

# Packaging Sector

A profile of the packaging sub-sector

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## 1. Executive Summary

This sector profile provides a brief overview of the packaging industry. It covers the key trends and challenges, the drivers of change and the key role players in the sector. A profile of FP&M SETA learners in the packaging sector is provided.

## 2. Overview

The Institute for Packaging South Africa (IPSA) reported that in 2012 the total value of South Africa's packaging industry was estimated at R48 billion, contributing about 1.5% to South Africa's gross domestic product (GDP) (IPSA, 2012). Although packaging contributes to only 1.5% of GDP, the manufacturing economy relies heavily on packaging in some form simply because products cannot be shipped from source to manufacturer to retailer to consumer, through the supply chain, without proper packaging.

South Africa's packaging industry manufactured 3.68 million tonnes of packaging during 2012. Glass and paper are the largest contributors to the packaging industry at 32.4% and 31.2% of total packaging market volume (IPSA, 2012). Although the glass and paper sectors manufactured the largest volume of packaging, plastic contributes the most in value at 41.8%. Plastic remains a more popular and economical packaging type choice (IPSA, 2012). Large-scale organisations in the packaging industry are described in Table 1.

### A South African experience of packaging material reduction

- The tinplate beverage-can has reduced to a mass below 30 grams versus a mass of 62 grams in 1966 in SA. The new aluminium beverage-can is now just 13 grams.
- The 2 litre PET bottle has reduced to a mass of less than 50 grams today versus a mass of 90 grams in 1979.
- Glass wine bottles weigh 32% less than 7 years ago.
- Detergent refill packs have reduced packaging material by 70%.
- The cement industry uses a standard 50 kg bag that is 2 ply at 210 g/m<sup>2</sup> versus the 4 ply 360 g/m<sup>2</sup> material used in 1980's.

(IPSA, 2012)



The packaging industry is diversified in terms of the different packaging types. The Packaging Association of South Africa (PACSA), distinguishes between glass, metals, plastics and paper and printing materials, all of which can be recycled (Packaging Council of South Africa, 2014). South Africa consumed approximately 3.7 million tonnes of all types of packaging in 2013, of which a total of approximately 51% was recycled. This was an improvement of 1.3% over 2012 statistics (Packaging Council of South Africa, 2014).

The most familiar type of packaging in South Africa is the plastic bottle, scientifically known as the polyethylene terephthalate (PET) bottle. The PET container is recognisable as the transparent, rigid container used to package bottled water, carbonated soft drinks (CSD's), sports drinks, water, household cleaners and food trays. It is a popular package for food and non-food products (PETCO, 2014).

The packaging industry is strictly regulated, particularly in relation to environmental management. Legislation which must be adhered to includes the following:

- National Environmental Management Waste Act, Act 59 of 2008
- Infrastructure Development Act, Act 23 of 2014
- National Water Amendment Act, Act 27 of 2014



Facilitation of recycling has become international best practice for plastic bottle manufacturers. A distinctive recycling logo is stamped onto the base of the material. This shows that the manufacturer has demonstrated sensitivity to environmental concerns by creating packaging products that lend themselves to recovery and

recycling. In markets with high levels of environmental awareness, shoppers regard such identification as reassurance that they are buying products manufactured by socially responsible business (PETCO, 2014).

