# FUTURE FOCUS

REVIEW OF PETCC ACTIVITIES **2016** 



# REVIEW OF PETCO ACTIVITIES 2016

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### TRANSITIONING TO A CIRCULAR ECONOMY

A new mind-set for business is emerging - it's worth billions of Rands, will drive innovation in tomorrow's companies, and reshape every part of our lives.

It's been 12 years since the incorporation of PETCO and we have gained many insights during this time.

Over the period and in celebration, we again honour the people, the companies and the organisations that have made extraordinary contributions to the recycling of post-consumer PET in South Africa. More than anything, they make recycling a joy that is shared by more and more people, because it is the right thing to do and because it is making a difference.

But so many of humanity's most acute problems - from economic inequality to climate change to water scarcity - seem to be getting worse instead of better. You might be questioning the health of our organisations, social systems, and business models. With good reason: companies are currently deeply rooted in a linear approach to growth - make, use, and dispose.

But what if we had a new way to design products, services, and businesses that were good for people, the planet, and business? That's the radical promise of the Circular Economy: moving from our traditional take-make-dispose economy, to one that has a closed loop, where materials, nutrients, and data are continuously repurposed, inspiring a shift to a new model: an alternative, restorative, and regenerative approach to business, one that creates new value and delivers long-term economic, social and ecological prosperity. A new mind-set for business is emerging. It's worth billions of Rands, will drive innovation in tomorrow's companies, and reshape every part of our lives.

We have been inspired by the report *The New Plastics Economy: Rethinking the future of plastics*, launched at the World Economic Forum Annual Meeting 2016 in Davos-Klosters, which set out a vision for a new and effective plastics packaging system, guided by circular economy principles, and fit for the long term. It's compelling and provided the impetus for the Ellen MacArthur Foundation to set up an ambitious three-year initiative, *the New Plastics Economy*, to act on the report's insights and turn the vision into reality.

And it's made a strong start. Leading players from the plastic packaging supply chain have committed to it, alongside major capital cities, philanthropists, policy-makers and academics. The momentum gathered is indicative of the collaborative approach that builds bridges along value chains, across silos, and between the private and public sectors to initiate a genuine system shift. The interest generated echoes a growing consensus on the need to phase out the negative impacts associated with today's patterns of use by notably redesigning certain materials and rethinking business models.

Transitioning the Circular Economy into the mainstream will be one of the biggest creative challenges of our time. Now more than ever, we need to explore new ways to create sustainable, resilient, long-lasting value - redesigning the world around us.

We need to be ready to roll up our sleeves and get started.

# What is a Circular Economy?

In the traditional waste management system, materials move through a linear "make-use-dispose" process where they are manufactured from raw resources, consumed and ultimately sent to landfill. This model of consumption has become part of our culture. It has resulted in increases in absolute greenhouse gas emissions as the amount of waste disposed in landfills has increased.

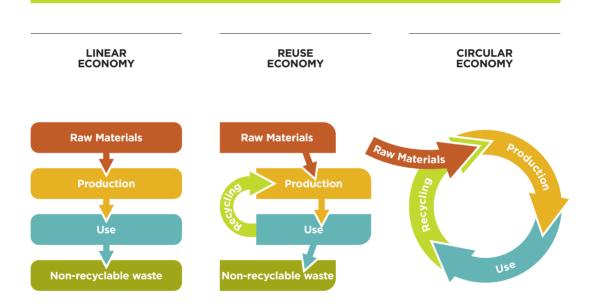
A circular economy aims to eliminate waste, not just from recycling processes, but throughout the lifecycles of products and packaging. A circular economy aims to maximise value and eliminate waste by

improving the design of materials, products, and business models.

A circular economy goes beyond recycling. The goal is not just to design for better end-of-life recovery, but to minimise the use of raw materials and energy through a restorative system.

In a circular economy, the value of products and materials is maintained for as long as possible. Waste is minimised and resources are kept within the economy when a product has reached the end of its life, to be used again to create further value.

#### FROM A LINEAR TO A CIRCULAR ECONOMY



In a linear economy, raw materials are extracted from the earth, used and discarded: 'take-make-waste'. At best, this economy leads to the relative decoupling of economic growth from the use of natural resources.

In the reuse economy, many non-recyclable materials are used again (cascading, repair/maintenance, remanufacturing, recycling). At best, this reuse economy leads in part to an absolute decoupling of economic growth from the use of natural resources and from emissions: the demand for natural resources and the emissions decrease as the economy grows.

The ideal picture is a circular economy in which raw materials are never depleted. The economy can be structured so that there is a positive coupling between economic growth and the growth of natural resources ('negative' emissions/ positive footprints). In a circular economy, value chains will be organised differently.

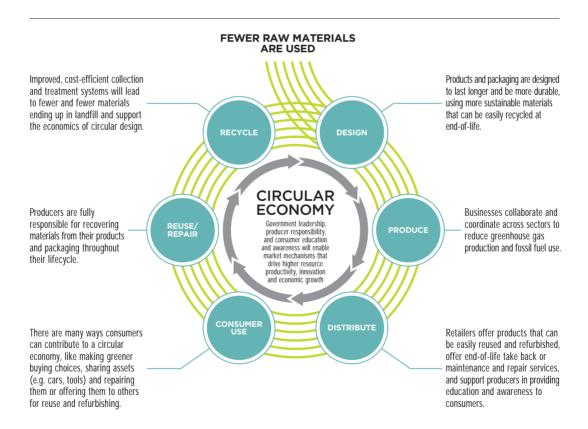
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"Embracing a circular economy, a system in which products are never discarded, but reused, recycled and reintroduced into new products affords a viable opportunity to drive performance, innovation and competitiveness, and stimulate economic growth and development in our country. Taking action to create a supportive business environment for companies that use recovered resources will help drive additional recycling, create more jobs, reduce greenhouse gases and extend the life of existing landfills. It's an exciting prospect. In short, the circular economy presents our country with plenty of economic opportunities for existing businesses, for women, for newcomers, start-ups and for science".

#### **Dr Casper Durandt**

Chairman PETCO and Franchise Technical Director, Coca-Cola South East Africa.

#### A CIRCULAR ECONOMY



Adapted from: https://www.ontario.ca/page/strategy-waste-free-ontario-building-circular-economy

### **ONE FOR ALL**

## Always Wanted to Save the World? Here's Your Chance

The United Nations' 2030 agenda for sustainable development includes 17 lofty-as-ever goals for tackling our most pressing social and environmental challenges - not the least of which is Goal 12: Ensure sustainable consumption and production patterns.

Achieving, or even striving for, Goal 12 will require nothing less than a complete overhaul of our linear, take-make-waste patterns of production and consumption in favour of a circular system - a restorative or regenerative system in which all products are designed and marketed with reuse and recycling in mind - informed by a radical shift in business models and policies around the world.

Aside from the environmental benefits of circular models - such as a significant drop in use of virgin materials, reductions in material waste as products are designed to last, and utilisation of manufacturing by-products and excess materials previously considered waste streams - more and more studies point to the undeniable business case for redesigning our entire economy. For the packaging industry, the 2030 goals are key drivers where sustainability is woven into the foundational ethos, the bottom line and future growth goals to drive business forward.

While it will take more than siloed efforts to bring about the radical systemic shift that's needed to achieve the UN's goals, many challenges must be overcome for widespread adoption. But as solutions continue to emerge and circular economic business models become more prevalent, we see it influencing consumers to be more conscious about their consumption, which in turn will drive more companies to adopt the principles ... enabling the complete systemic shift needed to achieve sustainable development.

But how do you convince individuals that these 17 formidable goals aren't just the business of presidents and NGOs? How do you demonstrate that one person can make a vital contribution to the gravest challenge of our time?

ONE FOR ALL is an answer to this challenge, giving everyone an entry point for helping to achieve the Sustainable Development Goals. The campaign is based on three central ideas:

#### 1 Bring it Down to Size:

The UN's complex agenda needs to be broken down in order to make it accessible and inclusive for everyone - a world with no borders, no boundaries, no divisions. From 17 goals to three simple words: ONE FOR ALL.

#### **2** Every Action Counts:

It's easy to see your own choices as insignificant compared to the amazing scope of the problems afflicting the world. They're not. In fact, the opposite is true. The only way to tackle these issues is if individuals actually commit to action.

#### **3** Just Choose One:

The UN is calling on everyone to pledge to do just one thing that advances a single Sustainable Development Goal. No individual can end hunger or halt global warming. But when the world's seven billion people act together towards shared goals, extraordinary things can and will happen. Each individual just has to find and commit to their one for all.

The task of bettering our world is bigger than any one of us. But it's smaller than all of us.

There are 17 goals aimed at making the world a safer, healthier and more peaceful place for all of us.

Which one goal will you choose?

#### Why do the UN Sustainable Development Goals matter to us?

Do the 2030 Sustainable Development Goals (SDGs) have any impact on our work as packaging professionals?

The answer is yes - and it's a renewed opportunity for the packaging industry to be part of the global solution.

Companies and packaging professionals are poised to take the lead on sustainable development by focusing on a few key 2030 SDG goals, including Goal 11, Goal 12, Goal 14 and Goal 17.

Goal 11 aims to "make cities inclusive, safe, resilient, and sustainable." One of the key targets specifies to "reduce the adverse per capita environmental impact of cities by paying special attention to air quality and municipal and other waste management."

In a similar vein to urban waste management challenges, Goal 14 aims to "prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution." These two targets are directly tied to waste management and the control of litter - tasks we sometimes view as municipal or government responsibilities beyond the control of industry. But we're seeing the tide turning as more and more packaging

professionals are improving the recovery rates of their packaging.

