

## **The Case Study of an e-Waste Service Provider Alliance –How to Grow a Responsible e-Waste Collection and Treatment Service for Southern Africa**

Karcher S.Y.

Since its original inception in 2007 this NPO based alliance (from here on referred to as “the alliance”) of various service providers has undergone a series of name changes in order to accommodate members from neighbouring SADC region states. The two name changes within the last seven years were deemed to be necessary by its members in order to highlight the rapidly changing core business and growing operational areas of the NPO members.

What started as a very localised and rather loose association of a handful of refurbishers and recyclers who sought to work together in order to stay competitive against larger more established recyclers, rapidly transformed into a growingly representative network of South African recyclers, refurbishers and a supportive key OEM manufacturer and supplier of ICT equipment for Africa, W2Art entrepreneurs, communication experts and academics.

After a Namibian logistics company joined the e-waste network in 2011 the basic foundation was laid for the members of the NPO to assist Namibia with establishing its own first fully government licenced e-waste collection solution by sharing local experiences including the identification of local buyers for such items. When South Africa’s largest e-waste recycler applied for membership in 2012, the initially rather informal and vaguely expressed aim of “lending each other a helping hand where possible” grew into the full equivalent of a resilient and socially just e-waste business cooperative where (metaphorically speaking) “the Big Fish and the many small fishes learnt to live and share together in a symbiotic co-nurturing system”.

This unique vision developed further into the commitment to grow an environmentally and socially responsible solution for e-waste in South(ern) Africa” with the aid of a unique and clearly defined “Code of Conduct” (CoC) binding alliance members to voluntary minimum required technical and operational standards. The CoC together with the Constitution are the tenets of the framework that communicates to Southern African stakeholders in the public and private sector on how the e-waste network wishes to operate.

For the present and future members of the NPO the CoC clearly stipulates minimum MANDATORY operational and technical standards for any e-waste related activity (from collection, and transport, to storage and treatment) and in accordance to norms that are based where possible and feasible on international examples i.e.: (WEEELABEX), but also considers and takes into account the unique socio-economic challenges typical for Southern African countries.

With the Code of Conduct being an industry “voluntary commitment” to minimum standards in the absence of a yet to be adopted and Government approved Industry Waste Management Plan (as was jointly developed and formulated by eWASA and ITA-PEG) or other industry EPR principle driven collection schemes, the members of the allied NPO have jointly created both business to business and public collection and treatment service solutions of the highest standards.

Recent key achievements of alliance members include the development of work opportunities for disabled women in the cartridge refurbishment sector, the expansion of ICT refurbishment services from Cape Town to Johannesburg, the shortlisting of the NPO for the SEED 2104 Sustainability award, membership extension to Lesotho and planned (at the time of paper submission) is also a research partnership project with a Finnish donor agency to retrieve e-waste (by creating jobs) from mines and other key e-waste generators in the Northern Province.

This paper will provide a comprehensive summary on the key elements the NPO is made of and the activities and trends alliance members have experienced since WasteCon 2012. It will clearly demonstrate the unique organic growth of Southern African e-waste industry based services with regards to guaranteed quality standards and the rapidly growing operational scope the alliance has experienced as an organisation and through its growing number of individual members.

## INTRODUCTION

### Organizational Structure of the Alliance

This NPO formed by a network of different service providers in the e-waste collection and treatment sector is a body corporate not carried on for the purpose of gain (non-profit-organisation) and has been in existence since 2007 (but having undergone numerous name changes since then). It is comprised of and run by a number of independent industry members who work closely together in order to offer their respective clients a Southern African “one stop-shop” integrated e-waste management and handling solution based on the introduction of value added steps along the waste hierarchy and according to the best and financially feasible technologies internationally and locally available. This alliance is managed by its coordinator and chairwoman Susanne Yvonne Karcher (author of this paper).

Members of the Tier 1 and Tier 2 category (see also explanation further below) pay a monthly fee into a dedicated NPO owned bank account to compensate the coordinator for time spent to attract new members, networking, media marketing and generally overseeing the NPO's member affairs. Members meet on a quarterly basis but are permanently informed about relevant news around e-waste management, new national and international role-players entering the market, legal trends, links to potential e-waste sources etc., via a Google group email setup. This NPO does not generate any profits. It is there as an umbrella organisation to encourage co-operation rather than competition amongst recyclers and refurbishers and to assist both the public and private sector to become part of a responsible e-waste management solution in South(ern) Africa and any relevant information is therefore shared freely and transparently with non-members as well.