*Table 1: large-scale employers in the packaging industry*

<b>Organisation</b>	<b>Description</b>
<b>Astrapak</b>	Astrapak Limited and its subsidiaries are manufacturers and distributors of an extensive range of rigid and flexible plastic packaging products. The Group has manufacturing facilities in all the main centres of South Africa, employs 4 168 people and has annualised revenues in excess of R2.71 billion in all operations. The operations are grouped into various business segments and service mainly the food, beverage, personal care, homecare, pharmaceutical, agricultural, industrial and retail markets. The Group continues to be focused on innovation-led growth in plastic packaging and plans to continue its expansion through a balance of organic, project and acquisitive growth (AstraPak, 2014).
<b>Nampak</b>	Nampak manufactures packaging products from metal, glass, paper and plastic in South Africa and the rest of Africa, and makes plastic bottles in the United Kingdom. The group participates in extensive collection and recycling initiatives and continues to invest significant time and resources in the development of more sustainable products. Its main business is in South Africa, where Nampak has 58 operations, accounting for 67% of all operations and 64% of the group's revenue. In the rest of Africa and the United Kingdom the company has 20 and 9 operations respectively. In the 2013 financial year trading profit increased by 60% in this region, accounting for 36% of trading profit (including exports) (Nampak, 2010).
<b>Mondi South Africa</b>	Mondi is an international packaging and paper group, employing around 26000 people in production facilities across 31 countries. In 2013, Mondi had revenues of €6.5 billion and a return on capital employed (ROCE) of 15.3%. The Group's key operations are located in central Europe, Russia, the Americas and South Africa (Mondi, 2014).
<b>Mpact</b>	Mpact is one of the largest paper and plastic packaging groups in Southern Africa. It has operations in South Africa, Namibia, Mozambique and Zimbabwe. The organisation employs 3 998 people across 32 sites, of which 22 are manufacturing sites (MPact, 2014).

### 3. Key features

#### 3.1 Trends

Similar to trends facing other manufacturing industries is global concern for the environment. Environmental damage resulting from improper disposal of used packaging materials – including their residues - is no longer tolerated. In South Africa responsible packaging management is a well-established and respected practise in the packaging industry. The purpose of responsible packaging management is to address economic, legal and regulatory concerns associated with container use (Responsible Packaging Management Association of South Africa, 2014). The necessity of looking after the environment has resulted in the development and growth of the recycling and reconditioning industries as they process old packaging materials into new materials in an environmentally friendly manner.

The implementation of the Labelling and Advertising of Foodstuffs Regulations in 2012 had a major impact on the packaging industry, and the manner in which packaging is designed and manufactured. Packaging is a critical factor influencing the consumer's purchasing decisions. The implementation of the labelling and advertising of foodstuffs regulations has made it necessary for most product packaging to be redesigned to

meet the requirements of the legislation. This brings an opportunity for retailers to select from new innovative and creative packaging that has a competitive edge (Supermarket & Retailer Magazine, 2011).

In a 2012 survey global industry players identified the following trends in the packaging industry:

- Sustainability concerns will dominate packaging industry work in 10 years in both Europe and North America;
- Cost, today's top driver, drops in importance in 10 years;
- Food safety/ security remains a top factor driving packaging work;
- Strategies to use renewable materials, recyclable materials and smart packaging in 10 years – a clear call for innovation and collaboration throughout the value chain;
- Though rarely selected as a “top” trend, convenience factors are identified as very important today – and that importance is expected to be maintained in 10 years; and
- Plastics will continue to replace glass and metals and flexible packaging will continue to replace rigid structures.

(Packaging World Magazine and DuPont Packaging and Industrial Polymers, 2012)

### 3.2 Challenges

The macro-economic environment has been challenging for the packaging industry in recent years, mainly due to pressure on both commercial and consumer spending. The combination of economic uncertainty and raw material and energy price inflation has also had a negative impact on packaging producers who rely on sophisticated printing and converting machinery to deliver the quality, efficiency and innovation that the market demands. Management needs to be skilled at determining how much to spend on maintaining and adding to the capabilities of their machine park (EYGM, 2013).

The need to get safe and nutritious food to millions of South Africans, most of whom live far from their rural roots, has to be balanced with achieving world-class standards (especially for exporters), as well as complying with stringent environmental demands. First-world packaging is required for the convenience of the prosperous, meeting the demands of self-service retailing; yet affordable, efficient packaging is required for the safe transportation of basic foodstuffs consumed by the majority of the country's population. Alongside these apparently contradictory requirements is the need to minimise the use of packaging materials for both economic and environmental reasons (IPSA, 2012).

Plastic and paper manufacturer Mpact identified the following challenges in the packaging industry:

- Skills shortages;
- High cost of administered services such as electricity and municipal services;
- Increasing incidence of imported goods, all of which are already packaged;
- Unreasonable customs and excise duties on South African packaging exports; and
- High levels of product waste, which can be as high as 40% as a result of inadequate packaging materials and poor infrastructure.