Goal 12 speaks more intimately to the everyday work of the packaging industry. Goal 12 aims to "ensure sustainable consumption and production patterns" by "encouraging industries, businesses and consumers to recycle and reduce waste" and "supporting developing countries to move towards more sustainable patterns of consumption by 2030." The packaging industry can encourage sustainable production and consumption patterns by reducing unnecessary packaging and designing for sustainable end-of-life disposal options. This can take on a number of forms, ranging from designing for recycling to using widely recyclable materials, incorporating more recycled content and encouraging packaging reuse or repurposing.

For the packaging industry, the 2030 SDGs must be woven into the foundational ethos, the bottom line and future growth goals to drive business forward. No singular entity can enact these measures alone, and that brings us to our last applicable goal: Goal 17, which aims to revitalise the global partnership for sustainable development with collaboration from governments, civil society and the private sector-packaging professionals included.

# THE GLOBAL GOALS

### **For Sustainable Development**

Adapted for us from the 'Transforming our world: the 2030 Agenda for Sustainable Development' (http://www.un.org/sustainabledevelopment/).







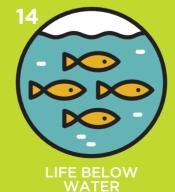






















REDUCED INEQUALITIES



SUSTAINABLE CITIES & COMMUNITIES



RESPONSIBLE CONSUMPTION & PRODUCTION



PEACE, JUSTICE & STRONG INSTITUTIONS



PARTNERSHIPS FOR THE GOALS

# CHAIR AND CEO REVIEW

#### **A Significant Year**

#### 2016 was a significant year for PETCO and PET plastic recycling.

For the second consecutive year, PETCO exceeded its recycling target with PET recycling figures continuing to grow despite challenging trading conditions. PETCO's efforts over the year led to a recycling rate of 55% of postconsumer bottle PET - with a total of 90 749 tonnes of Polyethylene Terephthalate (PET) or 2 billion bottles being recycled. PETCO exceeded its target set for the year by 1%, made more noteworthy if we consider that the consumption of total PET in South Africa grew by 15% year on year and that the world is still recovering from the economic recession. This effectively means that we are currently recycling more than half of all post-consumer PET bottles in the market and more bottles are being recycled than those going into landfill. This is a substantial achievement in a relatively short space of time.

Despite the continued tough conditions in international markets, with global prices for polyester staple fibre (PSF) remaining depressed for most of 2016, fibre export volumes increased significantly during the year, partly due to additional financial support provided by PETCO to the fibre export sector. According to official figures released by SARS, PSF exports increased from a total of 5 400 tonnes in 2015, to more than 13 000 tonnes in 2016, an increase of approximately 140%. Through these targeted subsidies, PETCO has managed to stimulate the export of fibre produced in South Africa from bottles that would have ended up in our landfill sites. For the "rPET to fibre" partners, PETCO's support was the lifeline without which millions of bottles would not have been collected, including the coloured ones which are problematic.

In the food grade sector, sales of recycled resin remained buoyant for most of 2016, with the sector's share of the total volume of PET collected for recycling increasing from 22 000 tonnes, or 30% of total collection volume in 2015, to 34 000 tonnes, or 37% of total collections in 2016.

With regard to the development of new enduse markets for recycled PET, the year saw the introduction of a new manufacturing process for PET strapping made from recycled material. A further development in 2016 was the renewed interest on the part of a number of manufacturers in making plastic pallets solely or in part from recycled PET. We hope to actively collaborate with these manufacturers to assist in both the further development of these products and in the development of local and international end-use markets.

Bottle-2-Bottle capacity, for carbonated soft drink grade approved Bottle-2-Bottle resin, represents the most sustainable use of the raw material by "closing the loop" where the recycled resin can be used repeatedly in new bottles. One of the highlights of the year was the official opening of the Mpact Polymers Bottle-2-Bottle Plant by the Minister of Environmental Affairs, Dr Edna Molewa, in May 2016. This is the first Krones Coca-Cola approved bottle grade PET recycling plant on the continent of Africa. PETCO's contracted financial assistance, based on the volume of bottles recycled, contributed to making this project possible, and PETCO's on-going support will assist in ensuring that this project does not fail, as other such initiatives have in the past.

From a legislation perspective, we expect the final Section 28 Notice from the Department of Environmental Affairs (DEA) calling for Industry Waste Management Plans to be issued in 2017. We see the Industry Waste Management Plan for Paper and Packaging as a natural progression in the strides that PETCO has made since it was incorporated in 2004. However, up until now, producer responsibility has been based on voluntary agreements between PETCO and the PET industry and self-imposed recycling targets. Statutory EPR for packaging could mean the introduction of statutory recycling targets and a waste producer definition to tackle the problem of "free-riders".

This effectively means that there could be a regulatory requirement for the waste from the packaging sector to be diverted from landfill. This has far reaching implications for PETCO as well as the wider paper and packaging industry that will be required to submit plans. In turn, this will have an impact on consumers and society at large. PETCO has been working closely with DEA and the packaging industry to ensure that

the effect on all stakeholders is constructive. A carefully designed and implemented Industry Waste Management Plan for Paper and Packaging can have many positive impacts in terms of increased recycling and diversion rates, job creation, integration of the informal sector and minimal cost-implications for consumers. Packaging is a particularly sensitive sector, as it affects all 59 million South Africans.

Sustainability is an all-encompassing conduit to resource management for the shift to reducing the use of finite resources, preserving the value of existing resources and creating renewable resources. In this regard, PETCO compiled and released the Energy Recovery discussion document - the first of its kind in the industry sector - that lays out the challenges as we see them in an effort to stimulate dialogue and direct action in this critical area.

2016 saw the use of rPET increase significantly. The pro-active, voluntary approach by some brand owners of setting recycled content targets is an example of leading sustainable business practice and encouraging a wider adoption of such practices. Although the real tipping point from a volume point of view is still some way off, Coca-Cola approval for locally produced rPET is a real milestone for the PET industry and will herald the use of greater volumes. The availability of high quality, competitively priced rPET is in a large part as a result of years of effort from PETCO and the industry to create a recycling supply chain that can feed the Extrupet and Mpact Polymers plants. Telling the story has proven critical in soliciting the much-needed buy-in from the PET packaging sector. Lead times on expanding facilities are significant, and plans to grow collection volumes can only materialise if sufficient recycling capacities exist.

Converters and fillers introducing rPET into their bottle blowing experienced challenges, but these are being resolved. Weak price dynamics for rPET in a low oil price environment is also challenging. Government and industry mandates and incentives for the use of recycled content in packaging (and other applications) could drive further adoption. We have the infrastructure in place and an innovative industry able to shift the established business model to one that is circular rather than linear.

From an administrative perspective, the Board of Directors made the decision to shift PETCO from being a private company with a not-for-profit mandate to a Not-for-Profit Company with non-executive directors on 3-year terms. The shift to NPC status means that the opportunity exists for PETCO's mandate to expand from the current focus on EPR, to include an additional mandate covering Enterprise Development and a strategy has been drafted to this effect. The Board was

also expanded to include thirteen non-executive directors, an additional bottler, an additional converter, new positions for the collector and recycler sectors, and two positions to be appointed to the board to represent a relevant sector as identified from time to time. An application has been lodged with SARS for PBO (Public Benefit Organisation) status.

Another important milestone was the appointment of a service provider to assist PETCO to develop our Theory of Change and Monitoring and Evaluation Framework, the implementation of which is now underway. The use of robust M&E is recognised across many sectors, particularly in the NGO/NPO space where the performance and value of such organisations may be more difficult to measure using standard commercial indicators applicable to the private sector. The importance of M&E has also been noted by DEA in the strategic plans developed by them.

The African Marine Waste Network, an ambitious international collaboration with the aim of developing a waste strategy for Africa, was launched in South Africa in 2016, with PETCO as a leading strategic partner. PETCO will drive the communications and networking component of this strategy from our Cape Town offices.

PETCO's suite of communications tools were expanded with the launch of our new website after months of hard work and preparation. Short video clips were produced of PETCO 2016 Award winners; databases were segregated and refined for more effective and targeted communications with stakeholders.

During the year, PETCO continued to conduct education and awareness programmes, actively encouraging and contributing to the education of learners through national schools recycling competitions and schools collection projects undertaken with our partners.

Through the many projects documented later in this review, PETCO continues to support small recycling businesses throughout the country, creating jobs and growing skills.

Going forward PETCO and its partners will work hard at growing collection volumes, setting higher benchmarks for all stakeholders. Our organisation wishes to become the leader in "design for recycling" governance, setting up relevant marks of quality for all to adhere to.

Thanks and credit for funding PET recycling in South Africa must go to the organisations who pay the PET recycling fee on each and every tonne of resin that they purchase, plus the brand owners, raw materials producers and retailers who support recycling with grants-in-aid.

# 2016

#### The Top Accomplishments

In celebrating these remarkable results in driving post-consumer PET recycling, we can summarise the years' highlights as follows:

- 1 PETCO's efforts over the year led to a recycling rate of 55% of post-consumer bottle PET with a total of 90 749 tonnes of Polyethylene Terephthalate (PET) or 2 billion bottles being recycled some 5.7 million bottles collected each and every day. PETCO exceeded the target of 54% by 1% to achieve 55% despite tough trading conditions.
- 2 Fibre export volumes increased significantly during the year, partly due to additional financial support provided by PETCO to the fibre export sector.
- 3 Sales of recycled resin (rPET) remained buoyant for the majority of 2016, with the sector's share of the total volume of PET collected for recycling increasing from 22 000 tonnes to 34 000 tonnes in 2016.
- 4 The introduction of a manufacturing process for PET strapping from recycled material, which is likely to be included in PETCO projects with effect from 2017 onward.
- 5 Mpact Polymers' Bottle-2-Bottle Plant was opened, which is the first Krones Coca-Cola approved bottle grade PET recycling plant on the continent of Africa. PETCO's contracted financial assistance, based on the volume of bottles recycled, contributed to making this project possible, and PETCO's on-going support will ensure that this project does not fail, where other such initiatives have globally.
- 6 PETCO contracted with seven recycling partners, who made payments to collectors to the tune of R360 million and injected R890 million into the downstream economy during the course of 2016.
- 7 PETCO training and enterprise development projects included 19 workshops where a total of 452 collectors and municipal employees participated and gained an insight into running successful SMME and Cooperatives; PETCO collection projects supported 17 projects with equipment and other infrastructure, enabling the doubling of collection capacity in some instances.

