SDG for Telefónica, but the Company also contributes to SDGs 4, 5, 8, 7, 12, 13 and 11.

The Sustainable Innovation unit, which is part of the Ethical and Sustainability Management of the Telefónica Group, is developing an initiative to stimulate internal or external ideas and projects with social and environmental impacts, enabling processes to be improved and new solutions to be created: the **Sustainable Innovation Initiative (IIS in its Spanish acronym)** in which the SDGs play an essential role.



MOTIVATION AND LEADERSHIP

For almost four years now, the IIS has represented a firm commitment by Telefónica to take sustainability to any part of the world. For Telefónica, the future of society involves making the most of the potential offered by connectivity to optimise the use of resources.

Sustainable innovation projects require medium or long term vision. This depends on the involvement of Telefónica management, which has increasingly incorporated sustainable innovation within its activity.

Telefónica works with the SDGs related to connectivity and accessibility to ICT, SDG 9, protecting the planet, SDGs 12 and 13 and sustainable societies, SDG 11.

The Sustainable Innovation Initiative is a global programme that is developed across all the countries where Telefónica has a presence: Germany, Argentina, Brazil, Chile, Colombia, Costa Rica, Guatemala, Ecuador, El Salvador, Spain, Mexico, Nicaragua, Panama, Peru, United Kingdom, Uruguay and Venezuela.

Previous winning projects:



Movistar+ 5S TV in Spain (2016 Call)

First accessible TV in the world

The Movistar+ 5S app allows people with a sight or hearing disability to enjoy a wide range of films and Movistar+ series via a triple system of sign language, subtitles and audio description.



Fire prevention drones (2017 Call)

Early detection of forest fires by drones scouring the affected areas and sending information back to control teams.



Smart energy for SMEs (2017 Call)

This is an integrated energy management system that up to now has been focussed on heavy consumers of energy. Implementing Smart Energy for SMEs could reduce the emission of 20 tonnes of CO₂.



Project Phoenix (2016 Call)

The objective is to provide cellular connectivity by satellite in response to natural disasters, using a portable bag that would enable communication by satellite.

OBJECTIVE(S)

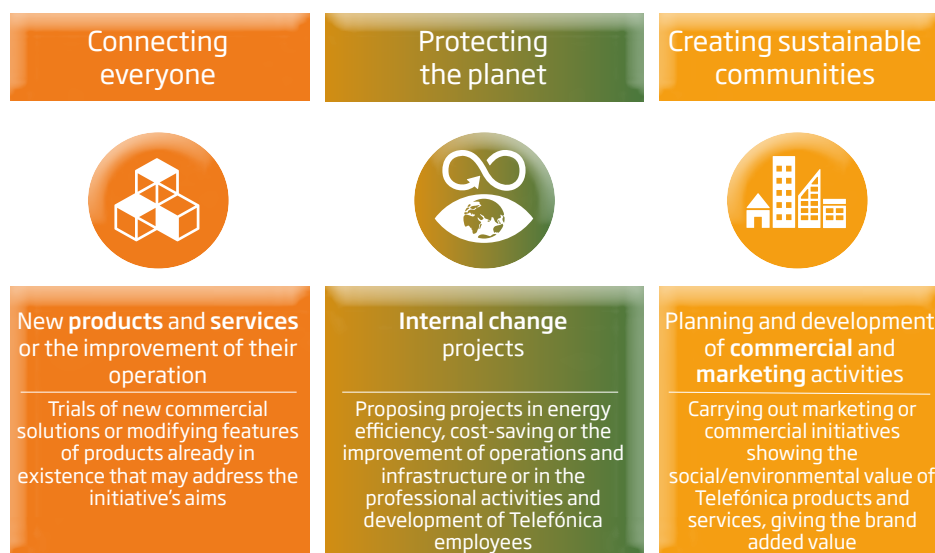
The IIS seeks to stimulate solutions to tackle global challenges where the activities of Telefónica may have a positive impact.

To achieve greater reach and impact, the initiative addresses 3 concepts linked to SDGs.

- **Connecting everyone - SDG 9:** Providing connectivity and services to everyone everywhere. All services must be adapted and developed to ensure everyone can use them. This technology may also enable people with disabilities to improve their quality of life.
- **Protecting the planet - SDG 12 and 13:** Developing new ideas to promote the principles of the circular economy in Telefónica's operations as well as initiatives promoting mitigation of and adaptation to climate change. In addition, new Eco-smart services and products can help tackle the main environmental problems facing society.
- **Sustainable societies - SDG 11:** Driving forward projects to make cities and human settlements inclusive, safe, resilient and sustainable. Encouraging an inclusive culture at work in which the variety and individuality of beliefs, lifestyles, talents and skills are welcomed and approved in order to produce new ideas and make better decisions.

