

# City shares waste management facts

24 May 2012



An innovative public-private partnership will ensure that in years to come Joburg will begin to benefit from the tons of waste generated daily in the city.

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OBURG'S leadership on the continent in the area of waste management was highlighted in presentations

by the City to delegates attending African Utility Week, the continent's largest utility services conference and exhibition, held from 21-24 May at the Nasrec Expo Centre.



Pikitup's Roelf de Beer City officials and municipal-owned entity Pikitup gave a presentation at a session on good practice in waste management, one of eight themes tackled at the conference. The others were: metering, renewables, water, large power, infrastructure investment, smart

grids/transmission and distribution (T&D) and generation.

Roelf de Beer from Pikitup, presenting on behalf of World Cup 2010 planner Christa Venter, described how waste was managed during the tournament. Joburg hosted the opening and closing ceremonies as well as a number of matches.

## Fifa World Cup

According to De Beer, 1 042 160 people attended the 15 matches at Joburg's Soccer City, with countless more enjoying the festivities at more than 50 venues dedicated to providing the "World Cup experience". "With any event comes the inevitable by-product of waste" and the challenge is to deal effectively with the higher-than-average amount of waste generated by such large events.

"Host cities pledged to ensure a green event by supporting initiatives that addressed waste minimisation and emissions reduction, among others," De Beer said. Joburg did this by adopting an Integrated Waste Management Plan (IWMP), which aimed to divert 20 percent of waste from landfill sites. The IWMP was conceived three years before the event and its success proved that it is vital to be prepared.

Pikitup was responsible for cleaning both inside and outside all the venues, as well as street sweeping, litter collection and on-site separation. This included a two-bin collection system for wet and dry waste and four-bin recycling stations along pedestrian routes.

## Clean City campaign

The organisation's strategy involved cleaning the venues immediately after the events finished and crowds dispersed, but it also instituted a Clean City campaign, which raised awareness and encouraged individuals to contribute to the campaign.



Senior project manager at Pikitup Palesa Mathibeli

The strategy proved so successful that many fans "commented that it never looked the next morning as if there had been a major event", said De Beer.

Another element of Pikitup's strategy was waste avoidance measures and green event guidelines. Among the former were the use of reusable crockery and cutlery, no promotional handouts and reusable commemorative mugs that fans could take home. Green event guidelines involved thoughtful purchasing, educating vendors and staff and encouraging spectators to recycle.

"Vendors and staff played a crucial role in reducing waste," he said.

As a result of these interventions the organisation was able to exceed its targets. "A total waste diversion and recycling rate of 62 percent was achieved, against the 20 percent target, and at stadiums 50 percent of waste was diverted from landfill to recycling," said De Beer.

In addition, the branding material used throughout the tournament was donated to local recycling and design companies for use by local crafters.

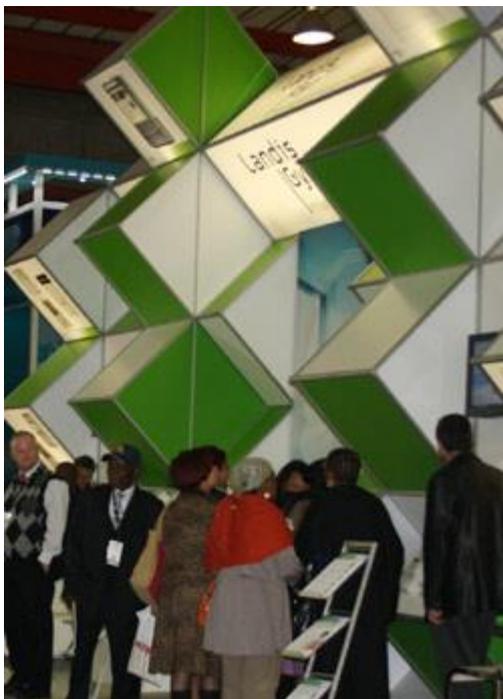
The popular cliché that hindsight is always 20/20 could be applied to Pikitup as the company looks back and reflects on the lessons learnt about managing waste at large events. Among these lessons was the fact that separate waste collection can work; that support from organisers, ranging from the local organising committee to affiliates and Fifa, was vital; that the benefits of the split-bin system outweighed the costs; that education and awareness were critical; that communication is essential if an operation is to succeed; that teamwork is key and that it is necessary to be flexible in order to deal with the challenges that will, inevitably, arise.

