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PROVINCIAL NOTICES • PROVINSIALE KENNISGEWINGS

PROVINCIAL NOTICE 678 OF 2020

DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE MANAGEMENT ACT 59 OF 2008

NOTICE IN TERMS OF SECTION 28(5), READ WITH SECTION 73 OF THE NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE MANAGEMENT ACT 59 OF 2008

I, Winifred Morakane Mosupyoe, MEC for Economic Development, Environment, Agriculture and Rural Development hereby give notice, in terms of section 28(5), read with section 73 of the National Environmental Management: Waste Management Act 59 of 2008, of my intention to consider the draft ***Gauteng Industry Waste Management Plan for the Informal Waste Industry*** in the Schedule to this notice, for public comments.

Members of the public are invited to submit, within 30 days of publication of this notice, written representations or objections on the draft Plan, to the contact person/s mentioned in the table below.

| PLACE | CONTACT | E-MAIL ADDRESSES & TELEPHONE NUMBERS |
|--|------------------|--------------------------------------|
| Umnotho House - Head Office of the Gauteng Department of Agriculture and Rural Development, located at 56 Eloff Street, Marshalltown, Johannesburg | Waste Management | wastecomments@gauteng.gov.za |

Please note that anyone entering Umnotho House will be subjected to COVID 19 procedures. Due to the COVID 19 pandemic, the delivery of comments by hand at Umnotho House is being discouraged.

Unless otherwise, and in writing, arranged with any of the contact persons, comments received after the closing date may not be considered.


WINIFRED MORAKANE MOSUPYOE, MPL
MEC FOR ECONOMIC DEVELOPMENT, ENVIRONMENT, AGRICULTURE AND RURAL DEVELOPMENT
25/11/2020



GAUTENG INDUSTRY WASTE MANAGEMENT PLAN FOR THE INFORMAL WASTE INDUSTRY

Indev

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1. INTRODUCTION

South Africa has a growing population and urbanisation rate therefore the trend for waste generation is an upward trend. In 2017, the country generated 42 million tonnes of waste and diverts only 11% of this away from landfills (National Waste Management Strategy, 2019). According to the 2018 General Household Survey, 64,7% of households in the country reported receiving a weekly refuse removal service. In Gauteng, as much as 92% of the households reported receiving a weekly refuse removal by either the local authority or private company whilst the balance of households either use a communal collection point or own refuse dump. The reported 92% service rate is skewed towards the urban areas of Gauteng.

The unprecedented demand for consumer goods has led to a huge increase in domestic waste which is having a hugely negative effect on the

natural environment. Municipalities are rapidly running out of appropriate dumping sites and recycling of waste materials is globally becoming a vital component of strategies to preserve nature and limit the demand for raw materials. The limited capacity of the state to provide a basic constitutional obligation in the form of refuse collection is a ticking time bomb and the situation needs to be arrested.

Historically, waste pickers have played an important role in the recycling sector in South Africa, forming a backbone of the informal waste economy and making a significant contribution in the recycling value chain.

Now, more than ever, the opportunity exists for waste pickers to be fully integrated in future plans for an efficient waste management system in the country. It is clear that the role of waste pickers cannot be limited to recycling, it must be extended to the provision of basic waste management services like refuse removal if we are to address the historical backlogs in service delivery in the country.

In the waste management space, the state has a legal framework available to not only address historical service delivery shortcomings but also attend to the adverse effects on levels of poverty, unemployment and economic vulnerability, which adverse effects have

Ignoring the informal waste sector in the planning of new, more technologically advanced solid waste management systems is perilous. This sector is dynamic and driven by basic survival needs that act as a powerful incentive to get the valuable materials before anyone else. Investment projects that rely for their financial sustainability on revenues from recyclables or on capturing higher calorific value materials and converting them into fuel or energy need to carefully consider

been fast-tracked by the Covid-19 pandemic. Furthermore, the institutional and legal mechanisms available to the state will position the informal waste sector as an integral part of government's strategy for economic reconstruction and recovery following the devastation of Covid-19.

Section 28(7) of the National Environmental Management: Waste Act, 2014 (Act 26 of 2014) provides for the preparation of an industry waste management plan for approval without being required to do so by the Minister / MEC. This plan has been developed for and in consultation with the informal waste industry, and is consistent with 13A and 13B of the Waste Act, 2014.. The plan has been prepared by Indev Foundation NPC, a Not for Profit Company established in terms of the Companies' Act 71 of 2008.

The industry waste management plan presented here responds to these national challenges and is a blueprint that can be implemented in every province.

2. PROBLEM STATEMENT

The problem is multipronged, but can be characterised into the following broad categories:

- i. ***Inadequate levels of waste collection by municipalities:*** Many households in South Africa still do not receive a waste collection service. In Gauteng, as much as 92% of the households reported receiving a weekly refuse removal by either the local authority or private company whilst the balance of households either use a communal collection point or own refuse dump. The reported 92% service rate is skewed towards the urban areas of Gauteng so there are many areas where waste services are still not available.
- ii. ***Limited recycling of waste.*** A national average of 11% recycling rate is not good enough. Gauteng, and in particular the City of Joburg has initiated a number of recycling and separation at source programmes however the recycling volumes are still low. It is important that recycling efforts are ramped up especially in light of the reality that Gauteng will soon be running out of landfill space if waste collected is not diverted away from landfills.
- iii. ***Underinvestment in innovative waste services provision infrastructure:*** Across the board there is a pervasive underinvestment in infrastructure that is meant to provide an

integrated waste management system and service. There is a worrying lack of innovative waste management systems that can appropriately respond to the waste service delivery shortcomings currently being experienced. The stop and start processes of integrating waste pickers into the formal economy in pockets of the country have not fully appreciated the complexities of waste picking which require a willingness to think outside the box in order to see waste management beyond conventional approaches.

iv. ***Opportunity cost of not recognising the contribution of waste sector in the green and circular economies:***

In developing countries like South Africa, government must go beyond defining service delivery challenges in terms of engineering and governance aspects of resource loops, a key issue that must be tackled is the inclusion of large population that still live in marginalisation as well as improved participation on the formulation, and implementation of programmes to deliver basic services. In the field of waste management this means that a key consideration when developing green economy and circular

economy interventions, is the inclusion of waste pickers, who have a long history of coping with resource scarcity through a range of resource recovery activities based on socio-economic necessities. Furthermore, there has been less focus on beneficiation programmes which extract more value from waste, turning waste into worth.

v. ***Poverty, Unemployment and a vulnerable economy:***

The current socio-economic architecture of South Africa calls for radical actions to redress the regressive trajectory of the economy. Millions of South Africans remain poor, unemployed and desperate. Unemployment, at 29 % continues unabated and needs to be addressed as a matter of emergency, especially youth unemployment. Service delivery protests that take place throughout the country have now taken on a new character, fuelled by the frustration of scores of young people that are unemployed. Professor Vimal Ranchhod, an economist at UCT, says 'Long term unemployment leads to unfulfilled human potential over a lifetime and can affect people's sense of self-worth and cause

depression. Poverty rates are higher and this affects individuals, their families and their communities'.

