

Live to Pump Again



WISP worked with Siyavana Solutions and the Shell Petroleum Company to divert 16 tonnes of pumps, hoses and computer boards from going to landfill. In so doing, between R4 mil & R5 mil in additional revenue was generated through the sale of remanufactured fuel pumps

The Organisations

Siyavana Solutions and The Shell Petroleum Company

Siyavana Solutions is a 100% BBEEE certified company that has been providing service solutions to the oil and petroleum industry for over 18 years. Using the latest technology available, Siyavana Solutions produce high-quality refurbished fuel pumps that can go back into the value chain.

The Shell Petroleum Company (Shell) is a well-known global oil and gas company with a prominent presence in South Africa.

Over the last four years they have collected 429 fuel pumps.

The pumps that can be remanufactured are stripped down and reusable components are kept. The sheet metal is treated, circuit boards are tested and upgraded with the latest technology, and pipes are replaced. Most of the replacement parts are recovered from the strip process.

Siyavana Solutions has formed key partnerships with other companies and organisations that can incorporate those parts which Siyavana Solutions are unable to use into their business operations. For example, old rubber hoses are sent to an agricultural business which uses them for irrigation purposes and old electronics are sent to a training school for vision-impaired children.

The Challenge

Hundreds of fuel pumps reach end of life at service stations annually. Shell decommissions and replaces roughly 100 fuel pumps every year leaving them with a disposal problem. Some of the pump components are regarded as e-waste and are consequently classified as hazardous material. Siyavana Solutions approached WISP to see if there may be alternatives to direct disposal of the used fuel pumps.

The Benefits

Economic Benefits



- 30% achieved in cost savings per pump for Shell Oil Company
- R4 million generated per year in additional revenue via the sale of remanufactured fuel pumps.

The Solution

WISP identified that Siyavana Solutions had the potential to develop an upcycling solution for Shell. Upcycling is the process of transforming used or waste material into usable products whilst retaining or increasing the value of that product. Siyavana Solutions optimises the lifecycle cost of fuel pumps by making sure that materials remain in circulation for longer, reducing the need for new pumps and reducing the environmental cost of disposal. Consequently, WISP helped to facilitate an ongoing synergy between Siyavana Solutions and Shell.

Environmental Benefits



- 10 tons of pumps diverted from landfill and remanufactured for reuse.
- 5 tons of hoses diverted from landfill to farmers to use for irrigation.
- 1 ton of computer boards diverted from landfill to school of the blind for learning purposes

Social Benefits



- 9 permanent jobs created between Siyavana Solutions and farmers.

Siyavana Solutions now collects old petrol pumps from Shell-owned service stations, refurbishes them and resells them to Shell at a discounted rate, creating a 'closed loop'.



WISP

Western Cape Industrial Symbiosis Programme

Delivered by GreenCape

Connecting Industry Creating Opportunity

About WISP

The Western Cape Industrial Symbiosis Programme (WISP) develops mutually profitable links between companies from all industrial sectors, so that under-utilised resources such as energy and water, and/or materials from one company can be recovered, reprocessed and re-used by others.

Driven by Business

The programme uses actual business opportunities as the mechanism for encouraging resource efficiency. Its holistic approach sees it actively dealing with ALL resources including water, energy, materials, logistics, assets and expertise. The programme is based on the highly successful national programme in the UK (NISP), which demonstrated that industrial symbiosis has the potential to significantly reduce industrial and commercial waste and comprehensively lessen the adverse environmental impacts of business.

Free Membership

WISP is a free facilitation service funded by the City of Cape Town and delivered by the sector development agency GreenCape. WISP enables synergies to happen by filling the gaps that its members, especially SMEs, could experience due to the lack of time or dedicated expertise needed to identify and implement resource, waste and energy efficient practices. The diversity of the industries in which WISP operates, and the variety and size of its business members, means that WISP has the potential to generate significant economic, environmental and social benefits from the synergies and projects that it brings about.

Partnership with Purpose

WISP works hand in hand with leading trade associations, manufacturers and other organisations to add real value to business. We are working in collaboration with the City of Cape Town, International Synergies and the National Cleaner Production Centre (NCPC) and the Western Cape Government.

Contact us to become a member and get involved!

<https://www.green-cape.co.za/content/sector/wisp>



WISP is delivered by

GreenCape

GreenCape was established to promote the development of the green economy in the the Western Cape Province. We assist viable green businesses and potential investors in the green economy to remove barriers to their establishment and growth. Our aim is to help unlock the investment and employment

potential of green business, technologies and manufacturing and put the province on course to become the green economy hub for Sub-Saharan Africa. This work, in turn, contributes to improving the resource efficiency, carbon intensity and resilience of the regional economy.

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