

THE STORY OF CONTARINA

CASE STUDY

#4

The public company Contarina serves the area of Treviso in Northern Italy and is EU's top performing in waste prevention and recycling in a wide area. What is their secret to recycle twice the EU average and generate five times less residual waste?



THE INGREDIENTS FOR SUCCESS

Veneto is one of Italy's 20 regions. The region, of just under 5 million inhabitants, beats the rest of the country with its 65% recycling rate. Within the region of Veneto the public company Contarina is responsible for the management of waste in most of the Province of Treviso, including the capital Treviso. Here they serve 554 000 inhabitants in 50 municipalities and has reached levels of source separation of up to 85% and generates only 53kg of residual waste per inhabitant and year. In contrast, the EU average level is a 42% source separation and a 285 kg per inhabitant and year of residual waste generation.

It's not only these impressive rates that make Contarina a zero waste champion, but its commitment to continuously improve its performance and advance towards zero waste. It has its mind set on the goal of recycling 96,7% of its waste by 2022 and reduce the residual fraction to 10 kg per inhabitant and year. A proper commitment indeed!

If Contarina has managed to constantly increase its recycling rates year after year is thanks to the decision taken by the Province (the planning unit in Italy) back in 2005 to keep incineration out of the system, which has proven to be a pre-condition for maximizing recovery of value. Without the obligation to send

waste for burning but with the pressure from the market to increase recycling Contarina has continued to increase recycling rates when others have plateaued because of put-or-pay contracts to feed incinerators.

The second crucial ingredient has been good political will and cross-party consensus over the last decade. This is a remarkable point because among the 50 municipalities there have been mayors from different political parties ranging from left to right, yet they have managed to reach a consensus on waste management which shows that Zero Waste is above all about common sense and good management leading to increased operational efficiency and monetary savings.

Thirdly the operational management has been extremely well-performing; a team of professionals has worked to keep advancing in the right direction and never stopped optimising the system even when entering domains where no other district of this size has been before.

Last but definitely not least, any good project needs to count with good support and counseling and Contarina, has counted with the support of experts who are involved in the Zero Waste network, which has helped move things in any crucial moment.



- » 100% Public Company
- » Serves 50 municipalities - 645 employees

THE STORY BEHIND THE PUBLIC COMPANY

Contarina is a public company owned by the Priula Consortium (Consorzio Intercomunale Priula) and the TrevisoTre (TvTre) Consortium which together represent 50 municipalities. Contarina started in 1989 as a half-private half-public enterprise providing services to 5 municipalities in the Priula Consortium and little by little it expanded to provide services of collection, treatment, management and communication for more municipalities. In 2006 TvTre Consortium enters in Contarina enlarging the number of municipalities and acquiring 40% of the shares of Contarina which effectively becomes 100% public.

The company's daily objectives are to increase the percentage of separate collection, to reduce the amount of waste produced (in particular the percentage of non-recyclable waste), to raise the quality of the collected recyclable material, and to improve the service offered, optimising the cost-benefit ratio. The company also manages processing

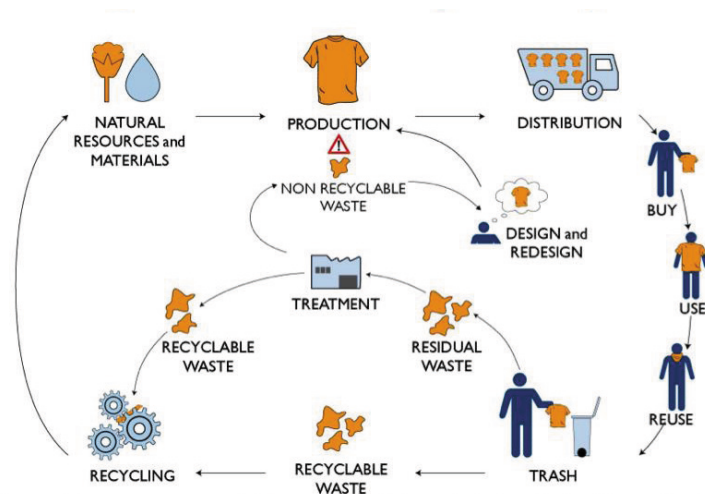
plants that handle non-recyclable dry waste and Organic and Green waste. Currently, Contarina is realizing two new plants for the development of recyclable waste and the recycling of absorbent products for personal care.

