

Better waste management will be critical to a sustainable future



By [Kate Stubbs](#)

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The waste management industry is in for an exciting 2022, with new environmental regulations, the use of digital technologies and a focus on the circular economy combining to improve sustainability.



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While there is recognition at the highest levels of the need to urgently address climate change and biodiversity restoration, even high-profile summits like COP26 have delivered mixed outcomes.

Nonetheless, the facts are clear enough: humanity needs to modify both its behaviours and actions if it hopes to meet the requirement of ensuring a sustainable planet for future generations.

The good news is that I believe 2022 will be seen as the year of implementing new processes and models with a view to ensuring just such a sustainable future. One of the critical drivers of innovation and change in the waste management industry is the existing environmental legislative framework, particularly some of the new regulations, goals and strategies



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A good example of this is the Extended Producer Responsibility (EPR) regulations being implemented. These laws are all about producers of a product that creates waste being made to take more responsibility for its disposal or recycling. This has led to a greater focus being placed on the use of recyclate in packaging as well as the post-consumer collection and beneficiation of such waste streams.

EPR rules come at a time when we are well aware of the diminishing capacity of landfill airspace in most provinces, exacerbated by population growth and rapid urbanisation. This is also the key driver in the proposed 'zero waste to landfill' concept - the goal being to divert 90% of waste from landfills to more sustainable purposes.

Use waste as an alternative fuel

One way of achieving this is to use waste as an alternative fuel. It is vital that waste that can't be recycled or reused is repurposed as an alternative energy source. Turning waste into energy offers twofold value: playing to the zero waste to landfill principle and helping impact SA's ongoing energy crisis.

Of course, with South Africa only recycling 10% of its waste, the zero waste to landfill goal appears ambitious. However, through minimisation, recycling, reuse and recovery of this waste - as well as beneficiation technologies - we can still build a circular economy that can properly tackle this challenge.



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A circular economy model is premised on the concept of designing out waste and pollution. It follows the hierarchy of waste management principles to avoid, reduce, repurpose, recycle, recover, treat and contain waste first, before seeking to dispose of it to landfill. In light of this, it is an approach that offers huge opportunities to deliver more inclusive economic growth, increase job opportunities and make positive environmental practices the norm.

It means businesses must examine how to strip out all unnecessary waste materials, energy losses and related carbon emissions across their supply chain. They must then find solutions to ensure that these materials, resources and energy can be 'fed' back into the cycle.

Digital revolution crucial in waste management

Finally, the digital revolution is also going to become increasingly imperative as companies seek to leverage technologies in various ways to optimise waste management. This may include the tracking of products and materials throughout their lifecycle to ensure safe and responsible disposal, or using Internet of Things (IoT) sensors on waste bins to signal when ready for emptying or collection.

Other ways to use digital technology include the testing of autonomous waste collection vehicles or robotics being utilised for sorting, separating and processing waste. It could even encompass the use of specific green technologies designed for processing and treating a wide variety of waste types.



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All of these trends are ultimately aimed at reducing carbon emissions, achieving the sustainable development goals and generally reducing the impact of waste on the planet. They are also a response to consumer awareness and pressure for companies to visibly be more environmentally and socially conscious.

It is an exciting time for anyone operating in this space as the waste sector today goes far beyond traditional recycling. In fact, during the course of 2022, I expect the industry will only become more focused on resilience and long-term sustainability - a crucial approach if South Africa hopes to move into a greener and more profitable future.

ABOUT KATE STUBBS

Kate Stubbs is the current group business development and marketing director for the Interwaste Group which forms part of Séché Environment, an international environmental solutions business.

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