



# YOUR ULTIMATE GUIDE TO UNDERSTANDING WASTE MANAGEMENT



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# Introduction

When your company's reputation is on the line, you want to ensure you're getting a fast, reliable waste management service. And to do that you need to understand how the industry works.


For example, did you know that up to 90% of waste can be reused, recycled, or repurposed?

If responsible waste management is important to you this guide is for you. In it we cover several key insights from industry terminology to data insights.

Once you've made your way through this guide you'll be able to:

- Understand the common terms used
- Understand what on-site waste management is and why it's so important
- Understand what the truth is behind common waste management myths
- And more

So, dive right in and get in touch with us for more insights.



*Our goal is to responsibly remove waste  
from our country, but not for ourselves, for  
the betterment of society as a whole.*

- Bertie Lourens

# The Waste Management terminology you need to know

Every industry has its share of elusive acronyms and terminology. Here's a glossary list to help you learn the lingo of the waste management industry.

We've compiled a list of the most commonly used **waste management** terminology to keep you in the know. For anyone looking to understand the world of waste management and **recycling**, this list will ensure you're understanding what your waste management company is talking about.

- **Business waste:**

Waste made by companies, retail, wholesale, entertainment, or the government.

- **Chemical waste:**

Waste that is made from harmful chemicals.

- **Circular economy:**

An economy regenerative by design, aiming to optimise the value of products, parts, and materials.

- **Clean production:**

Manufacturing in which waste is minimised, and toxic prevention practices are continuously applied.

- **Closed-loop system:**

A system that enhances supply chain sustainability, by recycling all of the materials in manufactured goods, usually to make the same type of product.

- **Commercial waste:**

Waste from a trade or business, or activity related to sport, recreation, education or entertainment. It excludes household, agricultural or industrial waste.

- **Mixed waste:**

Any combination of waste types with different properties, ranging from biodegradable to inorganic waste.

- **Municipal solid waste:**

A waste type consisting of everyday items that are discarded by the public.

- **Organic waste:**

Biodegradable waste that comes from either a plant or an animal. Example: Food waste.

- **Recovery:**

The collection and reuse of disposed materials.

- **Recycle:**

A process where waste is reclaimed for further use, and processed as a **product or raw material**.

- **Renewable energy:**

Energy from a source that is not depleted when used, such as wind, hydro, or solar power.

- **Reuse:**

To re-utilise articles from the waste stream for a similar or new purpose, without changing their form or properties.

- **Sustainability:**

Avoidance of the depletion of **natural resources**, in order to maintain ecological balance.

- **Treatment:**

Any method, technique, or process, which is designed to change the physical, biological, or chemical character or composition of a waste.

- **Waste generator:**

An entity, by site, whose acts or processes generate solid waste.

- **Compost:**

Decayed organic material, used as a fertiliser for growing plants.

- **Construction and Demolition waste (C & D):**

Waste, excluding hazardous waste, that is produced during the construction, alteration, repair, or demolition of any structure.

- **CO2 Equivalence:**

The amount or concentration of carbon dioxide (CO<sub>2</sub>) within a greenhouse gas related to its projected impact on global warming.

- **Cradle to grave:**

The tracking of waste, from the moment it enters a site to the eventual treatment or disposal of that material.

- **Domestic waste:**

Material from businesses and households that cannot be recycled.

- **Duty of Care:**

A moral or legal obligation to ensure the safety or well-being of others.

- **Ecosystem:**

A system of relationships between animals and plants and their environment.

- **Electronic Waste (WEEE):**

Any end-of-life item that has an electrical plug or electronic battery.

- **Extended Producer Responsibility:**

Measures that extend a person's financial or physical responsibility for a product to the post-consumer stage of the product.

- **Food waste:**

Food intended for consumption that is lost or discarded along the food supply chain.

- **General waste:**

Waste that does not pose an immediate hazard or threat to health or to the environment.

- **Greenhouse gas emission:**

The generation of greenhouse gas - a gaseous compound capable of absorbing infrared radiation and on setting global warming.

- **Hazardous waste:**

Gaseous, liquid or solid waste that has substantial or potential threats to public health or the environment.

- **Incineration:**

The destruction of waste material through burning.

- **Inert waste:**

Waste that does not undergo any significant physical, chemical or biological transformation after disposal, nor impact negatively on the environment.

- **Inorganic waste:**

Non-biodegradable, chemical waste, of mineral origin. Example: aluminum cans.

- **Integrated waste management:**

A combination of waste management approaches, including: source reduction, composting, incineration, recycling, and landfills.

- **Life-cycle assessment:**

The evaluation of a product or service's potential environmental impact over its entire life cycle.

- **Medical waste:**

Any waste consisting wholly or partly of human or animal tissue, blood, other body fluids, excretions, drugs, or other pharmaceutical products, swabs, dressings, syringes, needles or other sharp instruments.



- **Waste hierarchy:**

The prioritisation of waste management options (in descending order) throughout its lifecycle.