- 8 The African Marine Waste Network, an ambitious international collaboration with the aim of developing a waste strategy for Africa, was launched in South Africa in 2016, with PETCO as a leading strategic partner. PETCO will be driving the communications and networking component of this strategy from the Cape Town offices.
- 9 A service provider was appointed to develop robust Monitoring and Evaluation (M&E) indicators for PETCO.
- 10 A successful workshop was conducted with DEA in Pretoria to understand their areas of concerns regarding the recycling industry. Extensive interactions were also held with DEA regarding the scope of implementation requirements of Industry Waste Management Plans.
- PETCO compiled and released a discussion document on Energy Recovery representing the first of its kind that we have seen in the PET industry sector.
- 12 PETCO CEO Cheri Scholtz participated in the panel discussion at the Department of Environmental Affairs 5th Waste Management Khoro, where the theme was "Promoting Innovation and Upscaling Enterprise Development: Exploring the Tools of the Trade", in eThekwini, KwaZulu-Natal. PETCO empowered 25 waste pickers with trolleys and 100 bulk bags, and sponsored site visits for delegates to:
  - Power Rush Recycling, where the proprietors have 67 staff, comprising of 45% female and 75% youth.
     They further have over 150 informal collectors for whom the buy-back option is an economic lifeline; and
  - b Best 2 Recycle, a waste management services company that provides waste collection and separation services. They service 60 000 households in the Pinetown area, collecting glass, PET, cardboard, paper and steel.



- 13 PETCO's website (www.petco.co.za) was re-launched mid-way through the year after many months of hard work and preparation. This was done in conjunction with a consolidation and substantial improvement of our Stakeholder Database and communications tools.
- 14 Long-time PETCO recycling partner Extrupet was awarded numerous accolades during the course of the year for their PhoenixPET food grade recycled PET resin, which included the Judges Gold for Sustainability at the IPSA Goldpack Awards, the Packaging Excellence Award and the Silver Award for Sustainability at the WorldStar Awards, and two Gold Awards at the Afristar Awards (for Best in Packaging and Sustainability).
- 15 PETCO undertook and successfully completed a spatial mapping project of all assets, training and collections projects distributed nationally across the country.

"PETCO's achievement of collecting
90 749 tonnes in 2016 was beyond
remarkable. For those of us who
have long memories in this industry,
it in extraordinary to have crossed the
90 000 tonne mark so early on in
PETCO's evolution. One further needs
to consider what was the "lay of the land"
at the beginning of 2016 when there were
only hurdles and obstacles which had
many of us believing that the collection
figure for the year would have gone
backwards from the previous year."

Chandru Wadhwani Joint Managing Director of Extrupet (Pty) Ltd. and PETCO board member.



The PETCO Board of Directors continues to show commitment and thanks are due to them for their efforts and insight.

It is opportune to extend a very big thank you to Carene Mellor who left PETCO due to ill health. We wish her a full recovery. To Clynt Levin for his commitment and dedication to PET recycling in South Africa for always being available and for his dedication to the cause.

David Drew and Chandru Wadhwani have been elected to the PETCO Board representing the Converter and the Collector/ Recycler Sectors respectively.

PETCO enjoys Associate Membership of the European Association of Plastics Recycling and Recovery Organisations (EPRO) and of the Global Product Stewardship Council.

PETCO enjoys the support and collaborative efforts of both Packaging SA (previously PACSA) and Plastics|SA.

So much already done, but still so much more to achieve. Providing a vision and an implementation plan for a more effective system based on circular economy principles in which plastics never become waste and a new plastics economy begins to develop is our single-minded task going forward. We are excited to work alongside you.

Ludury

Dr Casper Durandt

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Cheri Scholtz

### ABOUT PETCO

#### PETCO is the trading name of the PET Recycling Company NPC.

The Company was incorporated in 2004 and since then it has emerged as a leader in Extended Producer Responsibility (EPR). By imposing accountability over the entire life cycle of PET products and packaging, companies that manufacture, import and/or sell PET products and packaging are financially and physically responsible for such products after their useful life.

#### PETCO works with many partners including:

#### • Government:

To build policy and implementation frameworks that support the concept of Extended Producer Responsibility and grow the Green Economy.

#### • PET Industry:

To harness knowledge and innovation leading to increased PET recycling efforts.

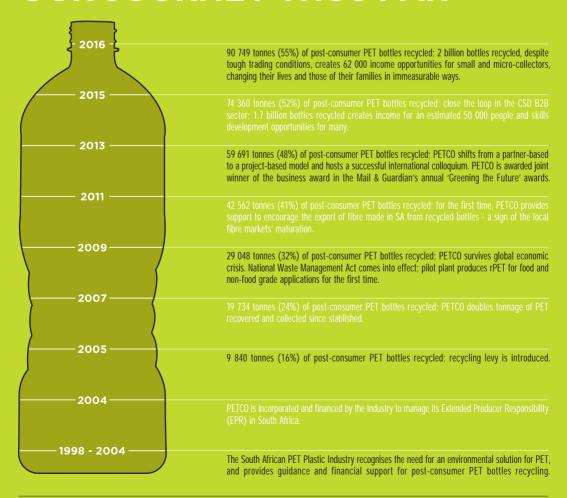
#### • Shareholder and Associate Members:

To sustain PET collection interest and support PET recycling efforts thereby reducing volumes of PET in the waste stream.

#### • International Industry and Agencies:

To collaborate on best practice with respect to post-consumer PET recycling.

#### **OUR JOURNEY THUS FAR**



#### PETCO's work focuses on five main areas:

#### **Industry Projects**

By taking responsibility for post-consumer PET recycling, PETCO imposes accountability over the entire life cycle of PET products and packaging. This means that companies that manufacture, import and/or sell PET products and packaging are financially and physically responsible for such products after their useful life.

Economic support through incentives or subsidies is provided to PET recyclers who collect bottles and process them into recycled PET in preparation for the manufacture of new products.

Support for PET recycling efforts ensures an on-going monetary value for post-consumer PET. This sustains collection interest and reduces the volume of post-consumer PET in the waste stream. The key is to ensure that the value chain remains viable, especially during periods of low commodity prices, influenced by the volatile economic market, the oil price, the highs and lows of virgin polymer and staple fibre prices.

As part of our strategy, we continue to focus on stimulating investment in infrastructure and innovation in the development of new end markets for rPET as well as the stimulation of existing markets.

#### **Training and Mentorship of Entrepreneurs**

PETCO sees the role of training and the mentorship of collectors as being critical to improving working conditions and assisting entrepreneurs to grow and sustain their businesses, thereby stimulating economic growth, job creation and development in our country.

We strengthen relationships with municipalities to encourage the establishment of kerbside collection projects and expand existing PET collection into new areas. PETCO supports projects and initiatives through the sponsorship of infrastructure and equipment that unlocks collections, helps collectors improve their efficiencies as well as the quantity and quality of PET collected.

#### **Consumer Awareness and Education**

We encourage consumers to participate in kerbside recycling projects where these exist and support community projects and drop-off sites that actively recover post-consumer PET for recycling.

We actively encourage and contribute to the education of learners through national schools recycling competitions and schools collection projects undertaken with our partners, inspiring learners to re-think the future through the lens of the circular economy.

Print publications, broadcast, digital and social media are all used to convey PETCO's recycling message. We conduct face-to-face engagements at exhibitions, public events and host interactive workshops and conferences.

#### **Sustainability and Business Innovation**

Recognising that business innovation sits at the heart of economic transitions, PETCO is a catalyst for design for recycling innovation. We aim to stimulate dialogue and direct action in shifting the use of finite resources, preserving the value of existing resources and utilising renewable resources. Taking action to create a supportive business environment for companies that use recovered resources will help drive additional recycling, create more jobs, reduce greenhouse gases and extend the life of existing landfills.

#### **Insight and Analysis**

Our insight and analysis, reports and global best practice case studies feed into a growing body of information highlighting the rationale for a transition towards an economy where plastics never become waste.

# PETCO IMPACT DASHBOARD 2016

Circular economy thinking leverages the economic and environment SDG clusters impacting them all:

#### **Sustaining the Environment**

- 90 749 Tonnes of Post-Consumer Bottles Recycled (22% increase over 2015)
- 55% Post-Consumer Recycling Rate (3% increase over 2015)
- 562 644 m3 saving of landfill space
- 136 124 tonnes of Carbon emissions saved

#### **Strengthening the Economy**

- 62 000 income opportunities in recycling
- R2.7m spent in support of collectors through equipment and training
- R48m spent in support of contracted industry recycling projects
- R363m paid by recyclers for baled bottles delivered to plants
- R890m injected into the downstream economy

#### **Shaping Societal Transformation through Education**

SDG Goals: 4

SD Goal: 16

SD Goal: 17

SD Goals: 6, 7, 13, 14 and 15

SD Goals: 8. 9. 11 and 12

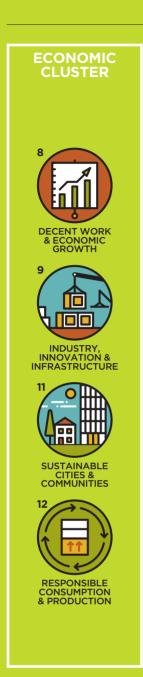
- 16 Accredited Training Courses
- 3 Municipality Training Courses
- 13 167 total website sessions (last 6 months since new website was launched)
- 34 410 total website page views
- 1466 Facebook Likes (218% increase on 2015)
- 1199 Twitter Followers (140% increase on 2015)
- 71 Instagram Followers (started 2016)
- 51 YouTube Subscribers (started 2016)
- 2 Associate Member Workshops

#### **Improving Governance**

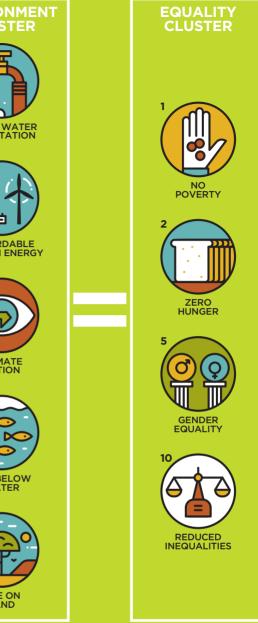
- PETCO achieved a clean financial audit
- >80% attendance by Directors at Board meetings (50 board meetings thus far).
- Adherence to internally developed operational management & governance processes.

