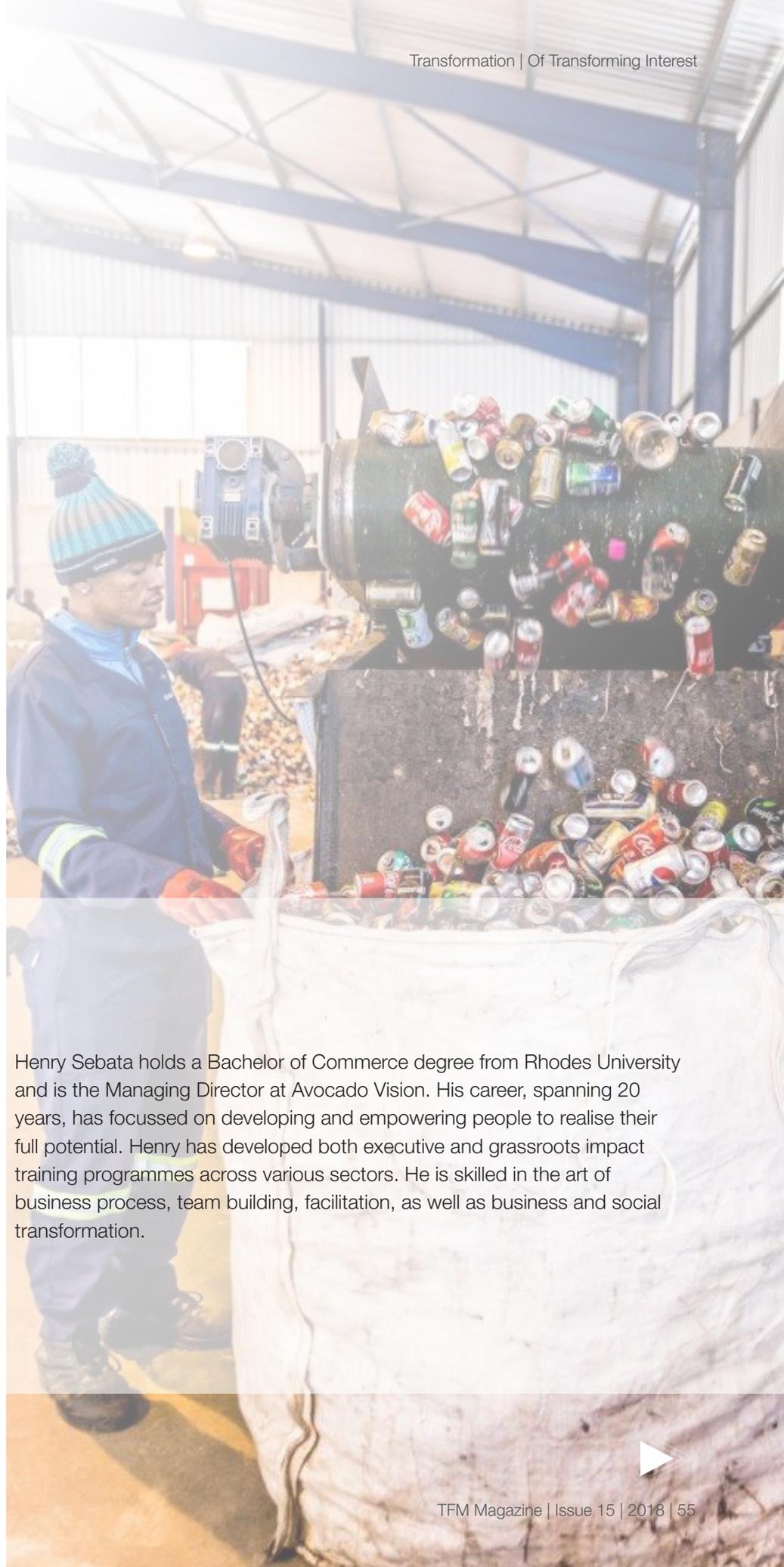


# ONE man's trash is another man's treasure

-The Waste Revolution-



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The South African Mineral Revolution, otherwise known as the Gold Rush, holds its place in South African history. Essentially striking gold unleashed a unique energy that created an entire industry and infrastructure to support it.

Almost 130 years on, South Africa is on the brink of another revolution; The Waste Revolution. The cornerstone of this revolution is simple; 'One Man's Trash is Another Man's Treasure'. The Waste Revolution has the potential to generate skills, create employment, support the environment, provide a livelihood to communities and drive entrepreneurship which will thrust the economy in an upward trajectory.

The economic development model in South Africa is a reactive one. Generally, development agencies wait for an applicant to ask for assistance, which is usually in the form of finance, to support a business that may or may not have the potential to create economic growth or jobs. For the economy to grow at the exponential rate required – which in my view is achievable – there needs to be a proactive approach that puts a value on 'another man's trash'. Essentially, to get the Waste Revolution into full swing, some groundwork needs to be done to ensure it benefits all, specifically in the following areas:

- > Legislation and regulations to support the revolution;
- > Research to identify credible opportunities and technology requirements;
- > Establishing a collaborative body to drive the process;
- > Funding and incentives;
- > A national baseline study;
- > Identifying value-chain businesses;
- > Development of Small, Medium Enterprises (SMEs); and
- > The roll-out of an awareness campaign.