When the Covid-19 pandemic struck the economy was already fragile. The labour intensive industries such as those involved in waste management took a hard knock, expressed in reduced employment and increased poverty statistics. The potential and existing key roles played by the informal waste sector in basic service delivery and directing valuable material to the recycling chain means that this sector cannot be ignored in this phase of economic reconstruction and recovery, as waste picking often is the only work option available, making the occupation an important source of livelihood.

- vi. ***Fragmented approach to enterprise development of large population:*** Silo Government support programmes; limited large scale public private partnerships that go beyond pilot programmes,

3. WASTE PICKERS AND WASTE MANAGEMENT

Waste picking is a global phenomenon especially in developing countries. It has largely evolved as a result of huge unemployment rates in these countries. The poorer communities have found value in recovering recyclables and selling them off in order to make a living. As the recycling sector grows, so does the demand for the recyclables and as such the value of these sector. In most instances, waste pickers are not recognised and in certain cases they are despised.

The value of waste pickers is increasingly being recognised and appreciated. There is growing recognition that waste pickers contribute to local economies, to general cleanliness and public health, and to environmental sustainability.

Local economy: Currently the recycling sector is predominantly driven by the informal sector. The recyclers rely on the waste pickers to collect recyclables, especially those that they cannot access directly themselves. This includes the recyclables that would have evaded diversion efforts and had reached landfill sites. In addition, the salvagers minimise the amount of waste that goes to landfill for disposal thereby extending the life span of the landfill and thus saving

municipalities money needed for developing new sites.

General cleanliness and public health:

Waste pickers recover waste which could otherwise be scattered all over especially in areas where there are problems with waste collection or in cases of illegal dumping.

Environmental sustainability:

Waste pickers divert a significant quantity of waste from the landfill, thereby saving landfill airspace. This reduces the impact of landfilling as it minimizes the need for additional landfill sites. Reuse and recycling decreases the demand for virgin materials needed for production, thus contributing to the conservation of natural resources and energy while reducing air and water pollution. Recovery of recyclable materials and organic matter contributes to the reduction of greenhouse gases (GHG) and to the mitigation of climate change.

This further provides “jobs” to those involved and as such create sustainable livelihoods. The Women in Informal Employment: Globalizing and Organizing (WIEGO) summarises the contributions of waste pickers as shown below.

The majority of waste pickers in SA operate on landfill sites. This has its advantages and disadvantages. The advantages include the reduction in the

amount of waste that has to be landfilled as well as the monitoring role they play in spotting illegal behaviour. However, the dangers to the health of the waste pickers, outweighs these advantages. Waste pickers operate without any personnel protective equipment (PPE) and handle the waste directly, thereby getting exposed. In addition, waste pickers are often in danger of being run down by the trucks and/or the heavy machinery operating on the site.

In a recent study undertaken by the department of environmental affairs, it was identified that the biggest challenge with the operations of waste pickers currently is in the manner in which they operate. The operational challenges include:

- Lack of the necessary Personnel Protective Equipment (PPE) necessary for people who work with waste.
- Lack of the necessary tools of trade (equipment and machinery) for doing the work they do.
- Lack of appropriate allocated space where they can operate from. Majority operate from municipal landfill sites and do not have designated areas to work from.
- Lack of the necessary infrastructure such as buildings to work and store their material,

ablution facilities etc.

- The operations on many landfills are not aligned with waste picker operations and as such pose a health and safety hazard.

Research undertaken by CSIR indicated that informal pickers are estimated to have saved municipalities between R309.2 – R748.8 million in landfill airspace in 2014, at little to no cost to the municipality, by diverting recyclables away from landfill, at ± 16 -24 tonnes/picker/annum. The same research also identified four scenarios emerging in terms of how waste pickers can be integrated into mainstream economy:

- (i) the informal sector is utilised in its current format, as a largely marginalized and unregulated community, recovering value at little to no cost to the value chain;
- (ii) the informal sector is integrated into recycling programmes, with some level of control (regulation) and monitoring, and with increased support from business and industry;
- (iii) government and business drive to formalise the informal sector

through the establishment of co-operatives and SMEs;

- (iv) the formal waste and recycling sector drive a labour intensive process, based on an employment model of absorbing the informal sector.

This proposed plan is based on scenario (iii) where both government and business establish cooperatives and SMME's to formalise waste pickers.

These waste management entities (Cooperatives and/or SMME's) can then access enterprise development support from a myriad of available funding schemes offered / facilitated by government organisation such as is found in cooperatives and SMME's.



Figure 1: Waste Picker pulling a recyclables cart (www.infrastructurenews.co.za)

4. INTRODUCING INDEV FOUNDATION NPC

Indev Foundation (hereafter referred to as Indev) is a Non For Profit Company incorporated to advance the following objectives: Community Development, Innovative Enterprise

Development, Poverty Alleviation, Skills Development, Job Creation. Indev advances the attainment of its objectives through a range of innovative Enterprise Development efforts constructed behind tried and tested innovations. Indev's innovations are responsible for a number of municipal support and enterprise development activities currently sustaining over 300 beneficiaries in the Provinces of Gauteng, North West, Limpopo, Western Cape, Kwa Zulu Natal, Free State and with a foot print in all Nine Provinces of the Republic of South Africa.

5. SOLVING THE PROBLEM

5.1 Industry Waste management Plan for the Informal Waste Economy as a Municipal Support vehicle.

Currently most municipalities implement the least cost method of collection and disposal as a minimum requirement and find it difficult to implement waste management planning in line with the waste hierarchy (NWMS, 2010). Most municipalities struggle to provide basic service levels to all households within their boundaries and this can often lead to service protests. Service delivery and unemployment protests are mostly characterized by violence and infrastructure vandalism. These vandalisms often translate to budget migration from critical services towards restoring same vandalized infrastructure – schools; libraries; clinics; etc. In order to solve the multiple problems alluded to in the previous section, and in accordance with Section 28(7) of the National Environmental management Act: Waste

Act, Act No 26 of 2014. Indev Foundation NPC has developed a multi-faceted industry waste management plan that will facilitate the so much needed inclusive growth which will result in thousands of waste picker livelihoods sustained whilst at the same time deploying innovative waste management systems to deal with waste service backlogs.

In order to achieve Inclusive growth, the plan pays attention to the following factors:

5.1.1 Municipal Support for Gauteng Municipalities:

According to the South African Constitution (Act No. 108 of 1996), basic services are the fundamental building blocks of improved quality of life to human dignity and well-being. South Africa is now in what can be described as a watershed time in its democracy and as the nation goes forward it is imperative that government is able to provide quality and efficient service delivery to all the citizens while ensuring that alleviation of socio-economic disparities in rural and

urban areas are well managed.

Waste services involve *inter alia*, collecting refuse from households, organisations and businesses, and managing this waste safely. Refuse removal is the Constitutional responsibility of local government, and municipalities are the primary interface between the public and government around waste management.