How does the Sustainable Investment Initiative work?

Sustainable Innovation Projects



KEY STEPS

The IIS came into being with the intention of creating beneficial and measurable social impact together with an economic return for the Group in all the territories where Telefónica has a presence.

The ISS has been supported and backed by the **Management Committee of the Telefónica Group**, the panel of **Telefónica stakeholders and the areas of HR, Product Innovation, Internal Communication and Strategy**.

All areas, departments and management bodies of all Telefónica operations at global level have been invited to participate in the initiative and have been able to contribute their ideas. The selected ideas are developed by the same area that introduced them, which generates additional motivation in the team developing the project. In this way, each and every area of the Telefónica Group is guaranteed to take part, either directly, as the organisation behind the initiative, or indirectly.

Telefónica believes it is essential to **involve all employees** in a responsible and sustainable business model; one of the objectives of this initiative is therefore to make employees aware of the need to tackle social and environmental problems, as well as to include sustainability criteria in its usual activities, while also encouraging the concept of sustainable innovation, not forgetting the economic and social impact that this may produce.

The IIS focused in its first three years on promoting and accelerating internal initiatives that may generate a positive impact on society and which require the participation of employees and business units. In this, the fourth year, the objective has been broadened to also allow suppliers to participate as well as business start-ups in which the group invests.

Concerning the resources needed, this initiative required a budget of Euro 350,000 to stimulate the development of the various projects, together with a selection team responsible for analysing all the applications to choose the winning projects and, in some cases, the collaboration of external bodies or agents to support the projects with their knowledge, such as universities or foundations, among other bodies.

COMPANY INPUTS AND BENEFITS

All projects have to be presented with a commercial business model for the Telefónica Group. The objective is to guarantee that the investment being made will lead to an economic return for the company in the future.

The principal difference is that the projects presented are not initially required to have the same rates of return on investment as are required from traditional communications' projects. In many cases, the main obstacle for these projects to being initially taken on, is that their potential return is lower than more traditional projects, so that business units will not at first take them on.

However, when they have the option of receiving an initial investment through this initiative, those in charge of the unit become fully committed, for the following reasons:

- The potential social value they bring.
- They are receiving the resources necessary to develop the projects.

From the start of this initiative, a total of over Euro 350,000 has been invested and over 200 ideas have been received from all operators in the Telefónica Group in both Europe and Latin America. This relatively small amount of money has made it possible to invest in nine innovative projects.

In 2017, one hundred projects were presented and the geographical distribution and subjects tackled were as follows:



SDG 9

21%

Projects related to
"Connecting everyone"



SDG 12 and SDG 13

34%

Projects related to
"Protecting the planet"