The NPO has three tiers of partners:

- First tier partners typically comprise of any e-waste related industry members. First tier partners are service providers offering the collection, transport, disposal, treatment, repair, refurbishment or recycling of any type and any volume of e-waste.
- Second tier partners have an interest in the NPO and its affairs but their core business is not directly related to the management of e-waste. Examples of such partners include but are not limited to retailers and OEM manufacturers and suppliers.
- Third tier partners have a free membership to the alliance as they are typically tertiary educational institutions or not -for -profit organizations (NPOs, CBOs) with an interest in responsible (e-)waste management. As such e-waste management is clearly not their core business but rather provides a limited value adding opportunity (such as e-waste to art operations, marketing and communication assistance, educational or research scope etc.)

## PRODUCTS, PROGRAMS AND SERVICES

The NPO aims to coordinate the responsible collection and down-stream management of the electronic waste stream in an integrated system within South Africa and throughout Southern Africa. The network of service providers brings together independent business partners able and willing to work together collaboratively to handle all parts of the e-waste stream in the most integrated and value adding manner and according to the best technologies locally available, while also assuring safe data destruction. Some of the members of the alliance are also regularly appointed to destroy counterfeit wares as instructed by RSA customs.

The alliance's unique business cooperation and waste beneficiation model allows its members to optimize their goals, namely:

- Minimizing waste and maximizing resource use and job creation
- Adding value in each step of the e-waste management process
- Creating an enabling environment for entrepreneurship activities while ensuring basic health and environmental protection for alliance members and their affiliates

In any alliance member collaboration project the following E-WASTE MANAGEMENT HIERARCHY is applied:

- Process 1: Refurbishment and repair
- Process 2: Recycling
- Process 3: Waste to Art

Services between a client and various collaborating alliance members are typically agreed on in the form of a Service Level Agreement (SLA).

#### ALLIANCE'S SERVICE LEVEL AGREEMENT

The NPO signs with clients interested in a one-stop-shop solution a *Service Level Agreement* that clearly spells out the scope of services rendered and the role and responsibilities of all stakeholders concerned. While the alliance coordinator signs the work agreement on behalf of the members, it is through suitable Tier 1 members of the alliance (as jointly and fairly agreed by all Tier 1 members of the network in majority vote) that all required services are provided in a cost saving and "integrated functions and materials recovery oriented manner" rather than through an end of pipe "waste management" approach.

The client is then informed about the number of units refurbished and dismantled via the responsible NPO members and the working standards applied are in line with the *Code of Conduct*.

#### THE CODE OF CONDUCT

The Code of Conduct was jointly developed by the NPO members shortly after the last WasteCon in 2012 (East London) when South Africa's largest e-waste recycler joined the Alliance with a view to collaborate with small businesses to jointly grow a responsible e-waste service footprint in South Africa (and beyond), They simultaneously needed an evaluation and assessment tool that reduces personal company liability while providing a responsible national and international (Southern African) e-waste solution.

The Code of Conduct is a voluntary agreement of members to adhere to minimum MANDATORY standards with regards to legal, organisational and technical requirements enabling them to become eligible for Tier 1 ALLIANCE membership.

General requirements (applicable to any e-waste practitioner operating as a Tier 1 member) include proof of legal compliance, fair labour conditions and general safe housekeeping and the nature and structure of collaborative agreements but also the protection of individual competition for the members. The second section of the Code of Conduct spells out the required MINIMUM technical and operational requirements directly linked to key activities typical for the management of e-waste- namely for the collection, transportation and processing (dismantling and/or refurbishment) of e-waste by any Tier 1 NPO member. A future extension of the Code of Conduct might be required if new members are signing up with the ALLIANCE who are concerned with the de-pollution of e-waste and final disposal of it at an authorised landfill site or are in the business of exporting such wastes directly. The current version of the Code of Conduct can be downloaded from the NPO's website at [sa.ewastealliance.co.za](http://sa.ewastealliance.co.za) –together with other useful documents assisting with the start-up of e-waste operations for both the collection and SME type treatment and component dismantling.

In the current regrettable absence of dedicated funds to audit the NPO members, any South(ern) African e-waste refurbisher and/or recycler who wishes to join the alliance as a Tier1 member needs to fill in an application form AND sign an affidavit to confirm that he/she adheres to all minimum requirements as spelt out in the Code of Conduct . The applicant also needs to agree to a possible future third party audit (and if required to a pre-qualification audit to confirm and substantiate any claims made and to avoid any form of "green-washing" from the outset) which has to be paid for by the applicant.