Municipal solid waste generation levels are not going to go down, waste generation rates are bound to increase rather than decrease. The goal of the current administration therefore is to progressively expand access to at least a basic level of waste services to every citizen and household, and to ensure that waste that cannot be reused, recycled or recovered is disposed of safely in properly licensed landfill sites. This is where the role of municipalities becomes vital, as they are at the coalface of service delivery when it comes to waste management. Municipalities, with their differentiated capacities, need to address historical backlogs and inequalities in access to waste services, and improve the quality of life for citizens by providing a cleaner place to work and live in.

Separation at source programmes that have been initiated in Gauteng have struggled to be sustainable. Separation at source forms the backbone of any

recycling programme, if efficiencies are to be achieved. The significance of separation at source include the following:

- Diversion of waste from landfill saves landfill airspace and thereby minimises the need for additional land for the development of new landfill sites in view of the high contestation of land by different land uses.
- Separation of recyclables from the general household waste minimises contamination of the recyclables and hence increases the ease of recycling and also improves the quality of recyclate, thereby fetching a better price.

In the municipalities where separation at source initiatives have been started, there are typically three scenarios that prevail:

- Municipalities provide bins for households (urban areas).
- Households provide their own receptacles or refuse bags.
- Municipalities do not provide receptacles and the households cannot afford to provide receptacles or refuse bags for themselves.

In the areas where the Industry plan will be implemented, receptacles for separation at source will be provided.

In light of all the above measures, the

Industry Waste Management Plan for the Informal Waste industry is positioned to be an unparalleled service delivery model in terms of waste management.

5.1.2 Creation of decent jobs and developing enterprises and a skilled workforce:

The existing structure of the economy is not conducive to job creation in that in many industries the concentration of business is high with smaller numbers of businesses which can be categorized as large businesses. This structure is not optimal when considering that small, medium and micro-enterprises ("SMMEs") in developed and developing countries are major contributors to GDP and job creation.

President Cyril Ramaphosa in his 2019 State of the Nation address also conceded that our greatest job as a nation is 'to create jobs for the unemployed of today, while preparing workers for the jobs of tomorrow.

The National Development Plan (NDP) acknowledges the contribution of the waste sector in reducing unemployment, poverty and income inequality. Furthermore the NDP affirms the view that waste management is an important utilities element of building sustainable communities.

The proposed Industry Waste

Management Plan for the Informal Waste economy is tailored to facilitate inter alia sustainable Job Creation, Community Development, Skills Development and Poverty Alleviation

As service delivery is stepped up, jobs will be created and sustained whilst skills are transferred to the beneficiaries or participants in such a way that they can even be mobile and access work in various other sectors, and participate meaningfully in economic activities.

5.1.3 Re-industrialisation of the economy:

Current investment levels in infrastructure are insufficient and maintenance programmes are lagging behind. Without investments in new, cost effective and innovative infrastructure to re-industrialise the economy there will only be small strides made in generating jobs and accelerating skills development and economic growth.

5.1.4 Innovation

Solutions to reduce the high unemployment rate, tackle poverty and ailing economy are not easy to find and now more than ever, innovative solutions are required to deal with these emergencies, accelerate inclusive growth

and create jobs. Indeed, as the NDP states there is scope for innovation and a variety of different models and tools to be developed for engaging the informal sector in the delivery of waste services. The proposed plan by Indev introduces innovative ways and tools to engage the informal sector in a large scale job creation and enterprise development programme.

5.2 Setting up the Collection & Recycling network of Co-operatives

In order to assist municipalities to deliver a basic refuse removal service, a network of waste co-operatives will be established across the province, to specifically extend the capacity of municipalities to collect waste, in the main whilst also beefing up the capacity to recycle waste.

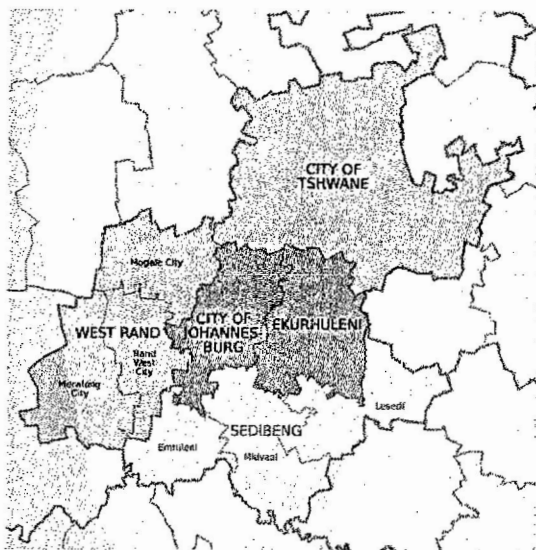


Fig 2: Gauteng municipalities

This network will be expanded from the existing waste cooperatives that have been established through GDARD's initiatives.

The cooperatives will be providing two primary functions: *Waste collection and Recycling*.

It is possible that across the province a total of 200 cooperatives, generating 1200 jobs can be involved in providing basic services in the waste management value chain.

5.2.1 Waste Management Principles for the rollout

The table below represent the principles that will inform the waste management :

| Principle | Annotation |
|--|--|
| Waste Minimisation | Avoiding the amount and toxicity of waste that is generated and, in the event that waste is generated, this principle means the reduction of the amount and toxicity of the waste that is disposed. |
| Waste Prevention | Avoiding the generation of waste and avoiding toxicity in waste |
| Waste as a resource | Beneficiating waste through re-use, recycling, treatment and recovery to reduce the amount and toxicity of waste disposed of. |
| Sustainable Strategic Partnerships | Government establishing and sustaining collaborative working relationships with non- government role players involved in the management of waste. e.g private sector, academia, civil society organisations and other development funding institutions. |
| Environmentally sound socio-economic growth | Ensuring that the intent and commitment of the Sustainable Development Goals are continuously integrated and aligned to all environmental protection considerations, and that environmental protection programmes contribute to improving the socio-economic lives of people |

Table 1: Waste management principles guiding industry plan implementation (National Waste Management Strategy, 2020)

5.2.2 Setting up of Cooperatives

Cooperatives are recommended as the preferred mode of operation for the informal sector as they still hold principles that resemble the operation of the informal sector. While many informal waste recyclers have found themselves in this sector due to unemployment, it has been established that one of the appealing principles of the informal nature of their operation is the level of independence they enjoy. The cooperative model also allows for working independently. Members of the co-operative are all equal partners in the co-operative and hence the

essence of working for oneself is still maintained, which is a strong element of the informal sector. A constitution will be drawn to guide the cooperative on Management, Meetings, Misconduct, Finances, Conflicts and General Matters. Applications for the

registration of the cooperatives will be lodged with the Companies and Intellectual Property Commission (CIPC) for all the cooperatives that will be involved in implementing the plan.