#### **Seeking Partnerships**

- The Council for Scientific and Industrial Research (CSIR)
- International Labour Organisation (ILO)
- Department of Environmental Affairs (DEA)
- Department of Science and Technology (DST)
- Packaging SA and Member Associations
  - Paper Recycling Association (PRASA)
  - Polvco
  - Petcan
  - The Glass Recycling Company
  - SAVA
  - Polystyrene Council South Africa (PCSA)
- National Recycling Forum (NRF)
- Institute of Waste Management SA (IWMSA)
- PlasticsISA
- SA National Bottled Water Association (SANBWA)
- GreenCape
- SAPRO
- African Marine Waste Network (AMWN)
- Consumer Goods Council of South Africa (CGCSA)







#### SUPPORTED BY HEALTH, EDUCATION & GOVERNANCE







#### **ENABLED BY PARTNERSHIP**



# END-USE MARKET DEVELOPMENT

We urgently need to transform plastic packaging material flows if we are to continue to reap the benefits of this versatile material.

Maintaining a balance between the supply of post-consumer material, demand for new end-use products, and installed recycling capacity is critical to keep the bottle collection and recycling chain intact and to ensure that the financial benefits continue to reach the collectors on the ground.

In South Africa, post-consumer PET bottles are collected and recycled into two main types of end-use products for the local and export market:

#### **Bottle-2-Fibre (B2F)**

In spite of experiencing sluggish growth in 2016, polyester staple fibre (PSF) remains the largest end-use market for post-consumer PET material. Significantly, with PETCO's assistance, our fibre-manufacturing partners were able to continue developing export markets for their products. Success was achieved in spite of the continuing depressed nature of global fibre markets.

In 2016, approximately 48 000 tonnes of PET, or close to 53% of the total PET volume collected, was applied in this end-use market. Going forward, PETCO will provide additional support to fibre exports, in line with the economic goals of the SDGs and the South African government's objectives related to local value addition, export promotion and foreign currency earnings.

#### **Bottle-2-Bottle (B2B)**

The B2B segment continued to experience robust growth in 2016, in line with growing awareness and adoption on the part of brand owners of Extended Producer Responsibility (EPR), and the reputational benefits arising from the use of rPET resin in their PET packaging products.

In 2016, for the first time, some exports of food grade rPET resin took place from South Africa. We hope to see this trend continue in 2017 and beyond.

In total, more than 34 000 tonnes, or 37% of the PET bottles collected were applied in the manufacture of recycled PET resin in 2016.

From PETCO's perspective, the production and use of both food grade and non-food grade rPET resin remains the major growth opportunity for PET recycling in South Africa.

#### Other end-use applications

Exports of post-consumer PET material from South Africa remained constant in 2016, at just under 10% of total collections.

Achieving the ambitious targets of the 2030 SD Agenda will require enhanced partnerships that bring together Government, civil society, the private sector and labour and that mobilises all available resources. PETCO is collaborating with existing recycling partners, research organisations and academic institutions to develop and commercialise new end-use applications for post-consumer PET material. In certain cases, the development of these solutions is well advanced, and during the course of 2017, we hope to be in a position to make announcements in this regard.

#### PET bottle collections by end-use market

**PET Bottle Recycling Tonnage by End-Use:** Recycled tonnages by end-use for the past 6 years, showing exports, B2B and B2F (including industrial fibre, fibre exports, etc.). This clearly shows the growth in the B2B and food grade sector as an end-use market.



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### PETCO PROJECTS

PETCO supports several categories of projects that are aligned with the principles of the circular economy, aiming to harness the benefits of plastics while addressing its drawbacks, delivering drastically better system-wide economic and environmental outcomes:

- 1 Commercial Scale Recycling Projects
- 2 Collection and Training Projects, and Visible Recycling
  - a PET infrastructure and equipment provision
  - b Collector training and development
  - c Education and awareness
  - d Special projects and joint ventures
  - e Fostering government partnerships
  - f Building the recycling network
- 3 Consumer Education and Awareness

#### 1 Commercial Scale Recycling Projects

PETCO's support for high-volume commercial recycling operations continued to make up more than 70% of the organisation's total expenditure.

During 2016, these commercial scale recycling partners, operating in both the fibre and food grade segments, demonstrated an on-going commitment to product development, capacity expansions and the extension of their respective collection networks.

PETCO closely monitors global and local market prices and cost variables, and adjusts its financial support mechanisms so as to maximise their relevance under ever-changing market conditions.

For 2016, the indirect cost of the PETCO financial model to consumers remained at approximately 1-2 cent per bottle.

#### PETCO's contracted recycling partners in 2016 were:

- Da Run Fa
- Extrupet
- FTE Insight
- Kaytech
- Mpact Polymers
- Propet
- Sen Li Da

Together these partners purchased post-consumer PET material to the value of more than R360 million, and injected end-use products worth approximately R890 million into the South African economy.

Collectively, PETCO'S recycling partners recycled more than 2 billion bottles, or 5.7 million bottles per day, over the course of 2016.

Driving the transition to the new plastics economy:

# R360 million worth of payments made to collectors

R890 million injected into the downstream economy

90 749 tonnes of post-consumer bottles collected for recycling

2 billion bottles recycled over the year

5.7 million bottles recycled every day

#### 2 Collection and Training Projects, and Visible Recycling

PETCO spent R2.7 million of its budget to support initiatives and activities that support collectors and contribute to the visible recycling of PET.

PETCO supports visible recycling in the following ways:

#### a PET Infrastructure and Equipment Provision

In 2016 we supported 17 projects across seven provinces, bringing the number of projects supported in the past decade to 76.

PETCO supports projects through the sponsorship of infrastructure and equipment that unlock collections, helping collectors to improve their efficiencies as well as the quantity and quality of PET collected. We also assist with the efficient transportation of haled material

In 2016 we provided the following equipment:

- 12 Co-operatives and SMME's provided with 339 sets of protective clothing and reflective vests
- 16 SMME's and Waste Pickers with 625 PETCO branded bulk bags
- 8 SMME's with signage and branding on equipment and vehicles
- 6 SMME's with platform scales
- 72 Waste Pickers with branded trolleys
- 2 SMME's with 7 branded volume cages
- 2 SMME's with gazebos and banner flags
- 3 SMME's with a shipping container each1 SMME with a branded trailer and a tow-bar
- 1 SMME with a wall around the recycling depot

All of our projects are monitored to track performance and growth as part of our mentoring philosophy, and moving collectors up the value chain, in line with the UN Sustainable Development Goals.

#### **b** Collector Training and Development

During 2016, in partnership with government, PETCO invested R297 000 in providing ILO Accredited training to Co-Operative Members and SMME'S. 6 696 hours of training was offered to 452 people. Employees of municipalities, economic development departments and provincial departments of environmental affairs attended.

PETCO sees the role of training and the mentorship of collectors as being critical to improving working conditions and the health of collectors and waste pickers as well as assisting entrepreneurs to grow and sustain their businesses. We also identify with the need to raise awareness in communities and strengthen relationships with municipalities to encourage the establishment of kerbside collection projects and expand existing PET collection into new areas.

Training courses supported by PETCO and implemented by the International Labour Organisation (ILO) social enterprise accreditation programme, were conducted in Sterkspruit, Tzaneen, Fort Beaufort and Port Elizabeth, amongst others.

#### c Education and Awareness

#### **Schools Projects**

The ABI (CCBSA) School programme has increased the number of schools from 40 schools in 2011 to 418 schools in the current year (369 primary and 49 high schools). The success of the programme is highlighted by the annual increases in volumes, managing to collect some 218 tonnes of PET (210 tonnes PET in 2015).

We partnered with our Shareholders Nampak, Coca-Cola Beverages (CCBSA) and ABI (CCBSA) in three school recycling projects covering 426 schools in KZN, Gauteng and Mpumalanga. One of the highlights of the programme has been the empowerment of 53 Schools Recycling Representatives (SRR). In addition, 14 SRR's have been placed in permanent positions within CCBSA and elsewhere.

#### Coca-Cola Shanduka (CCBSA) Schools Programme

Four Mhluzi Primary schools collected an average weekly total of 14 tonnes of recyclables. Collection processes are assisted by interns from the Steve Tshwete Municipality and Audited by Silver Ink Recycling, one of PETCO's partners.

#### d Special Projects and Joint Ventures

PETCO embraces partnerships and sees the value of collaborative efforts. We undertake a range of projects, from in-kind donations and joint-cause marketing campaigns to joint ventures with government, other industry bodies, our RAG partners and our Shareholder Members.

A number of remarkable initiatives were undertaken in 2016, to highlight a few:

#### The African Marine Waste Network

The African Marine Waste Network, an ambitious international collaboration with the aim of developing a waste strategy for Africa, was launched in South Africa in 2016, with PETCO as a leading strategic partner and owner of the communications component.