A proactive approach to supporting this revolution is a collaborative process undertaken by government and business at large, as both have a vested interest in a thriving economy. Furthermore, there is a real potential that the Waste Revolution will have an impact on a transforming South Africa. It is estimated that it will create 4,300 SMEs, which in effect will provide a pool of Enterprise Development Beneficiaries that, with development, can thrive and substantially contribute to the economy, job creation and the B-BBEE Scorecard of their host organisation.

## Don't waste 'A National Treasure'

The South African waste management landscape is set to experience a raft of legislative and regulatory changes that will advance the country toward a more resource-efficient economy. This will create opportunities in the waste sector for business and investors who focus on plastics, organics, e-waste, construction and demolition waste.

Disposal continues to dominate the South African waste landscape. Based on official 2011 estimates, 108 million tonnes of waste material was generated that year, of which 10% was recycled or reused, with the remaining 90% landfilled. The national Department of Environmental Affairs (DEA) has extrapolated the 2011 statistics to represent 2016 estimates unofficially. These show the generation of 111 million tonnes of waste in 2016, of which 83 million tonnes (75%) were landfilled. Furthermore, a large proportion, approximately 65 million tonnes (59%), was handled by local municipal waste management systems.

The Western Cape generates an estimated 7.7 million tonnes of waste annually, of which 3.6 million (47%) consists of commercial and industrial waste. The remaining 4.1 million tonnes (53%) is municipal solid waste (MSW). Of the total for the province, the City of Cape Town (CoCT) generates a substantial portion (48%) of the waste, which includes 2.8 million tonnes (36%) of MSW and 0.9 million tonnes of commercial and industrial waste (12%).

Household waste is managed by municipalities and/or their appointed service providers. The private sector typically leads commercial and industrial waste in larger municipalities and, to some extent, the municipalities themselves. Although private stakeholders own landfills, municipal landfills are open for private sector disposal.

According to the DEA, the waste economy contributed approximately R24.3 billion to the South African GDP in 2016. It provided 36,000 formal jobs and supported an estimated 80,000 informal jobs. A further R11.5 billion per year could potentially be unlocked by 2023 through diverting up to 20 million tonnes of waste. The anticipated spin-offs could include 45,000 additional formal jobs and 82,000 indirect jobs, as well as the creation of 4,300 SMEs. The overall target is to increase waste diverted from landfills from an estimated 13% (14 million tonnes) in 2016 to 25% (29 million tonnes) by 2023; hence greater business and job creation benefits are expected.

The waste sector is broad and complex, consisting of various waste streams, stakeholders and technologies. This provides a variety of opportunities:

### Organics

Solutions are being sourced for municipal green waste, abattoir waste and the organic fraction of MSW; furthermore, there is a biogas investment potential of R100 million.

### E-waste

The forthcoming promulgation of an e-Waste Industry Waste Management Plan (IndWMP), coupled with a national focus on legacy electronics, signals a rise in the availability of e-waste. This will provide an increase in feedstock for dismantlers and refurbishers, and an opportunity to establish the Western Cape's first licensed processing facility for processing large volumes of e-waste.

### Plastic

The promulgation of the paper and packaging IndWMP will unlock more significant volumes of clean feedstock and more business support for the sector. There is a need for thermal treatment technologies for dirty mixed plastics, refuse-derived fuels (RDF) and thermoform PET.

## Builders' rubble

The supply of and demand for builders' rubble as an alternative to virgin material is growing. The national government and local municipalities are increasingly focussing on diverting rubble from landfills. The private sector is beginning to consider builders' rubble as an alternative, in the context of rising virgin material costs.

Crushing contracts and, green procurement by the private sector, as well as red tape reduction are further unlocking reuse potential of builders' rubble.

## Municipal contracts

A number of municipalities will need waste-related infrastructure development, expansion or maintenance over the next three years.

Opportunities identified through industrial symbiosis include solutions to address the following:

Slag 540,000 tonnes/year	Paper/pulp effluent 240,000 tonnes/year	Foundry Sand 74,000 tonnes/year
Treated wood 760,000 tonnes/year	Laminate glass 200 tonnes/year	Cardboard cores 170 tonnes/year

New and changing national and provincial legislation and regulations are set to unlock a number of key waste streams, notably organics. These changes will help to simplify rules and procedures for alternative waste treatment technologies and activities.

The e-waste, lighting as well as the paper and packaging, industries will be legally required to implement mechanisms to ensure extended producer responsibility. This will provide access to feedstock to support demand for recovered materials.

The Report highlights areas where untapped opportunities would proactively provide development opportunities in the waste sector, in the following areas:

- > Textile processing;
- > Cardboard core processing;
- > Cardboard core containers;
- > Pallet recycling;
- > Wood chipping;
- > On- and off-site paper pulp / effluent technology;
- > Contaminated bentonite processing;
- > Foundry sand value-add; and
- > Paper recycle/dehydration of waste streams<sup>1</sup>.

Dwindling landfill space and rising management costs are pushing up the price of landfilling. This increases the demand from waste generators for alternative waste treatment solutions, which in turn improves the financial viability of solutions.

Source of reference:  
<https://www.greencape.co.za/assets/Uploads/20180622-GreenCape-Waste-MIR-FA-LR.pdf>  
 Images: Interwaste  
[www.avovision.co.za](http://www.avovision.co.za)