SDG 11

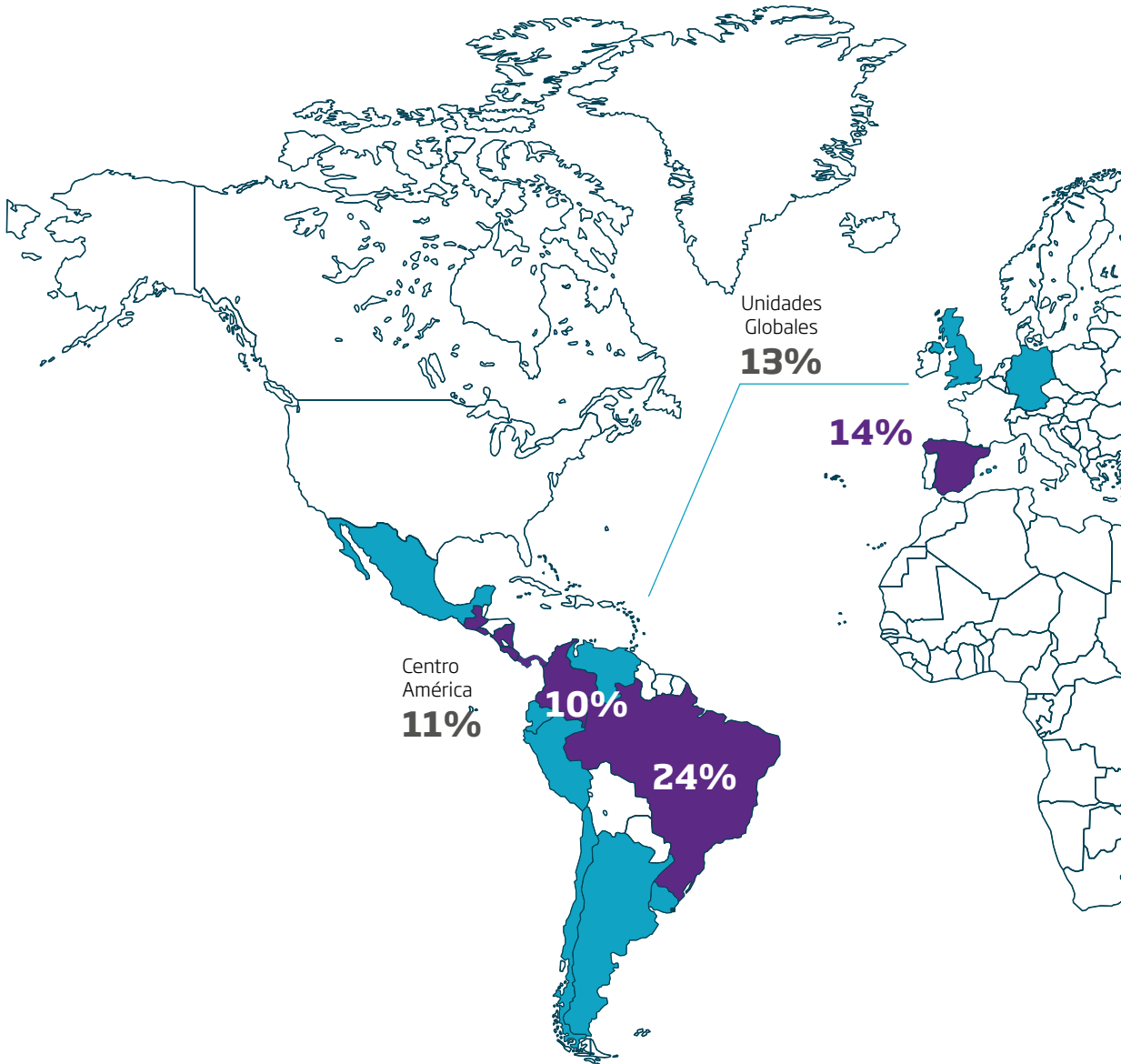
34%

Projects related to
"Sustainable cities"

11%

Others

Countries of origin of projects presented in the 2017 call



SOCIAL, ENVIRONMENTAL AND/OR GOVERNANCE BENEFITS

Each of the projects presented must indicate what the social or environmental impact is, since this is one of the main criteria for selection.

The initiative is structured along three principal lines of action:

- Connecting everyone is aimed at people who live in areas where there is no coverage or communication service or people with some type of disability.
- Projects such as “Internet for All” and “Pervasive SUB” have the respective aims of connecting populations living in remote areas and helping with the social inclusion process for deaf and blind people.
- Sustainable societies: Solutions are sought to improve life in cities, anticipate or undertake actions in emergency situations and promote a culture of inclusion at work. One of the projects financed is Fire Prevention Drones, whose purpose is the early detection of fires in forest areas using autonomous drones from the base stations to provide images, measurements and information from the air.
- Protecting the planet: An initiative directed at encouraging the principles of circular economy as well as initiatives that promote mitigation of and adaptation to climate change. The Smart Energy Project for SMEs seeks to improve energy efficiency in buildings, and therefore make savings for businesses.

FUNCTIONING OF THE FIRE PREVENTION DRONES PROJECT

1. Sensors (heat, smoke, wind) distributed at the Telefónica telecommunications towers to detect a potential fire.
2. An alarm is sent to the control centre and to the drone.
3. The hangar where the drone is kept opens automatically; the drone flies autonomously over the area of the potential fire and captures information with embedded cameras and sensors.
4. The information is sent in real time to the control centre thanks to IoT.
5. The drone flies autonomously back to the hangar, where it recharges automatically.



More info:

<https://www.telefonica.com/es/web/negocio-responsable/nuestros-compromisos/innovacion-sostenible/inversion-sostenible-2017>

https://player.vimeo.com/external/234844961.sd.mp4?s=f40beff9122ad168e8d334d8d42547b19fed9ccc&profile_id=165&download=1

CASE STUDY 9:

– Unilever



Towards a new economy: the Cif case

One of the objectives of the Unilever's Sustainable Living Plan is to reduce the environmental impact of the manufacture and consumption of its products. Cif, one of the 22 sustainable brands of the company, reformulated the life cycle of its detergents, seeking to make a positive impact and accelerate the transition towards a circular economy.