## MARKETING MODEL

Thanks to a lot of pro-active marketing and networking, the NPO is increasingly consulted and considered by media as the “official voice” to inform and educate the public and businesses about the dangers of e-waste as well as to highlight opportunities to recover function and materials in a proper EH&S and legally compliant manner. As NPO members adhere to minimum technical and operational standards (as prescribed in the Code of Conduct) these naturally come with certain efforts and expenses to maintain. Their financial service feasibility is increasingly threatened through individuals that enter the e-waste recycling arena with NO moral or technical standards in place. Therefore it is important that people (both the public and businesses) are fully aware of what happens with e-waste when materials are simply left on a kerbside (often done by ignorant householders) or sold in an attempt to recoup money from the “highest bidder”. Chances are that companies that offer unreasonably high prices for e-waste can do so because they are not legally compliant at all and merely hire labour in an exploitative way to cherry-pick the few valuables, leaving the vast majority of low value fractions or parts simply and literally “behind” in illegal dumps or on burnt heaps. Media exposure of the NPO and the work of its members took place in various TV and radio interviews since the last Wastecon paper and include a view information key sources as listed in the references:

## RECENT INDIVIDUAL ACHIEVEMENTS BY NPO MEMBERS

South Africa's largest recycler has just launched a programme in conjunction with a major electronic OEM manufacturer and a local bulk electronics retailer for 18 x 6m containers that have been wrapped and branded to be placed on the retailer's premises to enable drop off points to the public and at the point of sale. The manufacturer and retailer are jointly marketing the project in store and via TV and other printed media, and the recycler is managing the collection and responsible recycling of all e-waste collected.

All e-waste collected is first checked and tested for potential refurbishment and if viable refurbished and resold into the market place, and if not recycled responsibly following the recyclers ISO 14001 certified processes.

The project is opening doors for other similar projects whereby the recycler is looking at placing bins in strategically located shopping malls and universities nationally in an effort to create more awareness and education around the need for responsible e-waste recycling, as well as enabling drop off points for the general public at large and ideally at the selling point of new consumer electronics.

Another member of the NPO -a corporate refurbishment business and founding member, has recently signed an MOU with the Atterbury Foundation. This member will render its current services to this strategic partner, with specific reference to its “Refurbishment of ICT equipment for Donation program”. Through this arrangement the member will be able to offer this service (among others available) to the clients of Atterbury (of which the NPO the Atterbury Foundation is a direct affiliate).

As soon as the buy-in of these clients have been secured, the first phase of ICT equipment donations to charities & community upliftment projects starts. Once sufficient stock levels has been secured the establishment of containers or small business premises that are co branded by both parties is the next step. This initiative will entail the involvement of an 3<sup>rd</sup> party, initially earmarked as a possible NGO or Charity that actively works in the community in order to identify possible needs in that community as well as conduct a screening process of possible entrepreneur candidates that would be suitable to conduct the proposed business. The Charity / NGO would possibly also monitor the business & the entrepreneur's success & outcomes. The infrastructure needs & costs for the premises will be jointly funded from the strategic partners.

The second phase of this project is the heart & soul of the project as a whole. That particular NPO member will provide the proposed entrepreneurs with the support structure & the blue print in order to run a member branded retail outlet & internet cafe in their community.

Challenges and Opportunities for the NPO Alliance Working Model expressed in a SWOT (Strengths, Weaknesses, Opportunities and Threats) Format

The role of this NPO and the key services rendered by its members is directly related to the recent development of the legal landscape for e-waste management in South(ern) Africa. It is becoming increasingly evident to members that the Industrial Waste Management Plan (as was jointly compiled by the ITA-PEG and eWASA) as early as 2012 has not yet been put into motion at all by the DEA to introduce (as suggested) an EPR driven collection and take-back system for all types of e-waste.

This EPR driven system normally fully finances the responsible treatment and disposal of current liabilities such as CRT monitors, batteries, certain plastics, heavy metal containing capacitors etc. to name a few. In the absence of any legislative guidance, the Code of Conduct is the document that for now binds the alliance’s members to engage ONLY in responsible operation practices that make sure that ALL e-waste fractions (assets and liabilities) are responsibly processed and handled within a cradle to grave format.