(Booyens, 2012)

### 3.3 Drivers for Change

The development and application of new technologies will enable the packaging industry to achieve more with less. Nanotechnology is promising new and invaluable techniques, as well as paradigm shifts in thought processes for the packaging industry. The radical technology is set to revolutionise the concept of packaging design by maximising the primary functions of packaging, while protecting the environment as well as creating economic and social benefits, not only in the packaging industry but also across the spectrum of manufacturing (IPSA, 2012).

A report from PCI Films Consulting forecasts that flexible packaging demand in the Middle East and Africa will grow by around 5% per annum over the next five years as confidence in the region growing economy

encourages inward investment and greater emphasis on mass food processing. As countries in the region grow their economies and look to improve transport and distribution infrastructure and encourage inward investment, more and more multi-national brand owners are recognising the potential for local packaged food production to supply the region's expanding needs. Five countries; South Africa, Nigeria, Iran, Egypt and Saudi Arabia currently account for over half of total consumption of converted flexible packaging in the region (Packaging Strategies, 2014).

### **3.4 Professional associations**

The Institute of Packaging South Africa (IPSA) was established in February 1970. Today, IPSA has developed into an influential educational body of note within the packaging industry. With hundreds of members country wide, IPSA represents the main body of packaging professionals within the industry. It services the needs and interests of these members through its five regional offices in the Northern Region, Western Cape, Eastern Cape, KwaZulu-Natal, and the Border Region (IPSA, 2012).

The Responsible Packaging Management Association of Southern Africa (RPMASA) is a Section 21 non-profit company and is a registered NPO. It is the leading Southern African organisation for all in the value chain of industrial packaging and has links to various international organisations. The Association's mission is to promote safe, efficient and environmentally responsible manufacturing, handling, transport, reuse and final disposal of industrial containers. RPMASA further seeks to act as a focal point for industry stakeholder relations (Responsible Packaging Management Association of South Africa, 2014).

The Packaging Council of South Africa (PACSA) was founded in 1984, replacing the Association of Packaging Manufacturers. The Council is a voluntary industry body which aims to provide effective leadership and representation on major external and internal issues which impact the packaging industry to all interested parties including government, the media and its own membership. Its members are classified in three broad categories; converters, associates and affiliates. Converters represent some 70% of the revenue generated by the industry. Associates are in effect the major raw material suppliers and affiliates are customers and major recyclers. Collectively this body directly employs some 60 000 people in South Africa (Packaging Council of South Africa, 2014).

The World Packaging Organisation (WPO) is a non-profit, non-governmental, international federation of national packaging institutes and associations, regional packaging federations and other interested parties including corporations and trade associations. Founded in September 1968 in Tokyo the WPO seeks to promote education about packaging through members and encourage the development of packaging technology, science, access and engineering (World Packaging Organisation).

PETCO was established in December 2004 as a Pty Ltd Company with the specific objective of promoting and improving the waste management and recycling of post-consumer Polyethylene Terephthalate (PET) products on behalf of all stakeholders in the PET industry in South Africa. PETCO has provided millions of Rands worth of financial support to PET recycling companies, created income opportunities for an estimated 26 000 people, helped to establish over 430 recovery stations throughout South Africa and is working to introduce Bottle-2-Bottle PET Recycling (PETCO, 2014).

## 4. Learner Profile

IQ Business received MIS data from FP&M SETA regarding all learners the SETA has interacted with. The learner profile provides an overview of the FP&M SETA's learner who entered in financial years 2011/12, 2012/13 and 2013/14.

Fields of interest are the learners':

- **Equity distribution:** ethnic group of the learner.
- **Socio-economic status:** employed or unemployed.
- **Disability status:** being disabled, this includes sight, even with glasses.
- **Age at time of enrolment:** age was calculated off of the learner's ID number and worked back to reflect his/her age at the time they entered the course.
- **Home language.**
- **Gender.**
- **Geographical distribution.**
- **Intervention.**
- **Sub-sector.**

In this section a focus was placed on the sub-sector, namely packaging sector. Data<sup>1</sup> is reported in the infographic<sup>2</sup> below per sub-sector.