#### **Mapping Project**

PETCO successfully populated its collection projects onto a spatial mapping system. All PETCO'S assets, training and collections projects, distributed nationally across the country, are now clearly and spatially reflected on the map.

#### ILO Umhlatuzi Responsible Tourism Competition

PETCO partnered for the 3rd year with ILO (International Labour Organisation). This year the theme of the competition was the Umhlathuzi Municipality Responsible Tourism Competition. PETCO sponsored two winners in the Waste and Recycling Category. The two SMME's were supported with training, signage and equipment.

#### **Boxmore Trolley Project**

PETCO sponsored Waste Pickers with trollies in the areas where Boxmore has branches.

15 Waste Pickers will be able to increase their PET collection volumes and earn more money. The beneficiaries are from Harrismith, Soweto and Somerset West.

#### Wildlands Trust

PETCO sponsored 20 trolleys to Waste-preneurs who were using any means possible to collect their material whilst walking through the communities where they live. Their ability to collect volume is directly related to their ability to carry the material physically (usually in bags). Having a trolley now offers a solution to the constraints that Waste-preneurs experience and will directly enable them to load more material as well as offer a significant time and money saving benefit.

#### National Zoo Pretoria

PETCO signed an MOU with the Pretoria Zoo at the end of 2016 with the vision of implementing Seperation At Source within the Zoo. PETCO with the help of City of Tshwane identified and appointed a co-operative to manage the separation at source recycling project at the Zoo. PETCO has trained the co-operative members and assisted them with equipment: Protective clothing, 5 x Trollies, Bulk bags and a shipping container.

#### e Fostering Government Partnerships

PETCO partnered with government on various projects across all 9 Provinces, thanks to our collection network and the local authorities.

In 2016, PETCO supported government projects, including:

#### **DEA Trolley Project**

PETCO sponsored DEA with 15 trolleys and 100 bulk bags to be issued to Waste Pickers to assist them in collecting their recyclables.

#### Nelson Mandela Bay

PETCO sponsored a 12m shipping container to be used as storage and office facility for a recycling project. The recyclables come to the site pre-sorted and already placed into the correct containers, saving the project transport money.

#### **Engcobo Separation at Source Projects**

PETCO facilitated a workshop for the Engcobo Municipality, connecting them with buyer and a training partner for their separation at source project, and moving a co-operative away from a landfill site into municipal infrastructure in the process.

#### f Building the Recycling Network

As a measure towards achieving an inclusive approach amongst stakeholders of PET recycling, PETCO implements a membership scheme for stakeholders.

There are two broad categories of PETCO Membership:

#### **Shareholder Membership**

Shareholder Membership is reserved for companies who pay levies and grants, and for whom shareholding and voting is reserved. Percentage of shareholding in PETCO is allocated according to annual continuous membership contributions, which is calculated every 3 years.

#### **Associate Membership**

PETCO created the Associate Membership Programme for organizations who are not represented in the shareholding of PETCO but would like to become part of the PETCO family as they subscribe to our principles.

Associate Members are not allocated shares in PETCO and have no voting rights, but many other benefits apply, such as preferential attendance rates for workshops and networking events.

Communicating regularly with our members about legislative changes and the potential impacts on the industry, on critical issues facing the SA PET industry, as well as providing opportunities where networking and info-sharing can take place, is very important to PETCO.

Key events in the Member calendar are outlined below:

#### **PETCO AGM**

PETCO's Annual General Meeting (AGM), the premier event in the PETCO calendar, represents the most significant platform for communicating with key stakeholders. The main purpose of the AGM is to comply with legal requirements, such as the presentation and approval of the audited accounts, election of directors, and appointment of auditors for the new accounting term.

The PETCO AGM is always very well attended by a range of shareholder members who use the time to reflect on the progress made over the preceding year and to grapple with the opportunities and challenges looking into the future and beyond.

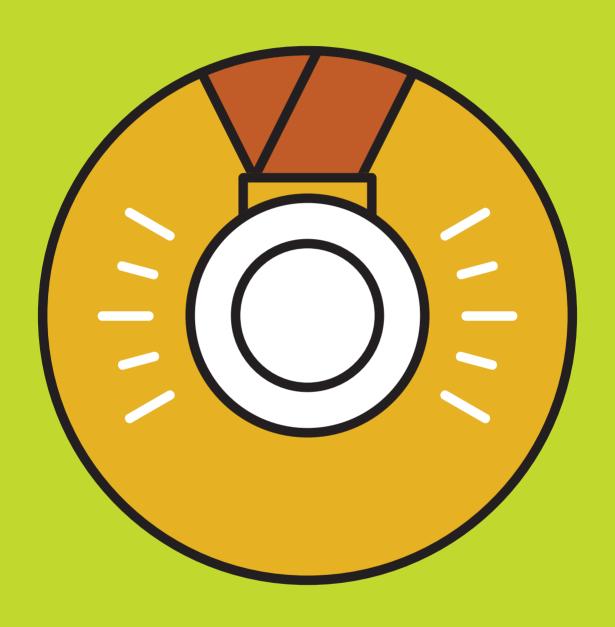
As part of the annual proceedings, PETCO hosts the PETCO Awards designed to recognise and honour the people, companies and organisations involved in the PET recycling value chain in South Africa, which not only contributed to advancing PET recycling, but also reflected the principles of EPR and circular economy-thinking in their practices, during the course of the previous year.

PETCO's 11th AGM was held on Thursday 21 July 2016 at The Venue Green Park, Sandton.

#### **Membership Workshops**

PETCO hosts regular nationwide member workshops, specifically designed to be useful to members' businesses and of benefit to their employees. These workshops help to ensure that members are up to date with the latest offerings from government and the private sector. PETCO Associate Members are allocated preferential rates for attendance.

In 2016 we hosted two well-attended panel discussions on Sustainable Brands and Recycling in Pretoria and Cape Town.



### PETCO AWARDS

For noteworthy achievements and successes during the course of 2016, PETCO gave awards to 10 recipients in the following 8 categories:

#### 1 Best Recycling Public Education Programme

Awarded to public, private or non-governmental organisations that exemplify excellence in recycling with respect to public education and awareness programmes.

#### **WINNERS:**

#### The Waste Trade Company

The Waste Trade Company, located in Port Elizabeth in the Eastern Cape, creates awareness through involvement in local initiatives and through the implementation of recycling initiatives at events in Nelson Mandela Bay. The Schools Recycling Project services Port Elizabeth, Uitenhage, Despatch, Kirkwood, Addo and the Sundays River Valley area.

Through their programmes, they collected 59 973 kg of PET during the course of 2016.



The Waste Trade Company's School Recycling Projects collected almost 60 tonnes of PET in 2016.

#### White Sharks Project Recycle Swop Shop

Since 2003, the Recycle Swop Shop in Masakhane, Gansbaai has been enriching children's lives by encouraging them to recycle and then rewarding that effort. Last year, an astonishing 14 940 kg of recyclables were collected by 6 054 kids, which would have otherwise ended up in the ocean. So, with this simple, yet effective community project, White Shark Projects also helps the community to do their bit for the conservation of our ocean and our environment.

The Recycle Swop Shop is very popular and, subsequently, Masakhane is one of the cleanest communities in South Africa.



Learners bring recyclables to the Swop Shop, for which they are given points that allow them to buy school stationery, second hand clothing, small toys, blankets, basic food and even sanitary wear from the Swop Shop.

#### 2 Best product using recycled PET

Awarded to a company or organisation that has displayed high levels of innovation and expertise in addressing the design, technical and manufacturing challenges associated with increasing the percentage of recycled PET resin included in the product/s that they manufacture.

#### WINNER:

#### The Joinery, for their 'My Office' range.

Focused on methods of production that contribute to local community growth, the Ellis sisters - Natalie and Kim - have devoted much of their time to researching and creating their own sustainable fabrics. In conjunction with PETCO partner Propet, The Joinery has conceptualised a fabric that looks similar to felt but is made from discarded plastic PET bottles collected around Cape Town.

This new range of tech accessories called 'My Office' is handmade by local seamstresses and artisans from rPET, and features a multi-purpose laptop sleeve made from the material of 5 recycled plastic bottles.

Since May 2016 they have used around 15 000 PET bottles in their products, diverting these bottles from landfill.



Natalie and Kim Ellis, with their shopper bags, made from recycled plastic bottles.

#### 3 Recycling Partnership Game Changer

This award recognises partnerships, including government (municipal, provincial or national), regulatory agencies, community organisations and private industry, that have successfully implemented gamechanging initiatives, policies or programmes that advance recycling and sustainability in South Africa.

#### **WINNER:**

#### **Pikitup**

The Pikitup partnerships in Johannesburg have resulted in private-sector companies providing technological solutions for waste separation and processing, in addition to community co-operatives, individual pickers and micro-enterprises. The initiative involves households separating their waste into three bags: wet and organic waste; plastics and glass; and paper. Recovery is increased through the involvement of pickers, co-operatives and community participation in buy-back programmes, and their roles are also being formalised through this model.

In the last 5 years, Pikitup, in partnership with Jozy@Work, has increased its Separation At Source programme to include 56% of households within Johannesburg. This has enabled the City to divert 21 000 tonnes of its waste in the 15/16 financial year.



the main driver behind their Separation At Source programme.'

#### 4 Recycling Innovator of the Year

This award recognises a PET recycling facility that is a leader in one or more key measurements: innovation, volumes of PET collected and/or processed, site improvements and sustainability measures adopted.

#### WINNER:

#### Extrupet (Pty) Ltd.

Extrupet's Phoenix $PET^{\mathbb{T}}$  has been at the forefront of innovation by being the first rPET used in, amongst other products, carbonated soft drinks, bottled water, fruit juices, liquid detergents and sheet thermoforming products.

In one month alone (May 2016), Extrupet purchased over 3 000 tonnes of post-consumer PET bottles - the first time in PETCO's history that this has been achieved by a single recycler in a given month.