This places all NPO members at a severe financial disadvantage when compared to any non-compliant individual (with recent member observations and personal company research suggesting that non-compliant, fly by night type operations are on a massive increase in South Africa), who are simply exploiting the high value fractions found in e-waste (combined with mounting unclarity on the future legal directions and related rapidly changing legal obligations and requirements), with no regard or concern for health of workers or the environment, often dumping low value or hazardous fractions. The following table highlights key considerations and observations in a SWOT format for the NPO in its current structure.

ALLIANCE	S	W	O	T
Organisational Structure	<p>Unique format</p> <p>Develops a culture of teamwork and collaboration rather than competition</p> <p>Sharing of information means a joint accelerated learning curve</p> <p>Attractive one-stop shop format offered</p> <p>Follows waste hierarchy</p> <p>Great public marketing appeal</p>	<p>Underfunded</p> <p>Mandate and purpose of NPO linked to political developments</p> <p>Administration overload</p> <p>No clear mandate by Tier 1 members to chair resulting in last minute crisis management.</p> <p>Chair being in Cape Town which is not always financially viable for non Cape Town members to attend</p> <p>Sometimes personal meeting is required to discuss in depth issues and Skype or conference calls are not always the best form of participation</p>	<p>NPO can be groomed to become THE media and communication marketing voice for responsible e-waste collection and management services in South(ern) Africa</p> <p>Being the industry voice guided by members means sharing opinions wrt operational industry challenges i.e. non value fractions, non-practical licensing requirements and even guidance in terms of legal, technical and operational day-to day practicalities</p> <p>Future media voice for the industry is</p>	<p>Legal unclarities and decision making vacuum,</p> <p>Lack of communication to DEA or guidance from the DEA</p> <p>Potential conflicts with eWASA,</p> <p>Uncertainty about future role of the NPO linked to the challenges above</p> <p>Buy in required from more non NPO stakeholders to catch and fully realise the vision.</p>

			<p>based on real local (no Eurocratic intervention or influence in realities of operating in SA) information, experiences and, challenges faced by members who can share how to overcome them and who are based on South Africa</p> <p>Potential to facilitate close collaboration with DEA and other government structures as members of this NPO provide a voice of authority based on experience.</p>	
<p>Membership Profile</p>	<p>Diverse membership covers full spectrum of industry and different levels of expertise and experience bring meaningful value add to decision making.</p> <p>Wonderful support by some members who add value to the NPO at their own expense and effort (e.g. website maintenance)</p>	<p>Fragmented with regards to individual member involvement and support of the NPO. Not all members seem to fully understand the benefits of NPO</p> <p>High entry level to join means struggle to grow membership</p> <p>Despite quarterly meetings and frequent Google group communication a lack of communication exists between members and from members to chair</p> <p>Requirement of more members across the board.</p>	<p>Signing up more interested members (e.g. in Lesotho ) will be easier in future through introduction of an affidavit rather than trying to audit at huge cost to ensure Code of Conduct compliance</p> <p>NPO members collectively stand for and support a <u>minimum</u> of legislative intervention to solve the e-waste management challenges</p> <p>Members are rather promoting only most basic but</p>	<p>Irregular and long overdue membership payments create huge administrative hassles</p> <p>Not enough members to make NPO financially sustainable in the long term due to lack of direction within core membership.</p> <p>Lack of cooperation and participation between membership and chair.</p> <p>Plan of action going forward required to give direction and participation</p>

			meaningful regulation principles that will naturally unlock the introduction of voluntary industry driven EPR principles as suggested by producer group ITA-PEG	
--	--	--	---	--

## REFERENCES

Introduction of work of this NPO done by an award winning US community project film maker:

<https://www.youtube.com/watch?v=IXYq0N4kv7Q>

Link to UN documentary about the NPO activities: <http://www.youtube.com/watch?v=HUWezul28Hw>

Interview of NPO coordinator on the SABC3 Espresso Show

<https://www.youtube.com/watch?v=81VYIewSHok>

Link to e-News Channel Africa Tech Report Show <https://www.youtube.com/watch?v=c9JA07p-c1k>

Interview of NPO recycling member on Business Day Live <https://www.youtube.com/watch?v=9jK5k6kUSPs>

German documentation on 3Sat (Nano) of the e-waste problem Africa

<http://www.3sat.de/page/?source=/nano/cstuecke/138679/index.html>