YEAR, COUNTRY (CITY)

2018, Argentina (Buenos Aires)



COMPANY NAME:

Unilever de Argentina



ECONOMIC ACTIVITY:

Global consumer goods Company: food, personal care, household cleaning, soft drinks and beverages.



COUNTRIES IN WHICH COMPANY OPERATES:

Operations in over 190 countries in Asia, Europe and America



NUMBER OF EMPLOYEES:

161,000 worldwide
4,600 in Argentina



COMPANY WEBSITE:

<https://www.unilever.com.ar/>



WEBSITE WHERE MORE INFORMATION ON GOOD PRACTICE CAN BE FOUND:

<https://www.unilever.com.ar/sustainable-living/the-unilever-sustainable-living-plan/waste-and-packaging/>
<https://www.unilever.com.ar/news/comunicados-de-prensa/2018/unilever-llama-a-tomar-accion-contra-el-desperdicio.html>
<https://www.unilever.com.ar/sustainable-living/sustainable-living-news/Menos-residuos-mas-reciclaje.html>



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CONTEXT

Unilever is one of the leading companies in food, personal care and household cleaning, with sales in over 190 countries, reaching 2.5 billion consumers every day. It has 161,000 employees and in 2017 generated sales of € 53.7 billion at a global level. It has had a presence in Argentina since 1926, employs 4,600 people and markets brands including Ala, Skip, Drive, Vivere, Comfort, Cif, Vim, Clear, Axe, Sedal, Rexona, Dove, Lux, Lifebuoy, Pond's, Suave, Hellmann's, Knorr, Maizena and Lipton.

In 2010 the company launched the Sustainable Living Plan at the global level, that focuses on three areas: improving the health and well-being of one billion people; reducing by half the environmental impact of the manufacturing and use of products; and improving the lives of millions of people.

The Plan aims to integrate sustainability into the whole of the value chain, from production to consumption, promoting a business model that incentivises the circular economy. This model is designed to boost responsible competitive growth, aligned with various stakeholders and benefiting the environment and the community. **The Plan is what gives the company purpose, stimulates innovation and reinforces the emotional connection between brands and their consumers, as well as mitigating risks and reducing costs.**

At the same time, **it is aligned with the SDGs**, which are aimed at guaranteeing the health, security and future of the planet over the next fifteen years. During 2012 and 2013, **Paul Polman, Global CEO of Unilever, joined the High-Level Group of Eminent Persons** to draw up the UN post-2015 development agenda. The Group was made up of 27 members representing the government, civil society and the private sector, in charge of advising the Secretary General of the UN on the shaping of the SDGs.

The objectives set at the UN coincide with the objectives set in the Unilever Plan. In addition to contributing through its operation, manufacture, logistics and management of human resources, Unilever helps turn the SDGs into reality through its brands; for example Cif.

Cif has been present in the market for 27 years in Argentina, Bolivia, Chile, Paraguay, Peru and Uruguay, with a variety of homecare products, including dishwashing products, sponges, creams, gels and so on.



The brand has always been interested in circularity. It offers improvements in product innovation that contribute to SDG 12, which guarantees a sustainable method of production and consumption and, specifically, fulfilment of goal 12.5 through Recycling in the City, an awareness-raising campaign which invites local people to sort and recycle their waste.

MOTIVATION AND LEADERSHIP

Unilever buys over two million tonnes of packaging per year worldwide and is aware of the causes and consequences of the linear model, “take, make and waste”. That is why it is trying to move towards a circular system. According to the World Economic Forum (WEF), the current linear economic model extracts 65 billion tonnes of raw materials per year, of which 80% end their life cycle as waste, representing a loss of approximately Euro 2.4 trillion per year (Chile Circular, 2017)¹.

In the case of Argentina, the average daily waste per person is 1.03 kilos, which amounts to 16.5 million tonnes per year (El Cronista, 2018)². In this context, waste is perceived as one of the main environmental problems of the country and there are great challenges in reducing, reusing and recycling it. There is as yet no record or estimate of the amount of material recovered.

The benefits to Unilever are obvious: waste from plastic packaging represents a loss of 80 billion dollars to the global economy each year and the circular economy is a mechanism that benefits the planet as well as business.

Paul Polman says: “As an industry of mass consumption, we must tackle the challenge of single-use plastic and make the change from a linear model of consumption that takes materials and throws them away to a circular model, starting with the design”.