Municipal services including waste collection and handling but also street sweeping, special and hazardous waste collection and cemetery management, are also handled by Contarina.

The success of Contarina is the result of a combination of several factors:

- » Great source separation at source,
- » Waste reduction incentives
- » through pay-as-you-throw system,
- » Transparency and efficiency,
- » Political will and commitment to
- » continuously improving the system

» Integrated waste management system



The integrated waste management system starts from the design of objects and packaging, in consideration of the entire life cycle, with the goal to be sustainable in all its phases.

EFFICIENT SEPARATE COLLECTION AT SOURCE

In order to achieve the exceptional separate collection rates of 85% the system needs to be extremely efficient. This can only be achieved with the use of intensive and adapted curbside collection combined with pay-as-you-throw system.

Municipal solid waste is collected in five or six major waste-streams: non-recyclable dry, organics (food scraps), garden waste, paper and cardboard, glass, plastic and tin. In some Municipalities glass is collected alongside plastic and tins. They are placed in special colour-coded bins that are readily available, free of charge and collected curbside. The collection of different waste streams takes place in different days of the week; the fraction collected most often is the most important one, i.e. food-waste, the one collected less often is the residual waste, which is also the less important one in volume. Paper, green waste and other recyclables are collected between once and three times per week.

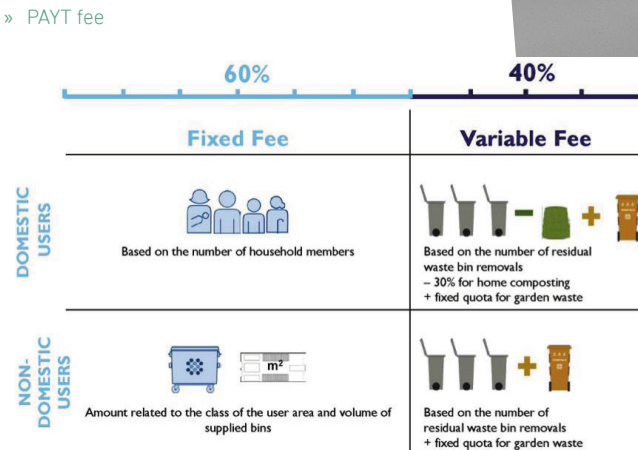
Curbside collection is supplemented by the EcoCentri (Eco-Centres): cen-

tres equipped with large containers » PAYT fee for other types of urban waste: from aggregates to bulk, from electrical and electronic appliances to hazardous waste.

"Pay-as-you-throw": the less waste you generate the less money you pay

Another fundamental principle of the "Contarina Model" is that the cost of the service to the user (family, company, corporation or other entity) is proportional to the amount of waste produced. This provides an incentive to do the right thing and minimize waste generation as well as promote home composting.

More concretely this boils down to splitting the fee for waste generation into two parts; one fixed and another one variable. The fixed part depends on the number of members living in the household whereas the variable portion is calculated according to two variables. One penalizes the number of times the non-recyclable dry waste bin is emptied. The other one is a bonus for those households doing home-composting which see a reduction of 30% on the variable fee.



- » Curbside collection
- » Types of bins

CREATING JOBS AND SAVING COSTS WITH ZW STRATEGY

More concretely this boils down to splitting the fee for waste generation into two parts; one fixed and another one variable. The fixed part depends on the number of members living in the household whereas the variable portion is calculated according to two variables. One penalizes the number of times the non-recyclable dry waste bin is emptied. The other one is a bonus for those households doing home-composting which see a reduction of 30% on the variable fee.

The UN Environmental Program lists the so-called "Green Jobs" among those with the greatest growth potential in the near future. Employees of Contarina have "green jobs" and have contributed to the development of the company which has seen the number of its employees grow, thus confirming the world growth forecasts of the sector also at the local level. In 2014, for the city of Treviso, Contarina's operational costs were contained during which time they also created 26 new job positions.

The company also aims to offer new services to the territory with particular attention on the social implications of its activities. For many of the services provided (e.g. cleaning, managing the EcoCentri, maintaining public parks, etc.), the company partners with social cooperatives who work in employing disadvantaged people.

Contarina's commitment in this field continues through the implementation of social projects that promote the reintegration of the long-term

unemployed and those who are ineligible for assistance. This integrated management system generates positive effects that go beyond simple waste collection: the system extends to the environment, the economy and into people's lives.