"In general, waste avoidance, reducing, recycling and the cleaning efforts of Joburg were highly successful and widely commended," said De Beer.

It is not in Joburg's nature simply to look back and dwell on the past, though, initiatives are constantly being dreamed up and executed. This was the theme of the presentation by Palesa Mathibeli, the City's senior project manager for alternative waste treatment technology projects, on the City's waste-to-energy project, being implemented through a public-private partnership (PPP).

## Waste-to energy project

"The general scope of the project is to provide a sustainable solution to reducing waste to landfill," said Mathibeli. Although the main aim is to reduce the amount of waste so the city saves on landfill space, renewable energy produced by this process can be converted into electricity, fuel or gas.



The African Utility Week conference delivers business opportunities for utilities. The project was initiated in 2008 in an effort to find sustainable ways of disposing of waste when the demand on the city's landfill space increased. Looking to Europe for inspiration, the City found the solution it needed in the waste-to-energy project.

Currently 93 percent of Joburg's waste is being sent to landfill, with only 7 percent being recycled or composted. This was pinpointed as an area where change was necessary and the City's growth and development strategy (GDS) – launched in October 2011 – projects that by 2040, 7 percent of the waste will go to landfill, 40 percent

will be processed using conversion technologies, 33 percent will be used for recycling and composting and 20 percent will come from source reduction.

Pikitup currently has initiatives in place such as the separation-at-source project, 45 garden sites, one composting plant and partnerships with private recyclers that include the trolley brigade – but these are not sufficient to deal with the amount of waste generated.

## Challenges

Although this pioneering project should yield impressive results, Mathibeli said there were challenges in getting it off the ground. “Challenges have been the mindset on waste management, in the provision of uniform and quality waste services, lack of landfill space and under funding.”

It is hoped that the involvement of the private sector in a PPP will solve the problem of funding. “It is an innovative funding mechanism to fund infrastructure, requiring a substantial capital investment,” said Mathibeli. PPPs are highly regulated, though, and feasibility studies must be conducted before it is possible to move on to procurement and project management.

Although the project was initiated in March 2008, the feasibility study was only completed in July 2010. The project formally entered the procurement stage in 2011, and the next step in the process will be the issuing of a request for qualifications, which is expected to happen in July.

If all goes according to plan, it is expected that construction of the first treatment plant facility will begin in August 2013 and the facility should be opened about two years later. A high-level site identification has been completed and three sites have been shortlisted, with a detailed assessment still to follow; for this reason the location of the sites cannot be revealed at present.

Once the project is up and running, said Mathibeli, Joburg will enjoy enormous benefits. These will include: the reduction of waste going to landfill, with 500 000 tonnes projected to be diverted; renewable energy, with a potential of 60 to 75 megawatts being generated; revenue from sales of by-products such as bio-energy, heat and recyclables; the potential to earn carbon credits; job creation – 400 jobs are expected to be created in waste recovery and 80 on the technical side; strong localisation and skills transfer, private party expertise and capital of between R2- and 10-billion raised.

A project of this magnitude cannot be undertaken by one entity alone, so the National Treasury and the Industrial Development Corporation will join the City’s environmental infrastructure and services department to contribute their expertise.

A steering committee comprising the Gauteng provincial finance department, City Power, Joburg departments of finance and economic development and Vela VKE has also thrown its weight behind the initiative.

Read more: [http://www.joburg.org.za/index.php?option=com\\_content&view=article&id=8063:joburg-shares-waste-management-facts&catid=120:environment&Itemid=201#ixzz3pNmKTOga](http://www.joburg.org.za/index.php?option=com_content&view=article&id=8063:joburg-shares-waste-management-facts&catid=120:environment&Itemid=201#ixzz3pNmKTOga)