To fulfil this commitment, the company seeks out talent with awareness, innovation, passion for consumers and ambition for their personal and professional development. Verónica Caballero, Head of Research and Development (R&D) at Unilever Cono Sur realised as soon as she joined the company that her passion lay in product creation: “Challenging what I see and transforming it into something more relevant to the consumer attracted me to the company 20 years ago and this is what I encourage in my team” says Caballero.

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1. Chile Circular. (2017) Available at: <http://www.petarostojic.cl/chile-circular/> visit dated 2 September 2018
 2. Producción de basura: cuál es la realidad en Argentina y qué se podría hacer (Waste production: what is the reality in Argentina and what could be done). (2018) Available at: <https://www.cronista.com/responsabilidad/Produccion-de-basura-cual-es-la-realidad-en-Argentina-y-que-se-podria-hacer-20180302-0075.html> visit dated 2 September 8

Similarly, those in her team tackle innovation right from the beginning, in the design of the product, and are divided into tasks such as formulation, packaging, understanding the consumer and processes, while also thinking about the environment and looking for improvements in product development.

At the same time, one of the biggest challenges lies in the use consumers make of the products. In light of this, Unilever and the Ministry of the Environment and Public Space of the Municipal Government of Buenos Aires signed a collaborative agreement in 2017 with the aim of encouraging initiatives to preserve the environment in the City of Buenos Aires. The agreement aims to generate specific actions to get local people involved in sorting waste, to stimulate the use of green points, the city's collection centres, and to promote changes in people's habits and responsible consumption. In addition, the agreement seeks to generate initiatives to encourage businesses and factories to reduce the amount of waste they send to landfill.

Paul Polman says:
"As an industry of mass consumption, we must tackle the challenge of single-use plastic and make the change from a linear model of consumption that takes materials and throws them away to a circular model, starting with the design".



OBJECTIVES

One of the objectives of the Sustainable Living Plan is to reduce by half the environmental impact of the manufacture and use of the products. Similarly, within the framework of this objective, the company contributes to the fulfilment of SDGs 6, clean water and sanitation, 7, affordable, non-polluting energy, 12, responsible production and consumption, 13, climate action, 14, life below water, 15, life on land and 17, partnerships to achieve the goals.

Paul Polman leads the Global Commission for Business and Sustainable Development, whose objective is to encourage the business sector to achieve the SDGs.

From the environmental objective of the Sustainable Living Plan, specific goals associated with Cif's advances that specifically contribute to SDG 12 are given in a local context; there is a need to generate greater awareness of the habit of washing at home, encouraging people to adopt sustainable practices. In this sense, the specific objectives are:

- **Reducing the consumption of water in the manufacturing process:** as it is a concentrated formula, it yields 2.5 times more than regular dishwashing products.
- **Guaranteeing that all plastic packaging is totally reusable, recyclable or able to be composted by 2025:** the packaging uses 40% less plastic than traditional packaging made of this material, it is 100% recyclable and 50% of the PET is recycled post-consumption.
- **Accelerating efforts to construct a more circular economy:** efforts made in innovation are extended to the whole value chain. The biggest challenge lies in the consumption and post-consumption of the product.

In line with this last objective, within the framework of the agreement drawn up with the Ministry of the Environment of the City of Buenos Aires, Unilever is driving the incentive for Recycling in the City, which encourages local people to take recyclable packaging to the city's green points.

People can take any clean, dry, empty packaging to the green points and receive in exchange a discount coupon that can be used in certain shops and supermarkets towards the purchase of Unilever personal care and homecare products.



OBJECTIVES

Security and quality are key factors in the production process, cutting across all areas of R&D. In accordance with the Guide for Business Action on the SDGs (SDG Compass 2016)³, the **leadership strategy** is what initiated this circular process, starting from one of the three major objectives of the Sustainable Living Plan: to reduce by half the environmental impact linked to business, which implies reducing greenhouse gas (GHG) emissions, water, waste and packaging, and ensuring that the supply of these is 100% sustainable.