Extrupet Joint Managing Directors, Vijay Naidu (left) and Chandru Wadhwani (right), on the floor of the PhoenixPET Bottle-2-Bottle plant.

#### 5 Best Community Breakthrough Initiative

This award recognises an individual or an organisation whose ingenuity and perseverance have created and sustained successful business ventures in the PET collection or recycling sector that directly benefits and uplifts the communities within which they operate.

#### **WINNER:**

#### **Reliving Cop17**

Re-livingCOP17 is a Non-Profit Organisation run by Smangele Chirwa that seeks to educate and motivate communities about measures for the implementation of resolutions taken at the major international COP17 event. It is the only buy-back centre in Esikhawini Township, Richards Bay, and works to educate the community about the importance of recycling through door-to-door awareness raising activities and campaigns at schools, parent meetings, churches and community meetings.

Through their programmes, they collected 3 418 kg of PET during the course of 2016.



Smangele Chirwa is passionate about educating communities about recycling.

#### **6 PET-trepreneur**

This award recognises an individual whose entrepreneurial insight, ingenuity and perseverance has created and sustained a successful, growing business venture in the PET collection or recycling industry.

#### **WINNERS:**

#### Nokubonga Mnyango, owner of Uthando Solutions and Trading

Nokubonga resigned from her job at the end of 2015 and decided to start collecting recyclables. Today, she has more than doubled her monthly income and, with the support of her husband, operates her business from home in the township of Ngwelezane outside Empangeni. Recently, she has been offered premises by the Department of Environmental Affairs at the uMhlathuze Municipality and is in the process of moving her business. She collects waste from taverns, shops, and schools and supplied 3 690 tonnes of PET to Mpact in 2016. She now employs 2 permanent employees and, in the busy season, hires more than 59 casuals.



"I realised I could live my dream of linking disadvantaged recyclers in the community to the markets," says Nokubonga.

#### Maxwell Ndlovu, owner of Okuhle Waste Management

Managed and run by Maxwell Ndlovu, the Denver buy-back centre employs 5 sorters on site, and collectors delivering to the centre created an additional 20 indirect jobs.

Total volumes are approximately 50 tonnes of paper and PET per month and approximately 10 tonnes of other recyclables. Projected growth in volumes is set for around 100 tonnes by the end of 2017. The company has recently employed 136 people with funding from Jozi@work for street cleaning, environmental education awareness and recycling for a period of four months.



Says Maxwell, "We saw an opportunity of running a buy-back centre that is open till late at night - an innovative way of getting more PET.

#### 7 Top Women in Recycling

This award recognises a female in the South African recycling sector who has demonstrated admirable leadership, business acumen and strategic foresight in driving and growing South Africa's economy through recycling.

#### WINNER:

#### Charlotte Lamprecht, owner of Hengue Waste

Charlotte started her recycling initiative in September 2007 in Riversdale, Western Cape. Within a year, she had convinced the Municipality of Riversdale to implement a two-bag system. Her company now runs the two-bag system in Still Bay, Jongensfontein, Riversdale and Heidelberg, and she has agents in Knysna, Montagu, Barrydale and Uniondale.

Total volume of material recycled during 2016 was 3 287 308kg and total PET during the same period was 57 392kg, or just over 57 tonnes. Through the buyback centres, they support approximately 400 entrepreneurs per month, buying material to the value of between R58 000 - R68 000. A total of 81 people are employed, 48 of whom are women.



Charlotte describes herself as 'spirited and tenacious'.

#### 8 Media Spotlight award

This award recognises a journalist or a media personality that is actively driving awareness of recycling and general sustainability issues, and has made an outstanding contribution to the understanding amongst consumers of issues pertaining to reduction, reuse and recycling.

#### WINNER:

#### Sindy Peters, Managing Editor at Bizcommunity.com

This year we asked journalists to enter a piece that they had written in the past year pertaining to recycling and sustainability. We had 11 entries and Sindy Peters' piece was the most original.

This is an extract from her piece:

"For someone without a background in chemical engineering, like myself, this might seem like wizardry, but it all comes down to the fact that PET forms part of the polyester family - a material used in the manufacture of clothing, home textiles, geotextiles, and new product packaging. Herein lies one of the primary reasons why we should limit the number of plastic bottles that end up in our landfills - because their usefulness extends well beyond their original purpose, and to bury them in earth is exceptionally wasteful."



Sindy has always been passionate about the environment.



#### **3 Consumer Education and Awareness**

Despite a comparatively small overall marketing budget of R3.5m, PETCO's total combined advertising value equivalent (AVE) increased by 113%, compared to 2015 - which translates into a return on investment of approximately 1 435% for the year.

#### New research conducted in 2016 includes:

PETCO Brand Audit:

To refocus our brand positioning, communicate more effectively with our partners and provide strategic direction going forward.

Research into Associate Membership programme:

To determine the current reputation of PETCO as perceived by Associate Members as well as to gauge their satisfaction levels.

Consumer research:

To understand the behavioural shift of PETCO's target audiences towards embracing an anti-littering, consumer reduction and recycling lifestyle.

We re-launched our website and worked to segregate our database for more effective and targeted communication. We further refined our short video clip on B2B recycling to be more consumer-friendly, and produced short video clips of our 2016 Award winners. These short clips work to build understanding of the highly technical process of PET recycling, as well as highlighting the incredible people behind the recycling process.



# FINANCIAL INFORMATION HIGHLIGHTS

In order to sustain and grow PET bottle collection, consistent demand for post-consumer PET is required. Recycling is a commodity business and, as such, is prone to significant cycles.

Unlike plastics, the steel, paper, glass and cardboard used in packaging are helped enormously by the ability of the original manufacturers to recycle their own material recovered from the waste stream. Polymer manufacturers are unable to offer such a low cost route because of the multiple variations in grades of the different types of polymer produced. Companies specifically set up for this purpose therefore carry out the recycling.

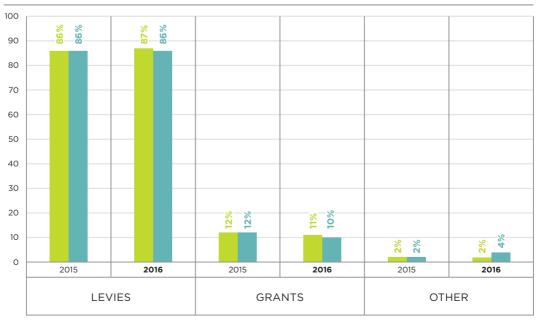
In most cases, this leads to recyclate being produced, which then has to compete with the highs and lows of virgin polymer prices and other end-uses (specifically textiles with recycled polyester content that compete with virgin polyester staple fibre). It is great when these prices are high, but when they are low, recyclate often struggles to survive. Hence the PETCO financial model.

#### HOW WE UTILISED OUR FUNDS YEAR ON YEAR

Financial statistics as percentages of Budget vs Actual, with previous year comparison:







#### EXPENSES (% OF INCOME) **■ BUDGET ■ ACTUAL** 75% %69 12% 12% RECYCLING PROJECTS SUBSIDY SUPPORT MARKETING, EDUCATION AND AWARENESS EQUIPMENT, **ADMINISTRATION** INFRASTRUCTURE AND TRAINING AND OPERATING COSTS

# WHERE TO FROM HERE?

# The outlook for 2017 and beyond

#### **PET Recycling Economics**

PET recycling economics remain challenged and nothing indicates that there will be a swift recovery. The global scenario is one of gross oversupply and weak demand for PET, placing strain on recyclers. Soft local economic conditions, possible recession and rising interest rates place additional challenges on all manufacturers.

The local fibre end-use market also looks increasingly bleak.

In 2017, based on indications received from PETCO's shareholders and partners in the PET value chain, we anticipate that the total market size will remain at approximately 241 000 - 245 000 tonnes i.e. that market growth will be close to zero. This can be ascribed to a number of factors, including the overall lack of growth in the South African economy and reduction in levels of disposable income, along with the high rate of market growth experienced in 2016 (15%), which meant that much of the growth that would ordinarily have occurred in 2017 took place in the second half of 2016.

Nonetheless PETCO is well placed to facilitate the collection and recycling of 95 000 tonnes of post-consumer PET bottles in South Africa in 2017, growing to 135 000 tonnes by 2020.

#### We are focussed on the following opportunities:

#### **Industry Waste Management Plan**

One of our main opportunities going forward lies in the fact that DEA will soon be requiring the Paper and Packaging Sector to submit an Industry Waste Management Plan. At the heart of this legislation is the idea that producers should be responsible for the end-of-life management of their products and packaging.

One of the reasons for the previous withdrawal of the request for plans to be submitted was confusion over the definition of "Producer" and who should register with DEA and submit plans. It's useful to look to other countries for ideas on how to solve such problems. One example, that is similar to the model that PETCO has adopted, is from a PRO in Canada called Multi Material British Columbia (MMBC) who adopted an interesting approach, namely that every company in the value chain is a "Producer". The definition assigns responsibility to the economic operators in the chain with "obligation hierarchy" to ensure that all relevant packaging materials are covered correctly, regardless of how many economic operators are involved in putting the product onto the market. This is a way of making sure that all responsible parties are identified, and of showing that the whole value chain is responsible for the product. Novel approaches such as this one provide good options for the South African

Paper and Packaging Industry to consider when compiling Industry Waste Management Plans.

We believe that statutory EPR will enable us to:

- Specify enforcement mechanisms such as penalty procedures and provisions for non-compliance to create a level playing field amongst PET users and to ensure no 'free-riders'.
- Require converters, brand owners, retailers, municipalities and other stakeholders, as appropriate, to jointly develop and implement plans to entrench a circular economy approach in the design and consumption patterns of products, specifying what provisions must be addressed, fee or cost structures, administration and reporting.
- Provide more comprehensive messaging to South African residents and consumers.