The Department of Trade and Industry had committed to promoting co-operatives

as a means to “create and develop income-generating activities and decent, sustainable employment; reduce poverty, develop human resource capacities and knowledge; strengthen competitiveness and sustainability; increase savings and investment; improve social and economic well-being; and contribute to sustainable human development” (the DTI, 2012

5.2.3 Land and Infrastructure requirements

The waste management value chain will be anchored on the following infrastructure, established incrementally to cover the whole province:

- i. *Land:* The co-ops will require areas in which to operate. The land will be used to set up materials recycling facilities and Recycling hubs (‘Green Buckets’). It is the intention to use tribal/community or government land on the basis of “Permission To Occupy” (PTO’s) to reduce capital outlay when implementing the plan.
- ii. *Material Recycling Facility (MRF):* It is important to ensure that recyclables are not separated only to be taken to the landfill site again for disposal. The recyclables therefore need to be taken either to a Material Recovery Facility

(MRF) where the waste can further be sorted or even treated. In this regard a Materials Recycling facility will be established in Gauteng. A business plan for the establishment of the MRF will be prepared, and will be based on information that will be gathered on waste volumes as the collection and recycling programmes are rolled out in the rest of the province. The MRF will have all the necessary ancillary infrastructure, including a clinic on site.

- iii. *Platform Tools:* The unit of implementation for this industry plan will be Platforms. Platforms will be rolled out across the province where the plan is being implemented. Cooperatives will operate from the platforms. Each Platform will be equipped with the following: 1 Green bucket/Recycling hub; 2 Motorised three-wheeler vehicles; 1 Bailer; 1 Bottle crusher

- a. *Recycling Hubs (Green Buckets):* There will be rolling out of green buckets across the province as more platforms get rolled out. Each Platform comes with one green bucket. The green buckets provide a

working space for co-operatives and storage for recyclables.

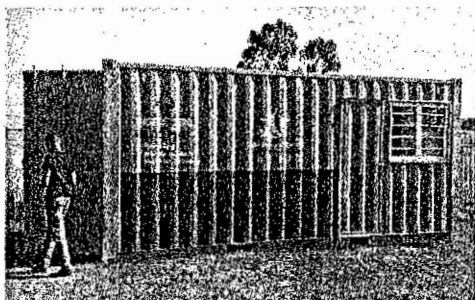


Fig 4: Recycling hub, also dubbed 'Green Buckets' with office and storage space

- b. *Motorised Three Wheelers:* Each municipality / organisation that takes up licenses with Indev, will receive a minimum of (12) twelve motorised vehicles to assist with waste collection and recycling. When domestic waste is collected as part of a service to a municipality, the fleet may be adjusted upwards based on increasing demand for the services or volumes to be transported. The members of co-operatives will be taken through driver training to acquire licenses

to drive the vehicles.



Fig 5: Motorised Three wheeler vehicle

The vehicles boast the following features:

- Driver weather protection and safety features including seat belts.
- Bin Capacity and Closure of 2.48 m³ with five opening flaps with covers. The bin is able to load a minimum of 450kg of recyclables.
- Hydraulic powered tipping capability.

The Three Wheelers have a service interval of 2000 km / 6 months, whichever comes first. They are roadworthy and authorised to travel on public roads. This is supported by the e-NaTIS certificate which is produced for a newly

manufactured vehicle.

The vehicles have an off road capability and are fuel efficient with a consumption of 5 litres per 100 km travelled at 70 km/h.

c. Trailers

Each Platform will get a trailer that comes in very handy for added capacity to transport recyclables or equipment.

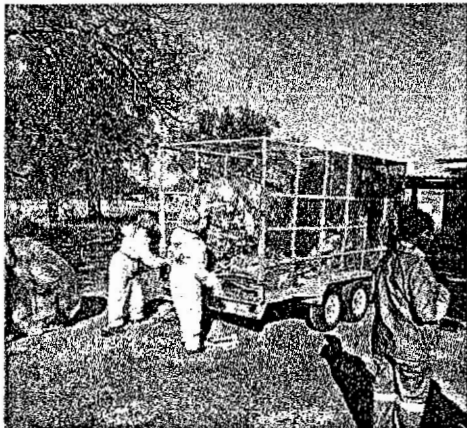


Figure 6: Members of a Cooperative loading waste in a trailer, to maximise efficiencies

d. Weighbridge and Weigh-pads: Each recycling hub will be provided with a weigh-pad to capture the weight of recyclables, bailed and un-bailed. In the case of the MRF, it may be necessary to install a weighbridge rather. These

details will be finalised in the MRF business plan.

e. Bailing machines & Bottle crushers: To ensure efficiency and weight of the waste recyclables, it is important that collected waste is well compacted at a waste generation point or at least at the recycling hubs before recyclables are taken through to the MRF. Each Recycling hub will have a bailing machine. A Bottle crusher will assist with pre-processing glass.

f. Generators: A generator for each platform will be installed for purposes of propelling the Compactor / Bale during the compaction of the waste recyclables. The generator will also be used to power the working areas as may be required.

5.3 Waste Streams under this plan

This industry plan deals with the following waste streams:

- *Plastic, Paper, Glass, Metals:* These are the waste streams that are currently collected for recycling

purposes. The recycling component of the plan will therefore focus on these.

- *Municipal solid waste:* This plan is also intended to assist municipalities with refuse removal for a monthly fee per household.
- *Any other waste stream* whose management may be complementary to the activities of the plan.

5.4 Policy Alignment

5.4.1 Alignment with Economic Reconstruction and Recovery Plan

When the pandemic hit South Africa there was already an economic crisis, the country now has to increase efforts to manage high poverty, inequality and economic vulnerability in a fragile economy.

The Covid-19 pandemic limited labour intensive industries that are part of significant supply chains. The waste management sector is one of those sectors involving high volumes of labour, and was necessarily badly affected by the pandemic.

The recovery must necessarily focus on *inter alia* expansion of production employment.

Consequently, the Economic Reconstruction and Recovery Plan has as

one of its objectives, to support cooperatives as well as small, medium and microenterprises because this is where the labour volumes reside. This aligns well with the objective of this industry plan which is to have SMME's and Cooperatives forming the backbone of the services that will be provided through the industry plan.

Out of the eight (8) priorities of the Economic Reconstruction and Recovery Plan, three are lifted here because of their direct relation to the plan:

- i. *Localisation through industrialisation:* This priority deals with sector stimulation and support for labour absorbing industries. This means strengthening support for SMMEs and co-operatives. The proposed plan, as indicated will use cooperatives and SMME's as the primary units to deliver plan services. These entities will be engaged in the industrial hubs network that will be set up for implementing the plan.
- ii. *Public employment programmes* that build communities. The SMME's and Cooperatives deployed to implement the plan will for all intents and purposes represent public employment programmes because they will be assisting to deliver public goods

and service. The people will be from local communities, contributing to the upliftment of local economies that have been battered by the impact of Covid-19.