In this scenario, the production of the Cif detergent was developed through the following **priority stages throughout the value chain**:

- 1. Raw material and design:** the bottle has 50% of its plastic recycled post-consumption. Unilever works with partners who make pellets from 50% recycled bottles and 50% virgin PET. In this way, 418 tonnes of virgin resin are replaced by recycled PET.
- 2. Production:** the concentrated formula compared with regular dishwashing products enables the consumer to use less water (-60%), plastic (-35%) and CO₂ emissions (-35%).
- 3. Distribution:** the product is produced in a factory that does not send waste to landfill. The production plant located in Argentina has achieved, through various initiatives, a reduction of 35% in energy, 25% in CO₂ emissions and 65% in waste generation. And products are taken to the point of sale using hybrid transport units that totally or partially use CNG, a fuel that as well as saving costs, achieves a reduction of up to 30% of CO₂ emissions per km travelled compared with conventional diesel engines. This change in the fuel used results in a reduction of 650 tonnes of CO₂, equivalent to 145 plane journeys around the world.
- 4. Consumption:** at the sales points, Unilever has developed visibility materials made of bioplastic and eucaplac, materials that are 100% biodegradable, recyclable and renewable, and generate a saving in CO₂ emissions of 90% and 98% respectively.

3. SDG Compass. La Guía para la Acción Empresarial en los ODS. (Guide to Business Action for SDGs) (2016) Available at: https://sdgcompass.org/wp-content/uploads/2016/06/SDG_Compass_Spanish-one-pager-view.pdf visit dated 2 September 2018



5. Post-consumption: Recycling in the City is a campaign to raise awareness of the habit of recycling as a practice promoting sustainable development; in this initiative the consumer takes the lead and assumes responsibility for good practice to take care of the planet. The consumer is the key actor who gives the life cycle a fresh start, as discarded packaging is reused to generate new packages. Key partners (supplier companies) cleanse the bottles at their plants, reducing their size, and making flakes of PET that go into the production process to begin a new cycle.

These stages demonstrate that the production process of the detergent **contributes directly to SDG 12**, in goals 12.5 and 12.4. The latter states that by 2020 there should be rational ecological management of chemical products and their waste throughout their life cycle.

In 2018, at a new Unilever “Sustainable Businesses” event, the company communicated its efforts in moving to the circular economy by showing the progress of its Plan. In this way, Unilever is positioning itself as a leader in this area, inviting the business sector at local level to join this initiative.

Communicating the life cycle of Cif within a framework of participation shared between various stakeholders was the central focus of the meeting.

COMPANY INPUTS AND BENEFITS

Cif, together with Unilever’s sustainable brands, grew 46% more rapidly than the rest of the business in 2017 and produced 70% of the company’s growth. This trend shows that introducing sustainability into the value chain produces economic benefits that are not at the expense of the planet or of human beings. Furthermore, it demonstrates that it is possible to generate sustainable value through the circular economy.

In this sense, as was mentioned previously, Unilever has made a commitment to guarantee that all its plastic packaging is totally reusable, recyclable or suitable for composting by 2025. The life cycle of Cif helps reach this objective by transforming the “resources-product-waste” consumer model by one which is totally circular.

Paul Polman, CEO of Unilever, states: “To tackle the challenge of plastic waste in the oceans we need to work on systemic solutions (those that stop plastic entering the waterways in the first place). We hope these commitments will encourage others in industry to make progress together to guarantee that all our plastic packaging is completely recyclable and recycled. In addition, we need to work in collaboration with governments and other interested parties to support development and increase the collection and reprocessing of infrastructure, which is essential in the transition towards a circular economy”.

SOCIAL, ENVIRONMENTAL AND/OR GOVERNANCE BENEFITS

Environmental benefits are based on savings in GHG emissions and water and on recycling plastic. The social benefit of the process lies at the endpoint of the cycle: post-consumption. As already mentioned, this is through Recycling in the City. This initiative has reached over one and a half million consumers through communication campaigns.

Moreover, Recycling in the City involves many stakeholders who see benefit from the project:

The Government of the City of Buenos Aires, which is increasing the volume of recyclable material and decreasing the waste going to landfill; consumers receive economic benefit and acquire new habits of responsible, sustainable consumption; clients (shops and supermarkets) acquire a competitive advantage that differentiates them and they join with Unilever to work on current topics on the sustainability agenda. For their part, recycling cooperatives also benefit because they have the business opportunity to increase the volume of materials they receive.

Unilever believes that the more they can reduce, reuse and recycle packaging, the greater will be the savings in the cost of materials, energy and transport, and in waste disposal. This is why this initiative will continue to expand to reach more people and promote habits of responsible consumption.

The case of Cif has been made possible by building partnerships with other stakeholders, such as key providers, NGOs and the government. The environmental impact challenge to which the company is committed is a complex one and only by working with others will it be possible to achieve the best results in terms of SDG 17 and to envisage meeting the 2030 Agenda for global development.





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