



a world class African city



WASTE TO WEALTH

**AWT/BIOGAS PRESENTATION: GARDEN
WASTE/ORGANIC WASTE SUMMIT, 5 JULY 2018**

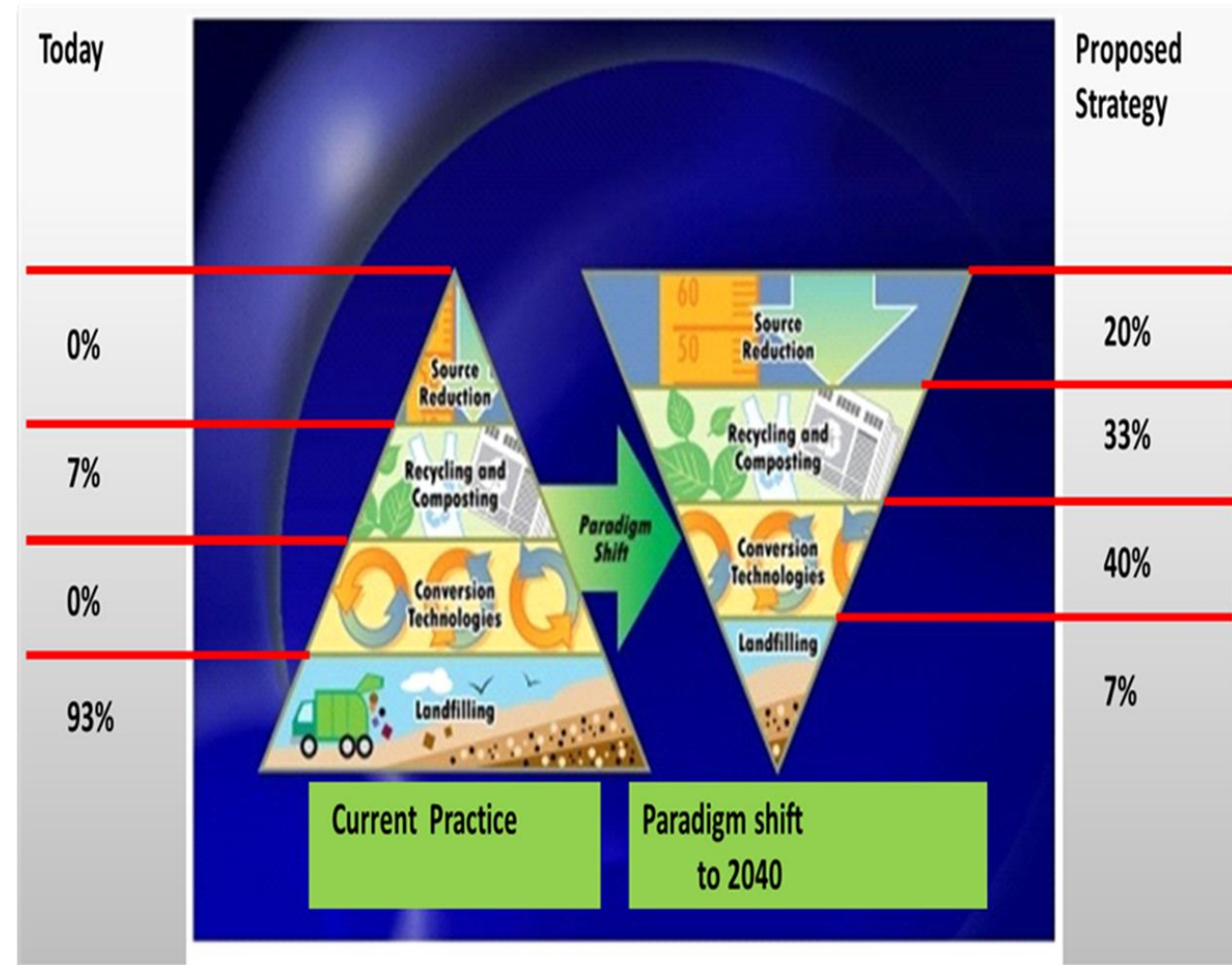


WASTE MANAGEMENT DRIVERS

Ensure integrated and sustainable waste management through the hierarchical management of waste (Reduce, Reuse, Recycle and Dispose)

Supported by:

- Compliance and enforcement of legislation
- Proper, research, planning and execution
- (credible data and information)