- iii. *A green economy that guarantees security of energy, food and water* : The green and circular economies provide investment opportunities such as those proposed in this industry plan, which can assist in economic recovery. The economic Reconstruction and Recovery Plan refers to waste recycling, beneficiation and the transition to a circular economy being key in the recovery. Waste picker integration and revitalisation of buy-back centres and other recycling infrastructure represent a huge opportunity to reconstruct local economies.

5.4.2 Alignment with the National Development Plan

South Africa's 2030 vision as articulated in the National Development Plan correctly directs implementation of a waste management system through rapid expansion of *inter alia*, recycling infrastructure, 'to bolster economic activity in poor urban communities'. identifies public employment schemes to

be an essential part of the 2030 vision. The NDP further envisages community based schemes that complement the delivery of programmes to communities as being critical in delivering the so many needed jobs.

5.4.3 Alignment with circular economy initiatives

The Ellen McArthur Foundation characterises the circular economy as one that moves beyond making adjustments to reduce negative impacts of a linear economy to making adjustments that build long term resilience, generate business and economic opportunities and provide environmental and societal benefits. The waste management principles referred to in section 5.2.1 will assist us in the implementation of the Industry Plan to achieve a circular economy whereby waste is continually eliminated and the value from waste is extracted.

The awareness campaigns that will be rolled out as part of implementation of the plan will be biased towards *inter alia* waste prevention, whilst the recycling and beneficiation activities of the value chain will deal with the value extraction from waste

5.4.4 Alignment with the Constitution and Waste Legislation

Section 24 of the Constitution places a burden on all government spheres to ensure a safe and clean environment to all the citizens of South Africa. It further advocates for the prevention of pollution and ecological degradation, conservation as well as ecologically sustainable development. Although schedule 4A of the Constitution lists 'environment' as a concurrent function between national and provincial government, local government is further given specific functions relating to the environment as contained in schedules 4B and 5B. These include among others cleansing and refuse and solid waste disposal.

Further requirements on environmental matters including waste management, are placed on local government through sectoral legislation such as the National Environment Management: Waste Act, No 59 of 2008, as amended. The Waste Act is based on the principles of the Waste hierarchy which promotes the 3R's (Reduce, Re-use, Recycle) prior to disposal to land. It therefore encourages municipalities to provide receptacles for the collection of recyclables wherever possible. The proposed industry plan responds to the requirements of the Constitution and waste legislation.

In Gauteng, the following key instruments relating to waste management will also be complied with through the implementation of the industry plan:

- o Gauteng Provincial Integrated Waste Management Policy;
- o First Generation Integrated Hazardous Waste Management Plan for Gauteng;
- o Gauteng General Waste Collection Standards; and
- o Waste Information Regulations

5.4.5 Alignment with National Waste Management Strategy

The recently published National Waste Management (NWMS) sets the following three outcomes to be achieved by all stakeholders from all sectors of society:

- i. Prevent waste, and where waste cannot be prevented ensure that: 40% of waste diverted from landfill within the next five years; 55% within 10 years and at least 70% within 15 years;
- ii. All South Africans live in clean communities with waste services that are well managed and financially sustainable; and
- iii. Mainstreaming of waste awareness and a culture of compliance resulting in zero tolerance of pollution, litter and illegal dumping.

Many municipalities in South Africa do not have the capacity to reach the above NWMS expectations. It will take the kind of '*Sustainable Strategic Partnerships*' suggested in the NWMS to reach these expected outcomes, whereby government will have to partner up with *inter alia* private sector, development funding institutions in the management of waste. There is little technical or financial capacity outside the metros to leverage service delivery to support beneficiation of waste (NWMS, 2020). In the absence of provincial or national intervention, economies of scale make it difficult to unlock value from the waste streams that municipalities are responsible for, making regional planning for waste services critical. This makes it difficult for recycling or beneficiation efforts to take off on a grand scale.

The NWMS advocates a shift in resources towards where they are needed the most and adoption of flexible approaches to service delivery that incorporate the informal sector while local needs are addressed.

The separation at source approach adopted in this plan is supported by the 2020 National Waste Management Strategy. According to the Strategy there is scope for innovation and a variety of different models and tools to be developed

for engaging the informal sector in the delivery of waste services that accomplish separation at source. Indev has done exactly this by deploying innovation in providing tools of trade for waste pickers to be involved in waste collection.

5.4.6 Alignment with Gauteng Township Economic Revitalisation Strategy

The Gauteng Township Economic Revitalisation Strategy (GTER) lists Waste Management and recycling as part of the clusters of township businesses or sectoral activities. The strategy seeks to forming to ensure that planned support and interventions for township economies are targeted towards the challenges experienced in townships. GTER is guided and supported by 7 pillars and the proposed industry plan is aligned to the GTER pillars as follows:

- i. *Innovation and Indigenous Knowledge Systems*: This refers to existing knowledge systems that can be converted into business opportunities. In these instances, relevant institutions are required to assist the entrepreneurs to develop their concept into viable businesses. This may involve incubation and funding of such business opportunities by those institutions. The implementation of the proposed plan is based on a range of innovations housed in

- Indev Foundation NPC. The cooperatives involved in the plan will be assisted through commercialisation of some of their ideas too.
- ii. *Manufacturing and production:* Planned intervention should give incentives that increase the manufacturing and production capacity of townships. Once the industry plan is funded, there will be an increase in manufacturing and assembly of the tools of trade required by the cooperatives.
 - iii. *Market support and competitiveness:* Support given to township business by ensuring that they can access available markets and that they are competitive. A key component of the enterprise support to be provided to the cooperatives entails assistance with market access for recyclables, as well as support to access other profitable value chains like water/housing/road infrastructure services as well as the retail sector.
 - iv. *Entrepreneurship development:* While it is acknowledged that not everyone is an entrepreneur, it is imperative that those who have the potential are given the best chance of succeeding at it. It is therefore recommended that such entrepreneurs be supported through skills development and mentoring as well as through incubation programmes. Skills development and training is an important component of the industry plan
 - v. *Resourcing:* One of the main barriers to entrepreneurs making it in townships is access to funding. The requirements by financial institutions such as collateral are prohibitive. Alternative funding options that are targeted towards these categories of individuals is needed to ensure that all the barriers to entry into entrepreneurship are removed. The industry plan in itself constitutes a resourcing plan for the business activities of waste pickers who are by default hard working entrepreneurs.
 - vi. *Economic infrastructure:* Township entrepreneurs need infrastructure that they can plug into to ensure their success. Lack of the necessary infrastructure to ensure the success of township business can also act as a barrier. It is therefore imperative that planned programmes invest in outlaying the necessary infrastructure. The backbone of the proposed industry plan is the infrastructure that is

proposed as part of the 'platforms' to be rolled out across the province.

- vii. *Regulatory/Policy Review:* This principle seeks to ensure the implementation of a range of legislation and policies (Preferential Framework, Broad Based Black Economic Empowerment, Gauteng Strategic Procurement Framework, Localised Accord) to ensure the attainment of, among other objectives the localisation of inputs through concentrated supplier development, incubation and capacity building. The industry plan is intended to be in compliance with all legislation.