This is world-leading Extended Producer Responsibility in action and we look forward to the new era of recycling in South Africa that the statutory EPR will bring. At the time of printing, we believe that DEA will require submission of the Plans by December 2017. For now, we eagerly await the final notice calling for plans, which we expect to be made soon.

## **Further Collaborations** with DEA

National Awareness. Reinforcing anti-littering and recycling behaviour and creating a national culture within which citizenry is aware of and active in their role in attaining a clean, safe and healthy environment.

Training and School Recycling Programmes. Sharing knowledge, programmes and implementation timelines are some of the measures being put into place.

Data collection and analysis. There is a wealth of data available from Statistics South Africa, National Treasury, the Department of Education and from within each organisation. Combining datasets, sharing insights, and best practice are being explored. We see great potential for enhancing the impact on planning and Monitoring and Evaluation across both organisations.

## Standardise Waste Management Procedures and Processes

Most of the authorities in South Africa still do not have kerbside plastics collection, even for bottles. Substantial progress on achieving plastics recycling targets will not happen until best practice processes and procedures are adopted nationwide. The higher the targeted recycling rate, the more challenging it will be to collect more bottles. PETCO is excited about the roll out of additional municipal kerbside collection and various projects and partnerships to achieve increased collection. In particular the Bottle-2-Bottle expansion would require cleaner feedstock and dovetails well with Government's mandate to municipalities to reduce the amount of material going to landfill. The expansion of kerbside collection programmes must however be carefully balanced with the needs of the informal waste pickers, who form an important foundation for the entire value chain.

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## The Circular Economy

In order to fundamentally change the way we think about waste in South Africa, we need to embrace the principals of a circular economy - a system in which products are never discarded, but reused, recycled and re-introduced into new products. Effective resource recovery and waste management are critical to a healthy and prosperous future.

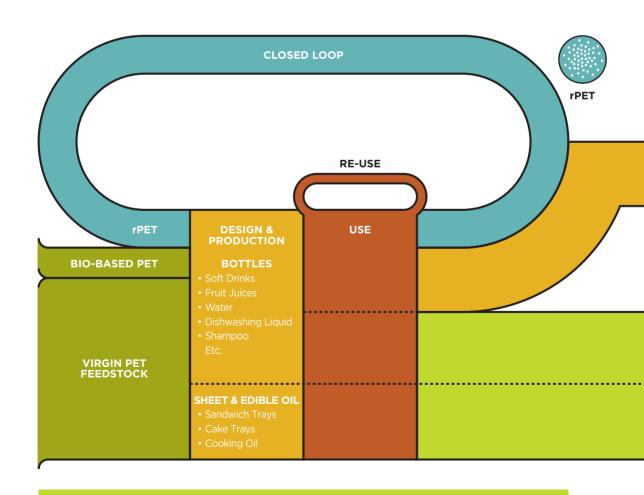
By transitioning to a circular economy, we have the opportunity to be leaders of a global movement toward a more sustainable model with significant economic, social and environmental benefits for our country.

Making the transition will require a shift in how we think about waste. It will mean changing our perspectives, values and habits. A circular economy aims to eradicate waste, not just from manufacturing processes, but from our everyday lives. A circular economy goes beyond recycling. The goal is not just to design for better end-of-life recovery, but also to minimise the use of raw materials and energy through a restorative system. Businesses will be encouraged to design long-lasting, reusable and easily recyclable products,

adding significant value to the economy by creating or expanding the reuse and remanufacturing sectors. In a circular economy, the value of products and materials is maintained for as long as possible. Waste is minimised and resources are kept within the economy when a product has reached the end of its life, to be used again to create further value.

Achieving these goals will require a fresh approach to waste management and resource recovery in our country - one that accounts for the shifting global context, recognizes the opportunities in a circular, low-carbon economy and enlists the support of all South Africans. We believe that this thinking affords a viable opportunity to drive performance, innovation and competitiveness, and stimulate economic growth and development. It's also an exciting challenge to create better products, reduce our reliance on extraction of virgin materials, and support efforts to fight climate change.

The trick, however, is reaching that point at which a circular plastics economy becomes economically viable.

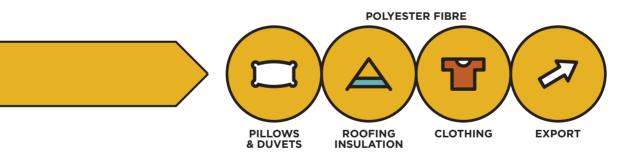


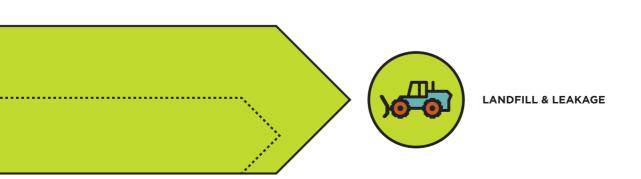
What needs to happen? According to the Ellen MacArthur Foundation researchers, three large shifts need to occur if plastics will ever transform into more of a closed-loop or circular economic system:

- An effective after-use plastics economy must be developed. To accomplish this, plastics, and their surrounding systems, must improve in quality and economic performance. As a society, we must also undergo a surge in reuse and recycling.
- Plastics industry stakeholders must dramatically reduce all negative externalities, including the excessive release of plastics into the natural environment. Creating an effective post-use plastics economy can provide an economic incentive to keep plastics in such a system, and in turn would help decrease leakage.
- In a reversal of how the industry grew over the past several decades, plastics must also be decoupled from fossil fuels by researching and incorporating more renewable sources of feedstock.

While many businesses may complain about these new requirements, the truth is that they can force us to become more innovative - and perhaps even arrive at new revenue streams as a result of these efforts. Hence we are bullish on the prospects for plastic becoming more of an economic generator, rather than a material that leaves behind huge environmental and social costs. The business community's willingness to re-evaluate plastics is higher than ever, as more companies realise that greater standardisation in both design and collection systems is overall more efficient in moving society toward a circular system.

To achieve this shift, we will need a long-term strategy and the support and co-operation of all partners, including municipalities, producers, waste management service providers and consumers. This co-operation will continue to be an important part of the circular economy. New, innovative operating methods and opportunities to maximise the use of materials will come from cross-sectoral collaboration and bold leadership. Education and awareness will be essential to nudge these changes and will be critical to support increased participation.





## **Create Conditions for Sustainable End-Markets**

Creating a greater demand for products made from recycled plastics is essential. The greater the demand, the more this will "pull through" the supply chain and stimulate activity.

End-use market developments for recycled strapping as well as the export of fibre are opportunities to pursue going forward. A number of other opportunities are currently in the prefeasibility stage, and PETCO will continue to support research in these areas in 2017 and beyond.

For materials to be recovered and re-integrated into the economy, the cost to recycle must be more viable than the low cost of sending materials to landfill. More emphasis needs to be placed on stimulating the development of markets for these products to help close the resource loop. Taking action to foster a supportive business environment for companies that use recovered resources will help drive additional recycling, create more jobs, reduce greenhouse gases and extend the life of existing landfills.

## Embedding Design for Recycling into the Development of Packaging

We recognise the need for innovators, designers, manufacturers, and packaging decision makers to understand how packaging design decisions can affect container recyclability and where feasible to design packages to be compatible with the broadest range of recycling operations and technologies. PETCO desires to become the leader in "design for recycling" governance, setting up relevant marks of quality for all to adhere to and become the go-to organisation on all matters PET / rPET related. We think it is an exciting opportunity to inspire a generation of designers to profoundly rethink plastic packaging.

During 2017, we will initiate a number of projects in this area, including targeted engagements with

brand owners and industry organisations in specific sectors. These engagements will build partnerships with brand owners, designers, marketers and other packaging decision makers, to maximise recyclability and reduce the environmental impact of their packaging.

Our government has procurement policies that encourage and support purchasing green products and services that do not impact the environment. As we shift to a circular economy, government leadership in procuring goods and services that make use of recovered resources or include recycled content could help stimulate markets for recovered materials.

## **Industry Developments** and **Expansion**

Hosaf, as the only virgin PET resin producer in South Africa, has embarked on a phased expansion program. The incremental capacity increases will happen in two distinct phases. Phase 1 will see Hosaf increasing its capacity to 237 000 tonnes per annum by the middle of 2017. Phase 2 will increase production to around 260 000 tonnes per annum, the timeline for this implementation is yet to be determined.

Hosaf's increased capacity will be sufficient to supply the complete South African virgin PET demand for the next few years, thus eliminating the need for any imported PET.

The Coca-Cola system in Africa has become more united and efficient. They are planning to grow the business. The company is in tune with its external environment and embraces the values and needs of its consumers, and is planning to grow the business.

A number of PETCO's existing recycling partners are in the process of investigating capacity expansions within their existing facilities. We hope to be in a position to make some exciting announcements in this area during the course of 2017.

#### What do our Stakeholders think about the Future?

#### **Greg Morse**

**Bottler Perspective** 

"Going forward, we are very excited to have the possibility of using rPET in B2B applications. We appreciate the investment that has gone into the infrastructure in making this possible and realise that without PETCO's support, closing the loop with respect to recycled PET, would not have been possible."

#### **David Drew**

Converter Perspective

"The key for the next 18 months or so will be working with the industry and government to try and ensure that whatever is implemented or enforced won't prejudice the PET industry unnecessarily. To do this we need to break down the silos both across the packaging industry and even those within the PET industry. Without unity we are unlikely to convince government to accept our proposals."

#### The following Challenges are anticipated:

#### **The Sugar Tax**

In 2016 government announced a tax on sugar-sweetened beverages (SSBs), which required PETCO to develop more than one budget scenario to cater for the potential impact of this tax on our business model.