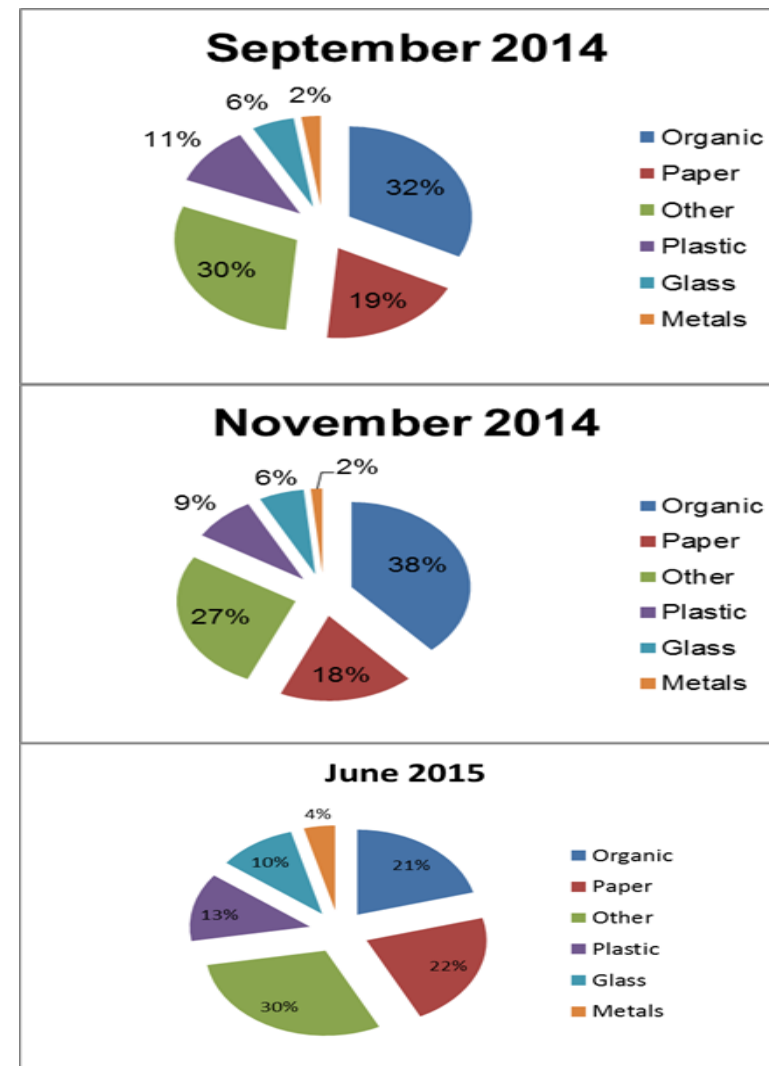
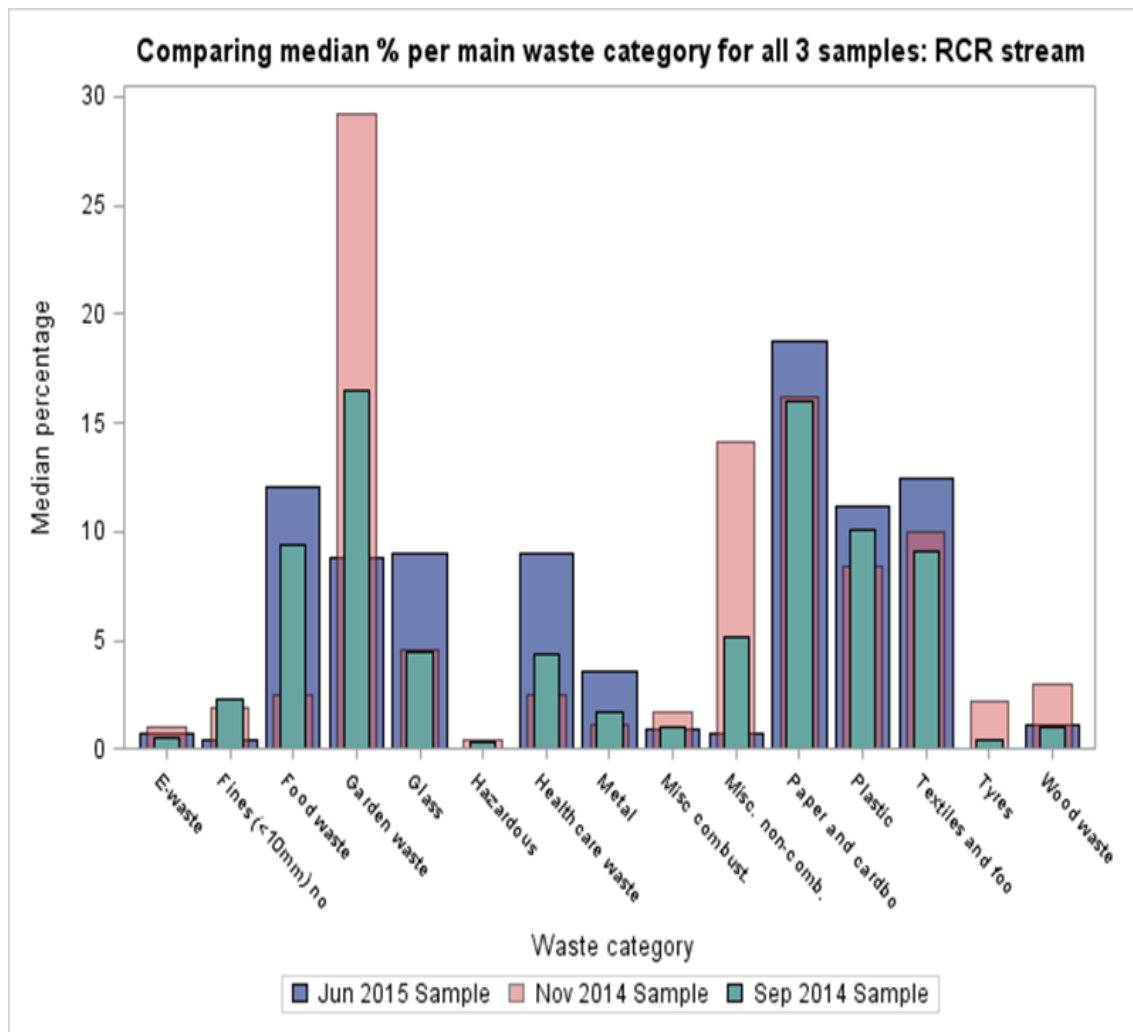