5.4.7 Alignment with Gauteng Township Economic Development Bill

The Gauteng Township Economic Bill seeks to facilitate and promote inclusive economic growth transformation, modernisation and re-industrialisation as well as interventions that inter alia are structured to include the social protection of vulnerable groups in society like waste pickers.

In addition to all the measures indicated above in the Township Revitalisation Strategy, In terms of the Bill, every

provincial organ of state must take reasonable measures to facilitate the provision of suitable infrastructure, including work sites necessary for the development of township based enterprises. The provision of operational bases, buildings or land by provincial government, for the platforms operated by waste pickers would be consistent with the provisions of the Bill.

The Bill also seeks to compel provincial government to establish or identify markets for products generated by sector township based enterprises. This means that the province has a responsibility to assist the informal waste industry with market access for the recyclables.

5.4.8 Alignment with District Delivery Model

Government's District Delivery Model (DDM) is about acceleration of service delivery through coordinated and monitored efforts of all spheres of government. The Gauteng province, working with municipalities as well as local economic development agencies and other provincial organs of state, will in a better position to strengthen and support the efforts of the informal waste industry through the implementation of the industry plan.

The DDM also seeks to prioritise the

development of rural and township economies. The model approach is also in line with the National Development Plan which outlines the importance of building a capable state in partnership with the citizens of this country.

5.4.9 Alignment with Pricing Strategy

The National Pricing Strategy for Waste management, hereafter referred to as the 'Pricing Strategy' suggests the following forms of support that can be provided to waste management programmes, via the general fiscus:

- *Recycling Subsidies:* A recycling subsidy is characterised by government providing 'a payment either per unit or per kg of material recycled, or as a lump-sum grant to communities or recycling centres'. The Pricing Strategy also suggests that subsidy could be paid to waste collectors or recyclers per unit of waste collected or recycled. The alternative is that government could provide 'tax credits or rebates for recycling whereby it provides tax relief to anyone who recycles or who invests in recycling infrastructure'.

Currently, there are no tax rebates

specifically targeted at recycling infrastructure, therefore, recycling subsidies would seem to be the feasible option for government to support the development of recycling infrastructure as proposed in the plan.

- *Grants:* Government can also make available grants to 'provide financial incentives for the improvement of various aspects of solid waste management including research and development'. In this regard, grants can be provided for any of the aspects of implementation of the industry plan, including financial support for the cooperatives and SMME's that will be involved in the implementation of the plan.

The current industry plan does not suggest any specific new taxes to be developed, although the Pricing Strategy proposes that a combination of taxes and subsidies is more effective and ensures that subsidies that are given can be sourced (from the tax revenue). In South Africa there is already an environmental levy that is charged respect of tyres.

5.5 Key stakeholders for Plan implementation

Implementation of the plan will require a range of stakeholders who will assume different but important functions as follows:

- i. *Waste Pickers:* Waste pickers are the labour force and actual implementers who will make this plan happen. After all the informal waste industry is made up of waste pickers in the main. Their role will very simply be to collect waste, recycle and beneficiate waste and grow their cooperative businesses for sustainable livelihoods.
- ii. *Local Government:* Local government (municipalities) is responsible for refuse removal and separation at source programmes. Local government is overall responsible for the management of solid waste generated within their jurisdictions. In order to bolster their capacity to provide these basic services, municipalities will be well-advised to specifically enlist the services of the cooperatives or waste picker entities for municipal refuse collection, in line with local economic development set asides. This service will be provided for a

prescribed monthly fee per household. In addition, and in order to increase recycling rates, municipalities will be encouraged to sign up for as many licenses as may be required to provide adequate platforms that will close the gap for the much needed recycling.

Local economic development agencies also have a role to play in uplifting local economies. There is no better way to do this than investing in infrastructure and innovations that will generate hundreds of jobs and sustain livelihoods in the many localities that are recovering from the devastating impacts of the Covid-19 pandemic.

- iii. *Provincial government:* The responsibility to support municipalities as they deliver services to their citizens rests also with provincial government. In the context of integrated waste management planning
- iv. *National government:* The role of national government, be it environmental or cooperative governance ministries or even treasury is to support the plan either financially by making resources available for regional waste management infrastructure

as a response to mandates relating primarily to basic services delivery and secondarily to municipal support.

v. Private sector companies

All private sector companies can support the implementation of this plan through CSI or other forms of funding ploughed in the plan for the rollout of platforms to create jobs and support community development whilst delivering basic service and creating sustainable local businesses.

5.6 Industry Plan Administration

The industry plan will be administered by Indev. Indev will procure services it requires for the implementation of the plan, allocate budget as may be appropriate and report against set implementation targets. The entire network of waste collection and recycling infrastructure as well as cooperatives will be managed by Indev.

Indev will also be responsible for preparation of business plans and funding proposals as may be required, to provide additional financial resources for the implementation of the plan.

6. INDUSTRY PLAN TARGETS

6.1 Targets for waste collection and diversion from Landfill

The targets will be dependent on how many platforms the plan implements, on the basis of available budget. Once the budget is fixed, waste collection and diversion targets will be set and submitted to the MEC for approval.

6.2 Targets for job opportunity creation

As indicated in the Financing section, one platform rolled out will produce jobs for 6 'Rapid Response Agents'. The total number of jobs that will be created will be finalised once the approved number of platforms is known. The plan as conceptualised will have the capacity to create and sustain a total of 1200 jobs across the province if 200 platforms are rolled out.

6.3 Training & Skills Development

Waste pickers involved in implementation of this plan will receive training and skills development covering the following elements:

- *Technical aspects of waste.* This will focus on the different waste material,

their values, opportunities available on each material and the associated material handling per waste stream. The properties of the different materials will also be included in the training to emphasise how the material should be handled.

- *Occupational Health and Safety and Road safety:* Waste poses health and safety concerns. It is therefore imperative that people in these sectors are made aware of the potential health and safety risks as well as possible measures to avoid and/or mitigate such risks. Emphasis will be placed on the handling of the waste material and the use of Personnel Protective Equipment (PPE) as well as the storage of the material (Compliance to relevant norms and standards) to avoid potential safety issues such as fires, rodent management and avoidance as well as physical harm

from the waste (falling stacks).

- *Operations and Business support:* Most people involved in this sector especially at an informal level as well as cooperatives need to be assisted with basic business skills to ensure that they operate their operations as businesses to ensure sustainability. Training and support will also be given on how to operate the equipment and vehicles provided as well as assisting cooperatives understand and achieve cost and operational efficiencies. Over the three-year license period, members of cooperatives will receive business training and mentoring to ensure that by the end of at least year two, they will be able to run their operations successfully on their own.

