

The Italian job

Milan's food waste recycling levels have quadrupled. **David Newman** explains how the source-segregated system works.

By the end of 2012, local authorities in Italy had a target to hit 65% recycling. In large cities, with dense populations, this was always going to prove challenging – and very few urban conurbations have managed it. But Milan is now showing the way, having just hit the goal thanks to its focus on food waste.

introduced transparent bags for residual waste. The contents were picked through meticulously, revealing considerable potential to recycle more glass, paper and plastics, as well as recover food. As Paola Petrone, general manager at Amsa explained at last year's 'Milan Recycle City' conference:

"We'd got to a point of 'no growth' in our recycling rates and so decided to introduce a food waste [collection]. There was a long period of studying and collection of data [and then] a strong communication campaign [to launch it]. We've learnt from our mistakes."

Following two failed attempts to collect organic waste, the city's waste contractor Amsa (Azienda Milanese Servizi Ambientali, A2A Group),

Separate collections for food waste began in November 2012 in one quarter of the city. Residents were given kitchen caddies and rolls of compostable bags. Over the course of the next two years, further collections were added in the remaining quarters – and now every resident has access to separate food waste collections.

Food waste recycling rates have quadrupled, and rates have also climbed slightly in other streams. Early indications suggest that Milan now extracts 85% of the city's food waste from the residual portion (household plus commercial). It's perhaps not so much a case of third time lucky but third time well-prepared.

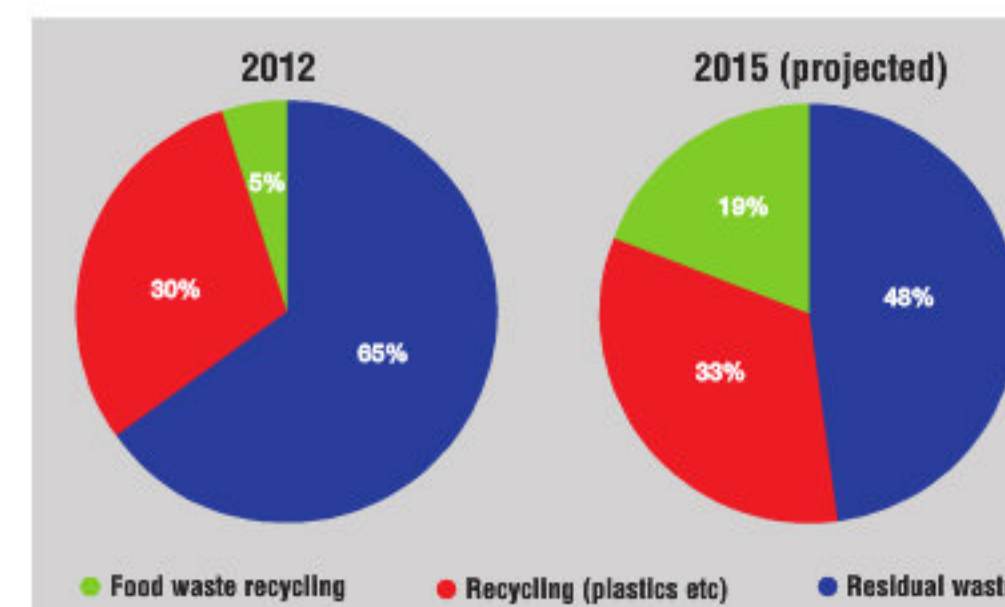
Contamination of the food waste stream is fairly low, having fallen from 4.4% to 3.4% in the past couple of years. Half of that is plastic bags, but with a ban in place contamination could fall further. Currently, almost half the organic waste collected is in the compostable bags distributed by Milan's shops.

Collection challenge. With 1.3 million residents and a population density higher than 7,000 inhabitants per square kilometre, Milan doesn't present the most straightforward opportunity for food waste collections. But with a national recycling target of 65% to hit by 2012, food waste recycling had to be part of the solution. Food waste collections had been launched twice before, unsuccessfully, but third time round there was much more analysis undertaken to help provide the right service. There was also a bigger spend on campaigns.



Twice a week. Door to door collections, run by publicly-owned company Amsa, started in November 2012. Each household was given a ventilated kitchen caddy and a roll of 25 compostable bags (certified according to the European standard EN13432). Residents transfer the caddy contents into a kerbside wheelie bin, which is picked up twice a week. Every seven months a new quarter was added with 100% coverage by June 2014. People are reportedly more than happy with how things are going: Amsa's customer satisfaction surveys show that 90% are satisfied by the new collection scheme and actively participate.

Economical treatment. Organic waste is collected and delivered to transfer stations and shipped daily to a vast AD and composting plant based 60km east of Milan. The Montello site (right) boasts eight AD siloes each standing 22 metres tall. Two more are planned this year as the company looks to create fuel for its vehicles. Some 285,000 tonnes of organic waste arrives every year, generating 12.8MW of energy. Almost all of that is used to power the plastic reprocessing plant on the other side of the 35-hectare site. Food waste treatment by AD costs 70€ per tonne, compared to the 100€ to dispose of the waste to landfill.



From 5% to 19%. Prior to the food waste collection service being launched in 2012, recycling rates were stagnating. Three years on and food waste recycling is expected to have quadrupled to 19% of total waste collected by the end of the year. Contamination levels in the organic stream have also fallen steadily – from 4.4% after two months to 3.4% after 18 months; this on the back of intensive communication campaigns. Recycling of other materials has also climbed too. This means 120,000 tonnes of waste per year has been diverted from landfill, saving 8,760 tonnes of CO₂.

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