BACKGROUND- WASTE DISPOSAL

Approximately 1.6 million tonnes of MSW is being disposed annually in the City's four landfill sites, With limited landfill airspace remaining to dispose of the current and future waste generated.



WASTE CHARACTERISATION STUDY 2014-15



MUNICIPAL WASTE COMPOSITION

Waste class	Average %
Residual waste	29%
Organic waste	31%
Recycables	40%

AWT- WASTE TO ENERGY

- The general scope of this project is to provide the CoJ with a **waste treatment technology** facility/s, that will **accept 500 000 tonnes** of residual municipal solid waste per annum through a "**design-build-finance-maintain-operate-transfer**" **public private partnership (PPP) model**.
- The Private Party will be responsible for planning, financing, designing, maintaining and operating the facility under a concession agreement.

AWT-WASTE TO ENERGY

- A feasibility was undertaken by the City in partnership with the Gauteng Funding Agency/DBSA for an alternative technology to dispose waste other than at the landfill site
- Feasibility included a waste characterisation study based on a large sample that covered all four seasons (largest waste characterisation in the country)
- Feasibility approved by Council in June 2016 to procure a waste to energy plant through a PPP to treat 500 000 tons of solid waste and generate electricity.
- Feasibility is based on a business model that creates an opportunity to outsource design, construction and operation through a PPP.
- It will divert about **30%** (one third) of City waste to landfill site
- It will add extended life to the City's landfill sites by reducing waste disposal and increasing landfill disposal space.

PROGRESS TO DATE AND WAYFORWAD

- Feasibility concluded and adopted by Council in June 2016
- City to embark on PPP Procurement process
 - ✓ Publish a public notice
 - ✓ Submission to National Treasury for Treasury Views and Recommendations (TVR1)
 - ✓ Confirmation of project affordability by GCFO to National Treasury.
- Commence PPP procurement (RFP/RFQ)
- Bid evaluation
- Contract negotiation

AWT- BIO-DIGESTER PROJECT

- Feasibility concluded on 50 ton bio-digester
- Decision to proceed with construction eminent
- Will use waste from Fresh Produce Market and part of garden waste and the dailies as feed stock
- Can generate bio-fuel to run 9 Metro buses
- If up scaled has potential to divert **30% waste** generated and produce bio-fuel enough to run 800 buses.
- Reduce Carbon emissions

AWT-BIO-DIGESTER PROJECT

Part of the UNEP (Global Environmental Facility) support programme

- Development Bank of Southern Africa (DBSA) has been appointed by Global Environmental Facility (GEF) to assist the City with the development of a
- Bankable PPP project
- Develop a pilot 50 ton project
- Biodegradable Waste Management Strategy.
- To confirm the potential of biofuel within the City going forward
- UNEP funding to commence in 2017/18 financial year

PROGRESS TO DATE- WAY FORWARD

- Pilot 50ton feasibility finalised
- GEF funding approved and available
- Currently busy with pilot plant designs and environmental studies
- EOI
- Finalising grand transfer
- Undertake full feasibility for full biogas bankable project (Appointment of the TA)
- Develop a city strategy for management of bio-degradable waste
- Ultimate diversion of biodegradable waste from landfill.

THANK YOU FOR YOUR ATTENTION