

Sustainability paving the way for future of waste management

By [Kate Stubbs](#)

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Waste management can no longer be looked at with a linear view as we move towards 2021. We are seeing national as well as global leaders around the world creating massive awareness around the 'throw-away culture' that many businesses, individuals and households have. With statistics highlighting that South Africa alone generates [108 million tonnes](#) of waste per annum, equating to about R25.2bn worth of waste dumped with 90% disposed at over-capacitated landfill sites, the big question is - do we have what it takes to manage it effectively and what needs to be done to ensure that we don't run into a waste crisis?

Waste is a universal issue as it presents much broader challenges that not only affect human health and livelihood, but also the environment and ultimately the economy. And so, with [over 90%](#) of waste being discarded or burned especially in low-income countries – where many valuable resources are lost - it becomes crucial for the industry to look at 2021 as a year of exploring innovative and sustainable solutions, where rapid growth and resilience are at the forefront of its decisions.

While the new year will likely see the waste management industry witnessing stronger growth, as new technologies and legislation transform the traditional operations within the industry, how they manage this growth will be key to their own ability to remain resilient.

As a result, we believe countries, governments and companies alike will have to focus on four key aspects if they want to find the most strategic approach to best manage both resources and waste and, more importantly, turning waste into a sustainable resource – creating alternatives from existing waste streams to reduce and reuse them. These include:

Investing in circular economy

Investing in a circular economy model will be key to encouraging the 'nothing wasted' mindset as we move forward into the year 2021. Whilst it is still a relatively new concept, in the African context it offers significant opportunities to truly deliver on more inclusive economic growth, which includes job opportunities and positive environmental practices that are direly needed for sustainable growth.

As more consumers begin to be concerned about product sustainability, a reformative, restorative, and regenerative system, the circular economy is a model that should be at the forefront of business strategy. Aiming to strip out all unnecessary waste materials, energy losses and related carbon emissions across supply chains and – through integration and innovation – promote closing gaps to allow materials, energy, and resources to be 'fed' back into the cycle. The consensus is that a more sustainable eco-cycle will be achieved through long-term design and planning, maintenance, repair, reuse, remanufacturing, refurbishing, recycling, and upcycling. 2021 will see many businesses designing waste out of an economic system for continued life of products following their initial main use.



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Digital transformation

The pandemic has fuelled many industries into a fourth industrial revolution (4IR) world at a rapid pace. It becomes essential in the new year for our industry to stay focused on achieving sustainable and innovative solutions to re-invent the wheel and remain competitive through these unprecedented times. Artificial intelligence will lead the way in the new year especially when it comes to shining the light on inefficiencies that exist across the value chain. Through AI applications, the industry will be able to identify the various waste types that are presented and structure the information received through analytics to increase transparency and automation in recycling and / or other alternative processing solutions, in real-time.

Addressing the mounting plastic waste

2021 will see an increase in plastic pollution – with the pandemic encouraging the use of single-use plastic as well as PPE and this will rise significantly with the second surge of Covid-19. With South Africa only recycling 10% of its waste – the zero-waste-to-landfill goal becomes ambitious. However, by the minimisation, recycling, reuse and recovery of this waste - as well as beneficiation technologies - we will be able to build a circular economy with the potential to create numerous environmental, social and economic opportunities – central to this is the diversion of 90% of waste from landfills. The key here will be creating facilities that can deal with valuable waste in a more efficient manner – and 2021 will be the year of rapid change in this space.



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Legislation

As government continues to increase and enforce regulations, the industry will need to find new ways to create a circular economy going forward. We are seeing legislations, such as the extended producer responsibility (EPR), being implemented where producers of particular products that ultimately produce waste are required to take responsibility for these products following the sale – this ensures that from production stage, the producer is already putting strategies in place to reuse, recycle and recover energy from the product in its inception. Furthermore, carbon tax and carbon credits will lead the way as carbon credits will be sold to carbon tax payers in order to reduce their carbon tax liability. We will see the Department of Energy developing administration systems to be effective.

So, we can see that the waste sector goes far beyond traditional recycling. In fact, moving into 2021, it will be more about resilience and long-term sustainability for the local waste sector, encouraging global standards and tackling them with a long-term view - one that will take South Africa's waste industry into a green and profitable future.

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