### Tubs, Trays and Edible Oil

Tubs, tray and edible oil bottles are currently not recycled in South Africa. There is potential for other forms of recovery for these pack forms, depending on buy-in from the sector to fund the investment in collection and technology. The issue of tracking 'free riders' coming aboard as PETCO members also comes to the fore, as they are one of the largest end-use sectors of recycled PET for packaging. We continue to encourage these producers to engage with us, as there is now a pressing need for PETCO to represent the entire PET sector as a vehicle for fulfilling their EPR obligations.

We are currently working with the Cape Craft Design Institute (CCDI) and some thermoform representatives on a Design Thinking project aimed at improving the recyclability of PET thermoform trays.

## Research and International Cooperation

Energy Recovery. An increasing number of countries are starting to recognise that waste plastic should be regarded as a valuable resource that should ideally be recycled or, where that's not an option, used to fuel waste-to-energy facilities. Challenges associated with Energy Recovery projects include being able to secure long-term contracts beyond the usual three-year period with municipalities, as well as being able to secure off-take agreements for the sale of electricity. PETCO has drafted a discussion document on Energy Recovery that is accessible from our website.

## Integrating the Formal and Informal Economies

Could the integration of the formal and informal economies provide a solution to waste management in South Africa? Currently the informal sector plays an essential role in waste management in South Africa. However, a prerequisite for successful plastic waste management is the existence of a legal framework that supports and finances the collection system with the necessary infrastructure, awareness campaigns and the training of waste pickers. Going forward, it will be crucial for waste pickers to get organised into groups, co-operatives or other collective entities. The experience of waste cooperatives in Brazil and India and in other countries and the legal framework that supports them is helpful to our situation. Many challenges remain but through a positive attitude and support from all of stakeholders more inter-linkages between the two waste management sectors will emerge in the future.

## **Consumer Awareness and Understanding**

We know that consumers are generally willing to recycle, when it is made easy for them to do so, but getting them to be fully efficient and motivated, and to ultimately change behaviour, requires ongoing awareness campaigns and education. While consumers might be aware of the need for change, most residents are not acting on their awareness, and lack understanding of what they can do that would actually make a difference. Residents are also looking for an authoritative voice they can trust to give them accurate and reliable information about how and what to recycle.

Our primary focus will be to increase consumer's access to accurate information about PET recycling within the South African context, and increase their knowledge of recycling and the mechanisms by which they can participate in the recycling process. By increasing their access to knowledge and information, we aim to motivate increasing numbers of consumers to participate in collection and recycling behaviour, and help consumers along the journey of behaviour change as we see it, namely awareness, action, comprehension, conviction and commitment.

#### Chandru Wadhwani

Collector / Recycler's Perspective

"Our challenge going forward will be to maintain and grow the percentage of PET collected in an environment of weak price dynamics for rPET in a "low oil price' environment. This coupled with pending Government legislation is leading to heightened uncertainty in the industry."

#### Tom McLaughlin

Retailer Perspective

"The fact that PETCO with the support of its members have set up a circular system for used PET bottles that creates jobs, saves foreign exchange, prevents waste to landfill and produces quality PET material for re-use at less than virgin cost is simply amazing. It is pioneering the circular economy for packaging and keeping costs down. That's good for retail."









## CELEBRATING THE PETCO PEOPLE

It's time, once again, to acknowledge and celebrate the incredible people behind this year's many accomplishments. You will find them all listed on the following pages, but that hardly suffices to show our appreciation for the efforts, the creativity and, most of all, the heart they all put into sustaining and expanding our presence. May the coming year bring new recycling partnerships, a more stable economic environment, recovery and further growth.

#### **PETCO STAFF**

- · Cheri Scholtz Chief Executive Officer
- · Alistair Schorn Business Development Manager
- · Belinda Booker Collections and Training Manager
- · Janine Basson Stakeholder Relations Manager
- · Vainah Mbulo Johannesburg Office Administrator
- · Financial Controller (to be filled)

#### PETCO CONTRACTED RESOURCES

- · Martin Niebuhr Accounting and Financial Consultant
- · Annette Schell Levy Manager
- · Oscar Baruffa Data and Strategic Projects
- · Deloitte SA Auditors

#### PETCO BOARD OF DIRECTORS

#### NON-EXECUTIVE DIRECTORS

- · Casper Durandt Chairman Franchise Technical Director, Coca-Cola South East Africa; Representing Brand Owners
- Tshidi Ramogase Vice Chairman
   Corporate Affairs Director: SAB Miller / ABI Soft Drinks; Representing Bottlers
- Greg Morse
  Manufacturing Director: Coca-Cola Peninsula Beverages (Pty) Ltd., Representing Bottlers
- Daniel Schoeman General Manager: Hosaf; Representing Resin Producers
- Chandru Wadhwani
   Joint Managing Director: Extrupet (Pty) Ltd., Representing Collectors / Recyclers
- Tom Mclaughlin Responsible Sourcing: Woolworths Food; Representing: Retailers
- Andre Nel Sustainability General Manager: Pick 'n Pay; Representing: Retailers
- David Drew
   Chief Commercial Officer: Boxmore; Representing: Converters
- Vukani Magubane
   Director of Public Affairs and Communications: Coca-Cola South East Africa; Representing: Brand Owners

Our directors serve a three-year term and are elected after being nominated by the industry sectors they represent. They may avail themselves for re-election.

Our board are not remunerated and pay their own expenses to attend annual meetings.

#### **PARTNERS AND MEMBERS**

PETCO acknowledges our partners who share an ambitious vision to shape waste management practices in South Africa.

- The Council for Scientific and Industrial Research (CSIR)
- International Labour Organisation (ILO)
- Department of Environmental Affairs (DEA)
- Department of Science and Technology (DST)
- Packaging SA and Member Associations
  - · Paper Recycling Association (PRASA)
  - · Polyco
  - · Petcan
  - · The Glass Recycling Company
  - · SAVA
  - · Polystyrene Council South Africa (PCSA)
- National Recycling Forum (NRF)
- Institute of Waste Management SA (IWMSA)
- PlasticsISA
- SA National Bottled Water Association (SANBWA)
- GreenCape
- SAPRO
- African Marine Waste Network (AMWN)
- Consumer Goods Council of South Africa (CGCSA)

#### **SHAREHOLDERS MEMBERS**

Shareholder Membership is reserved for companies who pay levies and grants, and for whom shareholding and voting is reserved.

At end-December 2016, there were 20 Shareholder Members of PETCO, following a number of mergers:

- 1 Astrapak
- 2 Bizee Corporation t/a ATA Agencies
- 3 Bowler Plastics (Pty) Ltd.
- 4 Boxmore Packaging International (Pty) Ltd.
- 5 Coca Cola Beverages South Africa (CCBSA)
- 6 Coca-Cola South East Africa
- 7 Coca-Cola Peninsula Beverages (Pty) Ltd.
- 8 Hosaf a division of KAP Diversified Industrial Pty Ltd.
- 9 Little Green Beverages
- 10 Mpact Plastics
- 11 Nampak Liquid Packaging
- 12 New Age Plastics cc
- 13 Nioro Plastics cc
- 14 Pick n Pay
- 15 Polyoak Packaging Group
- 16 Purple Line Plastics (Pty) Ltd.
- 17 Split Line Manufacturing cc.
- 18 Tsitsikamma Crystal Spring Water (Pty) Ltd.
- 19 Twizza (Azores Manufacturers)
- 20 Woolworths Holdings (Pty) Ltd.

OUR 25 SHAREHOLDER MEMBERS ARE THOSE WHO PAY LEVIES AND GRANTS, AND FOR WHOM SHAREHOLDING AND VOTING IS RESERVED.



#### **ASSOCIATE MEMBERS**

PETCO Associate Members are companies, organisations and individuals who do not pay a recycling fee and, as part of the PETCO family, prescribe to our values. The Membership is valid for a year and must be renewed on a yearly basis.

At end-December 2016\*, there were 55 Associate Members:

- 1 A whale of heritage route
- 2 Akura
- 3 Alfrehutch
- 4 Appletiser SA
- 5 Beauty and Son Recycling
- 6 Betha Neland Consulting
- 7 Beytell Belegging t/a Anti Waste
- 8 Blue Acqua
- 9 Bonke Abantu Recycling and Waste Management
- 10 Brandhouse Beverages
- 11 Dema Trans Waste Services
- 12 Ekhmanzi Springs t/a Aquelle
- 13 eLabel
- 14 Enviroserv Waste Management
- 15 Extrupet
- 16 Garden Route Marketing
- 17 Gontse Environment and Recycling
- 18 Green Cape
- 19 Green Cycle
- 20 Green Edge Communications
- 21 Green Recycle
- 22 Hlobisa Enviro Waste
- 23 usky
- 24 Institute of Packaging South Africa
- 25 Johannesburg Zoo
- 26 Kaytech Engineered Fabrics
- 27 Kimberly Recycling
- 28 Krones Southern Africa
- 29 Limwiz Management and Consulting
- 30 Mama She's Waste Recyclers
- 31 Move On Up 1061 t/a Waterval Minerale
- 32 Mpact Recycling
- 33 My Waste
- 34 Oasis Water
- 35 Perfect Water
- 36 Pikitup
- 37 Postwink Recycling Products
- 38 Propet
- 39 Purea Fresh Water Co
- 40 Recycling Solutions t/a Don't Waste Services
- 41 Remade Recycling
- 42 SC Johnson and Son Inc
- 43 Sen li Da Chemical Fibre
- 44 Silver Stars Trading
- 45 South African National Bottled Water Association
- 46 T-CUP
- 47 The Eco-Smart Box t/a The Recycling Box
- 48 The SOUL Foundation
- 49 The Waste Trade Company
- 50 Trashback
- 51 Tswelangpele Co-op
- 52 Tuffy Brands
- 53 Unilever SA
- 54 Waste Plan
- 55 Wildlife and Environmental Society of South Africa

<sup>\*</sup> PETCO is currently revising the Associate Membership programme, to be updated on an annual basis.

# CONTACT INFORMATION

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