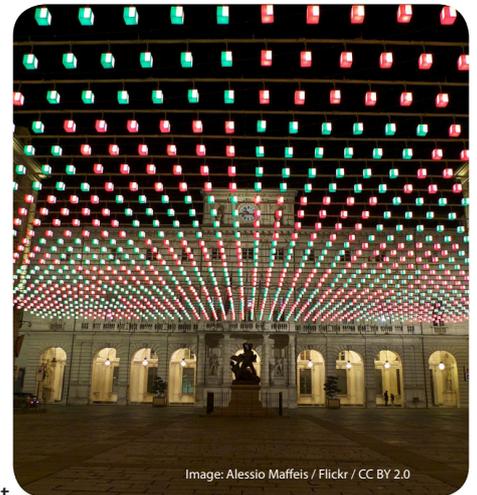


Monitoring low carbon, sustainable catering services City of Turin, Italy

Background

The City of Turin, located in the north-western Piedmont region in Italy, has a population of just over 900,000 people. The City Administration employs almost 11,000 people and is strongly committed to becoming a 'smarter' city, fostering sustainable, intelligent and inclusive urban growth. The City joined the Covenant of Mayors in 2009 and then developed Turin's Action Plan for Energy the following year. In 2011, the City's 'Smart City Initiative' was launched - a new innovation policy framework for sustainable, energy, environment, planning, mobility and ICT, achieved through social cohesion and innovation.

In 2013, the City of Turin and its Smart City Foundation launched a strategic planning process. Together with a technical partner, they produced 'Smart Mobility Inclusion Life & Health and Energy' (SMILE) - Turin's Smart City Master Plan, identifying 45 actions to be implemented in the short to medium term, together with relevant KPIs to measure its impact. One specific area of focus in the Master Plan was to achieve low carbon school catering services.



School catering represents a significant part of the procurement budget for the City of Turin. Approximately 8 million meals are delivered annually, with a total value of approximately 40 million EUR per year. The school catering services present an opportunity to educate children on sustainability policies, as the Turin School system (kindergarten and primary schools) includes about 71,500 children between the ages 0-13 years. Taking into consideration the teachers and families of these children, between 230-250,000 citizens are affected by the school catering services.

Sustainable, low carbon catering

The current school catering service began in September 2013 and will continue until August 2016 with the possibility of extension for a further two years. The procurement for the overall school catering service is subdivided into eight lots, with each lot covering a different geographical area in Torino. The lots were awarded to three different suppliers.

Turin introduced a number of measures and included various criteria into their current school catering contract aiming to reduce the associated carbon footprint. These included energy efficient appliances bought for schools, the utilization of mains tap water, the use of low environmental impact transport and a significant reduction in packaging and waste. Bidders were encouraged to favour low environmental impact packaging, including reusable, refillable or biodegradable products. One requirement for contractors to shift from using plastic to reusable dishes will result in an estimated reduction of 157 tonnes/year of plastic waste - as this criterion was applied to over five million meals delivered annually.

Management of separate collection of waste material had to be provided at each production or distribution unit, beyond mandated waste management regulations and a procedure had to be put in place so that, where appropriate, waste food could be redistributed to consumption as part of social projects in the city.

Additional criteria were used to lessen other sustainability impacts associated with the catering contract, such as requiring the use of ecological cleaning products and awarding points for bidders offering a wider range of organic or fair trade products than were specifically requested.

Approach to monitoring

In order to ensure that the City was on track to achieve a low carbon catering service and to identify areas for continuous improvement, Turin made the decision to monitor its current catering contract and evaluate the carbon footprint of the school catering service. Senior management from the School Catering Department and the EU policies and Innovation Department were involved in defining the

scope of these activities. Expert scientific advice was required to define the methodology and to undertake the calculation of the carbon footprint. A scientific study was then commissioned and the service was awarded to the University of Torino.

The study focuses on the calculation of the carbon footprint of the main environmental aspects of the catering services provided to schools in the City of Turin. Suppliers were involved in order to provide relevant data for the calculation system. The cooperation with suppliers worked very well.

The carbon footprint calculation methodology uses a LCA approach (according to the guidelines and recommendations of the ISO 14040 series), expressing the quantity of CO₂ equivalent (a harmonized unit for all molecules that contribute to climate change) released, directly and indirectly, during all stages of the system under examination. From a LCA point of view, the carbon footprint corresponds to the impact category known as 'global warming potential'.

The carbon footprint of five of the most commonly consumed food products (potatoes, carrots, apples, pears and peaches) was calculated as part of a pilot exercise to test the use of the calculator. In these five supply chains, the production processes accounted for between 75% and 95% of the total carbon footprint, revealing the significance of agricultural practices. In fact, during the school year 2013/2014 for just these five products, the requirement to provide food from integrated and organic production resulted in a reduction of 66.1 tCO₂ equivalent (about -26% of the carbon footprint of the whole supply chain of these five products) compared with providing the same amount of food from conventional agricultural systems. Interestingly, the transportation of these five foods, from the farm gate to the table, accounted for between 5% and 25% of the carbon footprint. Emissions from urban transportation, were in all five cases less than 1% of the carbon footprint. This highlights that GPP measures applied in this part of the supply chain have less of an impact on reducing GHG emissions than other aspects.

Future development

The first results of the study on calculating the carbon footprint of the catering services were presented at a public event in Turin on the 19 November 2014, which was attended by various stakeholders from the school catering supply chain. The reactions from various stakeholders were positive and as a result the introduction of GPP criteria for e.g. packaging, cleaning products, paper, transport will be further developed and utilised.

In the future, depending also on budget availability, the City will decide whether to apply this evaluation model more widely, to calculate the entire environmental footprint (ecological, carbon, water) of the catering service. This will take into consideration the full process, from the procurement of raw materials, to the preparation, distribution, and delivery of meals, to the disposal and removal of waste. Within the [INNOCAT - Procurement of Eco-innovative Catering](#) project, the City will monitor and calculate the carbon footprint of the actual contract and will work to redesign the school catering service towards a "zero emission model". This will be carried out with the view to not only reduce environmental impacts and improve efficiency, but also to make the service more socially responsible. Turin sees that potential benefits could be achieved by aggregating demand for low carbon catering solutions with metropolitan local authorities and other public institutions in the Piedmont region.

The City of Turin emphasises the importance of baselining emissions before implementing new GPP requirements within catering tenders, so that other public authorities wishing to undertake a similar approach can see the impact that green public procurement can make on the carbon footprint of such services.