6.4 Enterprise development

Over and about the training and skills development that will be offered, cooperatives will further be assisted as follows:

- a) Recruitment of beneficiaries and Registration of Cooperatives
- b) Setting up of the waste collection and recycling hubs they will be operating from;
- c) Incubation of their businesses;
- d) Market access for their recyclables
- e) Business development support to access business opportunities in other value chains e.g retail and digital sectors, water and construction sectors etc.
- f) Assistance with funding proposal to acquire assets / equity

6.5 Public awareness

The Industry Plan will have a programme aimed at creating awareness of waste management issues. For maximum effectiveness, waste awareness and anti-littering programme will be linked to the recycling infrastructure and to extended waste services. This will be particularly important in separating waste at source. The campaign is intended to be primarily a door to door sustained campaign anchored in the waste hierarchy, with the objective of achieving behaviour changes.

This approach is in line with the National Waste Management Strategy, which is supportive of efforts to raise public awareness and increase government and private sector investment in the delivery of infrastructure and services such as kerbside collection, drop off centres and buy-back centres linked to the national awareness campaign around recycling, economic incentives etc.

7. FINANCING THE PLAN

In terms of the fiscal measures outlined in the Economic Reconstruction and Recovery plan developed to address the impact of covid-19 pandemic, government has committed to increase its spending to provide basic services, over and above funding of measures to contain an curb Covid-19.

The industry plan is intended to assist government fulfil its constitutional obligation to provide basic waste management service. It is therefore expected that fiscal reprioritisation will be aimed at ensuring inter alia that productive activities such as those in the waste management value chain will receive the requisite priority. This will ensure that government not only delivers on basic services but supports social obligations to uplift communities.



Figure 6:

*Financing options for the Industry Plan***7.1 Funding from the fiscus**

As already indicated in section 5.3, government will be increasing its fiscal allocations on programmes aimed at basic services delivery. Municipal support programmes like this plan should therefore be financed through appropriated funds, in alignment with the Economic and Reconstruction Plan. Furthermore the National Waste Management Strategy affirms that investments in waste management infrastructure, particularly recycling, by National Treasury have the potential to not only reduce waste management costs for local municipalities, but also improve the economic efficiency of large Municipal Infrastructure Grants for landfills. National and provincial departments with a mandate to support and capacitate municipalities in respect of waste management, will be able to allocate some funds to finance this plan. This applies to the national department of environment as well all provincial departments that have the Environment mandate (Fig 6).

The national department of Cooperative Governance and Traditional Affairs and its provincial counterparts should also be able to set aside funding for the implementation of this and other programmes aimed at assisting municipalities (Fig 6)

7.2 License Subscriptions

The plan proposes a license subscription approach whereby funding can also be disbursed based on acquisition of platforms as indicated in the table below:

| Platform Offering |
|--------------------------------|
| <u>Platform Services:</u> |
| Waste Collection (Recyclables) |
| Waste Recycling |

| |
|--|
| Waste Information Management & Awareness |
| Fleet Management |
| Project Management |
| Enterprise Support & Incentives |
| Capital assets Amortisation |
| 6 licenses required for One (1) Platform @ R29 500 per license per month |
| <u>Platform Tools and People (One Platform):</u> |
| 2x Motorised Vehicles; 1x Green Bucket; 1x Bailer; 1 Bottle Crusher; 1x Weigh-pad; 1x Trailer; 1x Generator; 6 Rapid Response Agents, Personal Protective Equipment (PPE). |

Table 2: Licences and Platforms

Table 2 above provides detail in terms of how the licences and platforms are packaged. In the main, the plan will focus on waste *collection* and *recycling*. In order to reduce the volumes of waste going to landfill there will need to be separation at source programmes anchored in awareness raising initiatives. These can be provided through a *waste information system* specifically developed for waste programmes. The infrastructure (vehicles, machinery) and manpower (rapid response agents)

required offerings are indicated in Table 2. The machinery and vehicles will be made available to the beneficiaries (Cooperatives / entities) and once fully amortised the assets will be transferred to the beneficiary entities. The manpower will be sourced from cooperatives. Other products required to operationalise the

plan will be sourced from SMME's.

Fleet management will be critical for the entire suite of vehicles and machinery procured as part of the subscription. An in-house app-based *project management* tool will also form part of the service offering.

A single license will cost R29 500,00 per month. A minimum of 6 licenses are required to provide the services and infrastructure per platform as follows:

Tools and People: 2 Motorised Vehicles; 1 Green Bucket; 1 Bailer; 1 Bottle Crusher; 1 Weigh-pad; 1 Trailer; 1 Generator; 6 Rapid Response Agents, Personal Protective Equipment (PPE).

Services: Waste collection (Recyclables), Waste Recycling, Waste Information Management and Awareness, Fleet Management, Project Management, Enterprise support and Incentives, Capital

Assets Amortisation.

The services are amortised over a period of 36 months. Therefore this means the minimum license period is 36 months. An additional Once-Off Service Activation fee calculated at 25% of the amortised value

of Platforms will apply.

As indicated, it is the intention to utilise communal / tribal or government owned land on a Permission To Occupy basis.

7.3 Partnerships with Organs of State

A number of municipal, *national and provincial development agencies* carry a mandate relating to acceleration of economic growth, support of enterprises, community development etc. These mandates are perfectly aligned to the objectives of the economic reconstruction and recovery plan and this industry plan. Implementation of this industry plan can be funded by these economic development agencies through subsidies or grants for cooperatives, as well as grants / loans to finance development of major infrastructure like Material Recycling Facilities (MRF's), based on Business Plans developed and partnership agreements concluded. It is envisaged that once the MEC approves the plan, other state owned agencies or companies can participate in the implementation of the plan through provision of financial and non-financial support, as long as the mandate of the respective organisations

are aligned to the plan objectives.

There are many *public agencies (municipal, provincial and national)* involved in other sectors for basic services like water, housing, roads etc. For example, the cooperatives can be upskilled and positioned to offer basic complementary services like fixing water leaks, fixing potholes etc. This will help the cooperatives to supplement incomes and ensure financial sustainability of the businesses beyond the initial minimum 36 month period for license subscription

The industry plan is not confined to only the waste sector. The cooperatives that will be set up through the plan will be able to access business opportunities in other value chains, leveraging on the assets acquired through the plan.

7.4 Partnerships with Private sector

Breaking the vicious cycle of underinvestment in waste management requires partnership with the private

sector to invest in waste minimisation measures that extend the life of municipal landfills and create opportunities for private sector involvement in separation at source and recycling that reduce the cost of delivering waste collection services for municipalities (NWMS, 2020). This refers not only to partnerships with private companies involved in recycling but also to private sector companies with the financial muscle to fund programmes like the industry plan. a specific organisation has concluded a partnership agreement funding will be based on Business Plans that will be prepared by Indev.

7.5 Budget for Plan implementation

Indev will prepare Business Plans for funding to the MEC and any other organisation that wants to enter into a partnership with the plan.