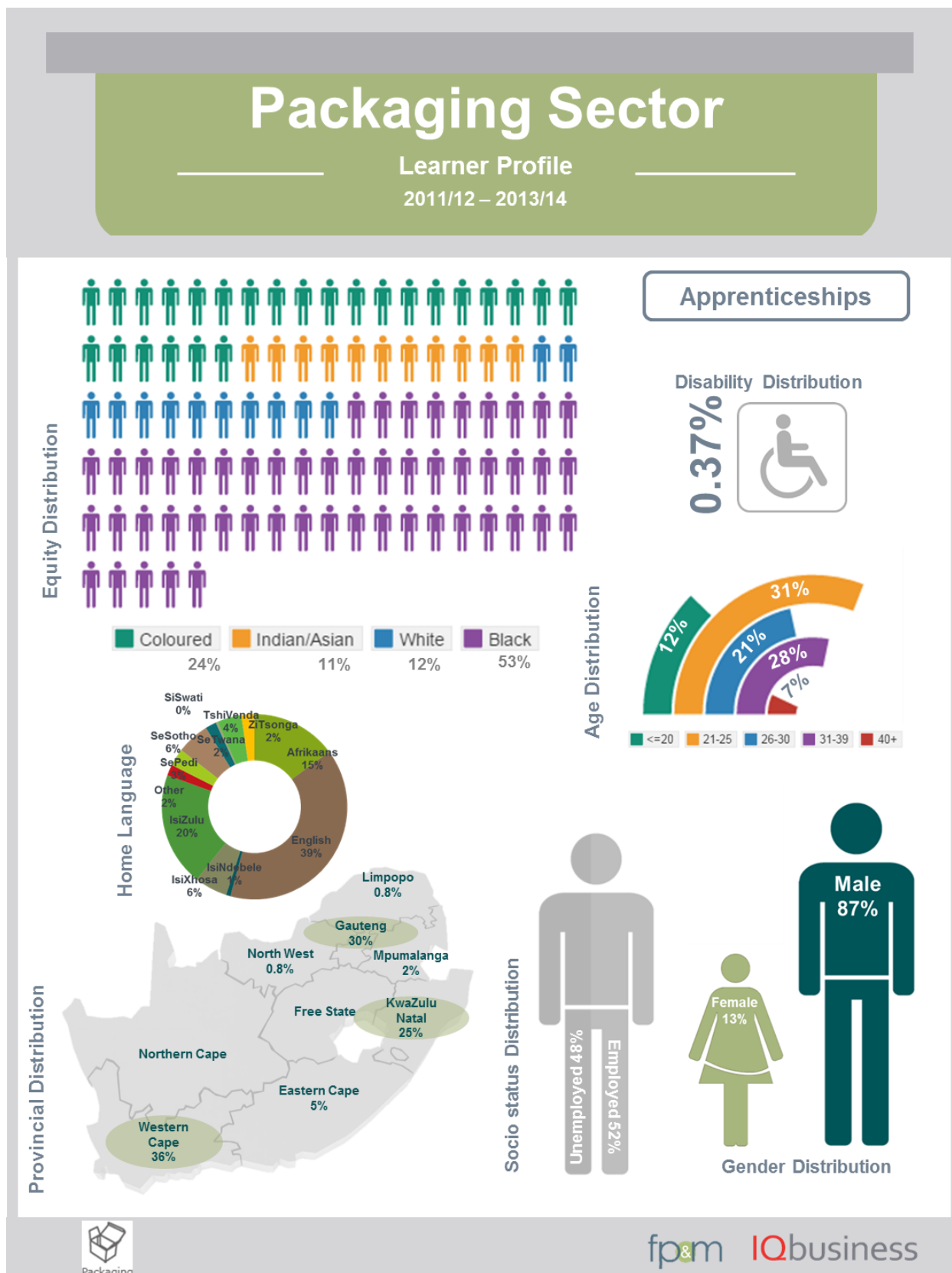
The FP&M SETA courses in this sector is apprenticeships and learners in this sector is mainly black South Africans. It can be seen that 93% of learners in the packaging sector are under the age of 40. The packaging sector is weighted toward male learners and almost equally distributed between employed and unemployed learners. Packaging apprenticeships occur predominantly in the Western Cape, Gauteng and KwaZulu-Natal.

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<sup>1</sup> The data excludes missing data within the variables.

<sup>2</sup> A visual representation of information or data, e.g. as a chart or diagram.

## 4.1 Packaging Sector





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