The percentage of separate waste collection in 2013 in the municipalities managed by Contarina reached almost 85%, with peaks in some municipalities around 90%, and ranks far above the national average (currently around 42%) and the regional one for Veneto (Veneto, population 5 million, is currently around 65%, the highest regional average in Italy).

Even the production of non-recyclable dry waste (kg*inhabitant/year) has reached optimum levels. On average, each inhabitant of the municipalities managed by Contarina produces 53 kg of waste per year. More separation, and therefore, less production of non-recyclable dry waste helps contain the costs that are on average about €178 per household and year in Priula.

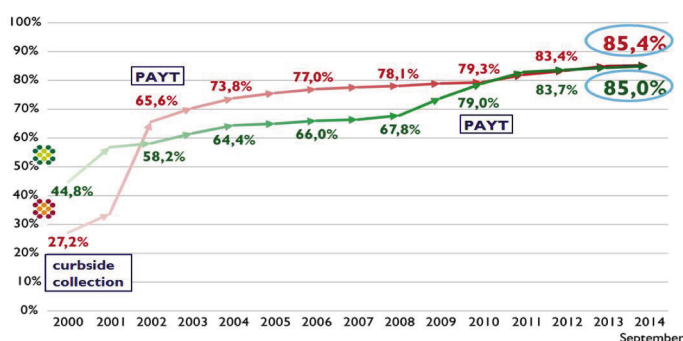
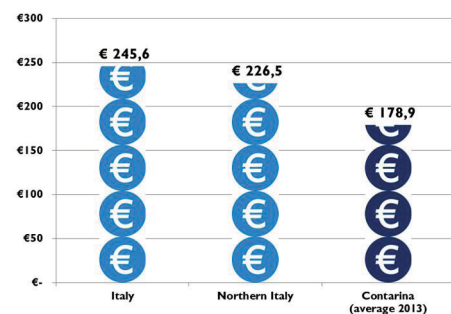
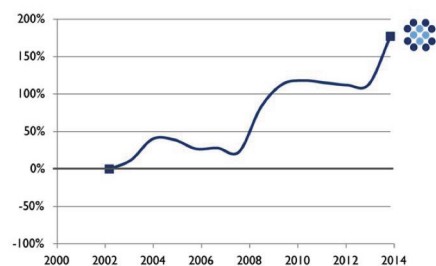
When comparing with the costs of rest of Italy one can see how good management and recycling more it also saves money to the taxpayers. Over the last 15 years waste management costs in Contarina have increased only 8% whereas at national level these costs have grown 70%, and the general cost index has grown around 30%.

TRANSPARENCY – A KEY ISSUE FOR CONTINUOUS IMPROVEMENT OF THE SYSTEM

It is important that citizens and other stake-holders have a clear picture of how the system works in order to allow the incentives to do its work in facilitating doing the right thing. For the operator it is also key to manage the data in a smart way in order to see where there is room for improving and optimising the system.

This data system consists of a single database where each user's data can be viewed together with their geographical position, the bins provided, the recorded number of collections and the applicable rates. This unique database also allows users, through the Internet, to view information associated with their consumption and to report any discrepancies.

Creation of 'Green jobs' in Contarina



FROM BURNING RESIDUALS TO ZERO WASTE

During the last decade Contarina has used a mechanical biological treatment (MBT) plant to treat the residual waste. The outputs of the MBT process were to turn 33% of the residual waste into Refuse Derived Fuel which was subsequently burnt for energy recovery and to send the remaining part of low- calorific waste to landfilling. However with the adoption of zero waste principles it sought a better and higher use for these materials.