- **Waste management:**

The activities and actions required **to manage waste**, from its inception to its final disposal.

- **Waste minimisation:**

To make every means possible to avoid and/or reduce the amount of waste and toxicity generated.

- **Waste reduction:**

**Using less material and energy** to minimise waste generation, and preserve natural resources.

- **Waste to energy:**

Generating fuel or energy in the form of electricity and/or heat, from waste.

- **Waste treatment facility:**

Any site used to accumulate waste for the purpose of storage, recovery, treatment, reprocessing, recycling, or sorting of that waste.

- **Zero waste to landfill:**

Waste management and planning approaches that emphasise waste prevention, as opposed to end-of-pipe waste management **disposed in landfills**.

# What is on-site waste management?

Ever since you embarked on your bold new waste management strategy, you've been seeing some really pleasing results. All stats point to progress when it comes to your reduced waste-to-landfill streams - it seems that recycling campaign is paying off after all.

But, have you ever stopped to think what actually happens to that bottle after your colleague throws it in the new, shiny blue bin? How does it actually get recycled? We asked KZN Sales Manager, Herman Steenkamp, to help us understand and walk us- through the process - from rubbish bin to reinvention.

## Says Herman:

"Okay, let's take a Cold Drink bottle as an example. A businessman drinks his Cold Drink and throws it in the hotel room bin. Housekeeping then collects the bottle, and that bottle is then added to the general waste bag on the trolley (in many cases in a separate bag dedicated for recycling). Once all the rooms are serviced, those waste bags are taken to the back of the hotel or basement.

## Next up: Sorting.

"All that waste is then dumped onto a table. That Cold Drink bottle, along with all other recyclable materials, are sorted into allocated piles and placed in clear bags. Those bags, when full, are weighed and measured for monthly stats.

## And then: Bailing.

"Vehicles then collect and transport the bags to the sorting facility for bailing. The Cold Drink bottle becomes part of a single-commodity bail, some few hundred kilos strong. That plastic bail is moved by forklift together with other plastic bailed materials and stored in the yard until it's sent off to a recycler. In some cases, that could be overseas and the bail would need to be loaded into a container and exported. In other cases, that recycler could be local.

## Onto: Recycling.

Once the bottle arrives at the recycler, it gets chopped up. At the same time it goes through a flotation process, where other materials like the label and top, are removed. The plastic flakes of the bottle, known as PET flakes, are then washed. These clean PET flakes are then melted, extruded (heated to a very high temperature and squeezed through a little hole) and made into pellets or fibres.

The bottle top, made of **HDPE plastic**, will also go through the same process of chopping, washing, melting and extrusion. It comes out on the other side of the extrusion process like long strings of plastic spaghetti, which are then cut into plastic pellets.

## Last up: Repurposing

The rPET fibres/pellets and HDPE pellets are then sold back into the economy to become new materials. rPET (recycled PET) fibres/pellets can be made into clothing. They might also become plastic sheets or food packaging punnets, or be used for the production of new bottles such as food grade plastic water bottles or non-food grade products like dishwashing liquid bottles. Similarly, those HDPE (High Density Polyethylene) pellets can be used for a wide variety of things, like new closures and caps, bags, plates, animal tags, and other injection moulded products. The same principle applies for paper, glass or aluminium - collecting, sorting, weighing, bailing, and finally - recycling or repurposing those materials for new, fresh value within the economy." And, there you have it. Smart waste management in a nutshell!

Interested to know more about this process, and how your company can benefit from the 4R economy? We recommend doing a **waste audit**.

# The waste management data insights you need to know about

In our digital age, data is everything! And the waste management industry is no different. In fact, Thomas Redman once said, "Where there is data smoke, there is business fire."

As companies strive to keep ahead, in constant pursuit of their innovative mojo, data insight will increasingly help inform better business decisions. Here are 8 essential attributes that you should expect from your waste management data:

## 1. Accurate and reliable

Your data needs to give you a realistic, inerrant overview and insight into your company's **waste management practices**. Only then can you understand what's needed to set **strategies** and optimise best practice behaviour.

## 2. Readily accessible

Your data should be accessible on demand and readily available at all times. You should have a digital platform that offers easy access to all relevant data insights, along with an approachable **waste management partner**, who can help steer direction and inform decisions.

## 3. Up-to-date

Accuracy is also time-bound; and so information needs to offer the most current snapshot of your business landscape. **Data** is only relevant if it reflects the 'here and now' reality of your organisation.

## 4. Diverse in presentation

Data insights should not have to come **with a dictionary**; they should be easily read and comprehensible across the board. This means that they should be interesting to look at - enriched with graphs and charts that substantiate its findings.

## 5. Comprehensive

You should be able to find exactly what you're looking for - immediately - when you access your company's data. For example, **how much waste have you produced** in general as an organisation? **Per site**? What kinds of waste are you producing? What is the central point of generation? Data should be captured on a broad spectrum so that you can interrogate down to the most specific of categories.