The budget will reflect the need for the following:

- Development of an efficient network of infrastructure across the value chain

- Skills and enterprise development
- Research and Innovation
- Re-setting public behaviour towards waste management
- Effective engagements between private and public sector
- reliable systems to capture and share information

In general the budget will be split according to the following (Fig 7) :

- Infrastructure Development & Innovation:
- Fleet Management
- Waste Information System and Awareness programmes
- Enterprise Development & Support (Establishment of Co-ops, Business support)
- Research and Development into new technologies
- Administration (HR, Accounts, IT, Legal & Contracts)
- Project Management (Business Plan preparation, Monitoring & Reporting
- Marketing & Stakeholder management
- Training & Skills Development

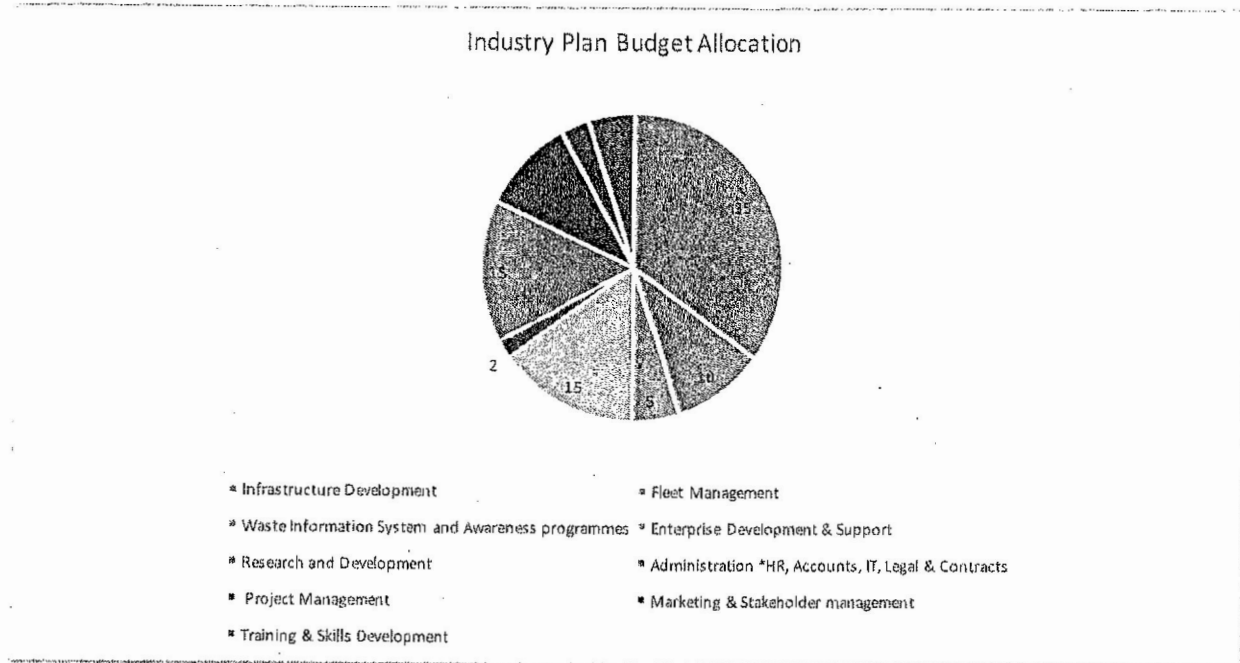


Figure 7: Budget cost allocation

7.6 Sustainability Plan

In addition to the above efforts to facilitate business opportunities in other sectors, the following will also be critical in the financial sustainability of businesses created through this plan:

Availability of markets for recyclables is key. The negotiations that will be undertaken between the informal recyclers as well as the formal processors will ensure that the business operations of the cooperatives are financially sustainable.

8. MONITORING, REPORTING AND PROJECT MANAGEMENT

8.1 Monitoring and Reporting

Quarterly implementation reports to monitor progress with the Plan will be prepared and submitted to the MEC. The reports will focus on progress made with implementation against targets which would have been set once the baselines are established. In broad terms the report will cover the following:

- Progress towards achieving the set targets including a summary of risks and challenges and how these are getting addressed. The main targets whose progress will be reported upon are:
 - Waste Collection (Number of households serviced and frequency of service)
 - Waste recycling (tons of waste recycled)
 - Job creation (number of jobs created and maintained)

- Cooperatives and SMME establishment (Number of SMME's and Cooperatives established and maintained)
- Skills development and training (Qualitative assessment of Training and skills development programmes undertaken)
- Effectiveness and social impact of the Industry Plan (Qualitative and quantitative assessment of the impact of the plan on the livelihoods of the beneficiaries involved in the implementation of the plan)
- Regulatory Compliance of facilities established (the extent to which buy back centres, recycling hubs, sorting/crushing facilities comply with relevant regulations)
- State of Finances
- Outlook for the next quarter.
- Other subscribers and partners will receive implementation progress reports based on agreed targets in partnership agreements.
- An annual report inclusive of financial report will be prepared every year.

8.2 Project Management

Projects at various locations will be managed using an in-house project management tool (screenshot from EPMP in Fig 8 below). This system can generate all kinds of project specific reports and can be accessed by authorised persons outside Indev.

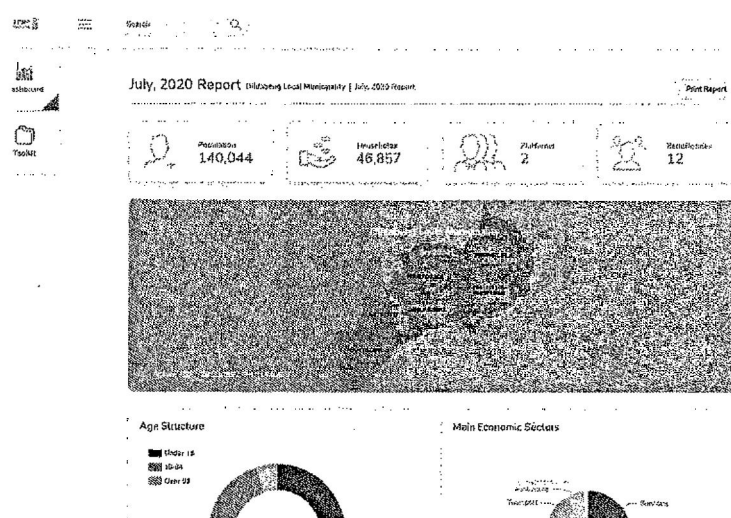


Fig 8: Screenshot of the EPMP project Management tool

9. CONCLUSION

This industry plan sufficiently places the informal waste sector at the centre of the efforts to restore growth, kick-start implementation of the Reconstruction and Recovery Plan. The enterprise development and support as well as the training and skills development approach will stimulate and strengthen the cooperatives of informal waste recyclers into sustainable business that can play a meaningful role in the economy. This will thus also have the benefit of improving the earning potential of the informal waste recyclers, improve waste recycler social inclusion, dignity and protection. The plan will also assist the Gauteng province to achieve the objectives of the Gauteng Township Economic Revitalisation Strategy and Gauteng Township Economic Development Bill.

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Contact Centre Tel: 012-748 6200. eMail: info.egazette@gpw.gov.za
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