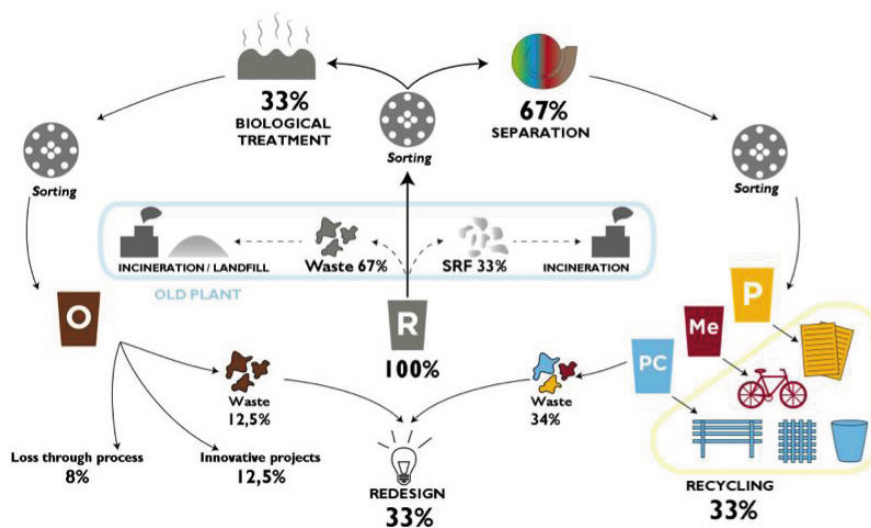
In 2015 Contarina is set to start the operation of a Material Recovery and Biological Treatment (MRBT) plant which is remarkably more efficient in recovering further materials also from residual waste for recycling operations.

With the new system to manage residual waste it is possible to reduce the final residues that need to be disposed of to only 46,5% of the total residual waste. Since 85% of the waste is source separated, 15% amounting to 53 kg per inhabitant and year is processed and only 46,5% of this 15% or 53 kg is disposed of. This

results in only 24kg per inhabitant and year of the total waste produced being stabilized and sent to landfill.

Additionally, contrary to incineration or landfill, this system makes waste very visible to allow for researchers and designers to study what cannot be recycled in order to design waste out of the system.

On top of recovering more materials from residual waste this system works with cold treatments and is **a lot more cost-efficient and safer from public health perspective than any kind of incineration**. Also the capital investment for the machinery necessary to run this alternative process is many times cheaper than incineration (around 4-5 times cheaper at a same capacity). But the most important angle, is the adaptability of such a way of processing residuals, since it is capable to manage progressively more separately collected materials (organics, paper, plastics, etc.) and less residuals, thereby keeping cross-consistency with strategies to maximize separate collection and waste reduction.



» Residual waste treatment (present and future developments)

FUTURE ZERO WASTE OBJECTIVES

Contarina has achieved outstanding results already but far from being complacent it seeks to go further and further in what personifies the zero waste spirit; never giving up on the efforts to reduce waste.

The mayors of the municipalities within the public company are committed to accelerate the path towards the goal of "Zero Waste". In order to do so they have set up the following objectives by 2022:

- » reduce the current total amount of waste generated, aiming for 280 kg per inhabitant and year (average EU in 2012 was 492kg);
- » reduce the current amount of residual waste, aiming for 10 kg per inhabitant and year (average EU in 2012 was 285kg);
- » reach separate waste collection of 96.7%;
- » reduce the current bulk waste by 80%, aiming for 2 kg per inhabitant and year;

- » increase participation in household composting by 80% compared to the
- » current percentage (up to 40% of participation);
- » continue optimising activities to allow for energy and fossil fuel savings;
- » support public or private initiatives to set up separate waste collection centers and raise awareness about waste reduction, reuse and recycling, as well as increasing number of specialised centres which intercept usable objects before they become waste;
- » promote "Zero Kilometer" policy for local food to improve consumption of proximity products which generate less food and packaging waste;
- » establish the "Zero Waste Observatory" with the aim of constant monitoring the residual fraction in order to be able to redesign it.

- » Future goals towards Zero Waste (by 2022)



For more information visit:

www.zerowasteurope.eu

www.facebook.com/ZeroWasteEurope

Or contact:

info@zerowasteurope.eu

Twitter @zerowasteurope

Sources

GHK, Gipuzkoako Hondakinen Kontsortzioa Ibaiondo Industrialdea 27-3, 20120 Hernani

Gipuzkoa; www.ghk.eus

Zero Waste Europe was
created to empower communities
to rethink their relationship with the
resources.

In a growing number of regions,
local groups of individuals, businesses
and city officials are taking significant
steps towards eliminating waste in
our society.

Case study by Joan Marc Simon

Visual design by Petra Jääskeläinen

Zero Waste Europe 2018

Attribution-NonCommercial-ShareAlike

4.0 International



Zero Waste Europe gratefully acknowledges financial assistance from the
European Union. The sole responsibility for the content of this event mate-
rials lies with Zero Waste Europe. It does not necessarily reflect the opinion
of the funder mentioned above. The funder cannot be held responsible for
any use that may be made of the information contained therein.