## 6. Contextual

You need more than raw data; you need to understand the **industry at large**, and how your company performs relative to it. It's no good getting cold feedback that lacks any interpretive context. You need relevant statistics and insight into market trends so that you can make sense of where you are and where you want to be.

## 7. Customisable

Every company has a unique set of needs that drives and informs its direction. Your data should be designed to suit your particular package. Information needs to be amenable and flexible by design, custom built and tailored to move your business forward.

## 8. Importable

And lastly, **streamlining** your data is a necessity. You should be able to easily import your information into your reporting system, if needed.

So, the next time you look at your waste management company, ask yourself if they are giving you the data you need to know your business is in good hands.

# Fact or Fiction? Waste management myths

Every industry has its myths, this chapter covers the common ones in the waste management world and gives you the truth.

When it comes to the world of **waste disposal**, don't believe everything you hear. There can be some fiction lurking amidst the fact. Here are a few big waste management myths - and the truth to debunk them.

## Myth #1: Landfills are a viable solution.

Truth: Landfills are not the long term solution. They are, in fact, a short-sighted and unsustainable response to our **waste management** woes. Landfills don't take waste costs into account, nor can they absorb the exponential demand of human overpopulation. Not only do they generate unmitigated knock on effects of air, water and ground pollution - they limit critical opportunities to recycle and reuse our resources.

## Myth #2: Waste management is, and will always be, pricey.

Truth: Not so. Your goal is to find that provider who will prove you wrong by giving you a transparent window into their well-oiled operations. A good waste management partner is committed to streamlining its services so that costs go down, while efficiency goes up.

## Myth #3: Recycling isn't as eco-friendly as we think.

Truth: Critics argue that recycling uses more energy than if you were to make the product from scratch. But the Environmental Protection Agency **would say differently**. When compared to making the same product brand new, energy savings amount to 95% for recycled aluminium; 60-74% for recycled steel and tin cans; 60% for recycled paper; and 30% for recycled glass and paper. At the end of the day, stats suggest, **recycling saves energy**.

## Myth #4: Biodegradable waste is not all that bad.

Truth: In spite of what we all assume, biodegradable waste is not innocuous. It leaks methane and **carbon dioxide** into the atmosphere - nasty greenhouse gases which contribute to global warming. And because these gases decompose too quickly, landfills won't even be able to harness their energy. Biodegradable waste, like food waste, takes a serious toll on our environment. By separating your organic waste and sending them to a Bio-methane plant, we can capture these harmful gasses and turn them into energy. **Ask your waste service provider to help you achieve this.**

## Myth #5: You have to separate your waste into 5 streams.

Truth: Your **recyclable** waste items don't have to be sorted to be recycled. More often, companies are using single stream systems where All the mixed recyclables gets thrown into the same bin. Machines and, more often, human hands are quite skilled at sorting and consolidating your materials on site, and optimising their reuse. As long as all the organic material have been removed from the waste stream, it is quite easy to recover all the valuable recyclables from a mixed recyclable stream.

## Myth #6: (And on that note....) We don't have to rinse our recyclables.

Truth: Granted, you don't have to scrub your materials til they shine. But keep in mind that, the cleaner they come, the more money can be channeled directly towards its intended purpose of being reused and recycled. A cleaner load also translates into better health and safety for those employees handling your waste on site.

## Myth #7: If we want to go green and expand our business footprint, we'll have to learn to juggle contracts.

Truth: If you work across different locations, you shouldn't have to manage different contracts based on region. Nor should you have to work with multiple vendors regarding your waste streams. Your **service provider** should handle your full waste portfolio and consolidate your activities in a way that is accountable and intuitive.

## Myth #8: To have a sustainability strategy in place, you need big bucks and a big team.

Truth: A successful sustainability plan doesn't have to come with a big price tag and multiple teams to roll it out. You can be a small business and embed your business plan with an effective waste reduction strategy from the onset - one that will not drain your budget nor require huge HR investments.

## Myth #9: Our company's small efforts won't make a difference.

Truth: Au contraire! Did you know, the energy savings from one aluminium can you recycle can save enough energy **to power a television for 3 hours**? If so, how much more can your business positively impact the environment with an efficient waste strategy and partnership in place?

# Bertie Lourens



As the CEO of WastePlan, Bertie believes in creating value from waste and uplifting the poor in South Africa.

Bertie started WastePlan in 2003 and has a passion for responsible waste management. He's goal is to help businesses reduce their carbon footprint and move the country closer to **zero waste to landfill**, to ensure our environment and planet are safe.

Bertie has authored a number of articles on the **WastePlan website** and continues to bring his knowledge of the industry to the business.



# SPEAK TO THE WASTE MANAGEMENT EXPERTS!

Ready to begin your journey to responsible waste management? **Get in touch** and we'll help you work towards reducing your business' waste to landfill.

GET IN TOUCH