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Malta: WasteServ Malta

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About

Case study name:

[The greening of industries in the EU](#)

Country:

Malta

Organisation Size:

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WasteServ Malta is Malta's major operator in the waste management sector. WasteServ is committed to establishing and maintaining innovative waste management practices which also protect the environment and society. This case study illustrates the main motivators behind one particular green business practice adopted by the company, namely the introduction of waste separation at source and the introduction of anaerobic digestion of the organic part of municipal waste to generate biogas. The introduction of new practices, through new technology, increased the number of jobs in the company, while existing workers had to undergo training in order to acquire new skills.

Introduction

The waste management sector is still evolving in Malta. It has gone through significant changes over the past few years, in particular moving from facilities which were not compliant with current technical standards to the establishment of new facilities which make use of modern technology. The use of modern technology has brought about an improvement in employees' working conditions, for example through the use of automated as opposed to manual systems. A waste management strategy was developed to set directions and it states that Malta's focus should be on waste-to-energy. According to the [National Statistics Office](#), between 2004 and 2010 waste disposal accounted for 93.8% of the total waste managed in Malta, while recovered and incinerated waste accounted for 6.1% and 0.1% respectively.

[WasteServ Malta Ltd](#) (WasteServ) was established in November 2002 and is the major operator in the local waste management sector. WasteServ is responsible for organising, managing and operating integrated systems for waste management. The company operates and administers public waste management facilities, many of which are unique to the Maltese Islands; for example, a non-hazardous waste engineered landfill and the only incineration facility. WasteServ currently has around 300 personnel. The introduction of new green practices, mainly through new technology, increased the number of jobs at WasteServ. Furthermore, existing jobs were transformed and employees occupying those jobs received training to acquire the necessary new skills. WasteServ has invested heavily in building the necessary infrastructure, such as introducing bring-in sites, to effectively implement waste separation at source.

The company has provided data to the Maltese government about heat and electricity produced from gases generated from landfills, to support it in its plan to achieve the set RES target of 10% by 2020. Relevant to the green business practice under study, in February 2008 WasteServ commissioned a materials recovery facility at one of its plants. This facility, which was a first for Malta, is used for sorting dry recyclable waste recovered through the various initiatives currently implemented, including the Recycle Tuesdays scheme, bring-in sites and other at-source waste separation initiatives. A second facility, introduced in 2010, is a mechanical treatment plant combined with an anaerobic digestion facility which allows the recovery of the organic fraction derived from municipal waste to produce biogas. This in turn is used for energy generation and compost, which can find a number of uses including landscaping projects. This facility is the only one of its kind in Malta.

Drivers and motivations

Availability and economic feasibility of new technology

Technology was one of the main motivators to implement the green business practices under study. In most cases, the commitment to implement changes resulted from studies arising from technical assistance projects conducted in cooperation with other countries. Most of the practices established at WasteServ are based on proven technology brought in from other EU Member States, for example Germany. These are normally adapted to the local situation in view of the very particular nature of the islands' waste management challenges.

Acting in accordance with new regulations

Complying with new legislation was another strong motivator for the implementation of green business practices. Until early 2004, solid waste generated in the Maltese Islands was deposited in unmanaged landfills. One of three landfills was closed in 1996, and the other two landfills were closed in 2004 prior to EU accession, since it was not possible for these landfills to comply with the requirements of the Landfill Directive 1999/31/EC.

Government is the only shareholder of WasteServ. Stakeholders including government, regulators and the community in general have all approved the green business practices applied. This can be gauged through the support received from all stakeholders and participation in, for example, recycling schemes by the general public.

Government has several policies related to climate change, and WasteServ facilities must always be in line with such policies to contribute to the achievement of national targets, such as national renewable energy targets and landfill reduction targets. The company is regulated by various entities including the Malta Environment and Planning Authority (MEPA) and the Malta Resources Authority (MRA). The main regulatory changes and environmental permits were a major factor in the type of technology selected.

Community pressures

The community exerts significant pressures. The general public is very sensitive to the issue of climate change and has become more demanding in terms of environmental concerns and waste management. This is evident during public meetings held as part of the development planning process to establish new facilities. During such meetings attendance is generally good and participants participate actively to put forward suggestions and to require authorities to monitor closely the operations in the sector.

Reduction of dependency on resources

The application of the above green business practices contributes to the reduction of the company's dependency on a number of resources, including landfill void space, fossil fuel utilisation through the generation of renewable energy and the requirement for use of raw materials through the recycling of a number of materials including paper, plastic and metals.

Green business practices

In order to implement the green business practices, WasteServ had to:

- establish new facilities;
- recruit new personnel;
- restructure company operations; and
- adapt existing procedures and work practices.

Energy efficiency

The adopted green business practices contributed, directly and indirectly, to energy efficiency and energy saving in the company itself. For instance, the civic amenity sites which are equipped with photovoltaic (PV) and wind turbines generate electricity for use within the site while the excess is exported to the national grid. Similarly, biogas generated at the Sant Antnin Plant is used to generate electricity, some of which is used on site, with the excess fed into the national grid. Furthermore, part of the heat generated by this facility is to be used to heat the swimming pool of a neighbouring philanthropic organisation.

Reduction of greenhouse gas

The implementation of this green business practice will contribute to an overall reduction in the share of greenhouse gas (GHG) emissions from the waste sector. GHG emissions from waste are estimated to be equivalent to 7.6% of the gross national emissions. In addition, there will be a reduction in power plant emissions for energy generation.

Implementation

The green change involved practically all of the company's departments including the projects office, human resources, operations and finance. Most of these initiatives emerged through research conducted by company employees. Research included review of available technologies, reliability and the efficiency of each technology. The implementation of the green change involved a lengthy but essential process including brain-storming sessions, design meetings, input by consultants, applications for development permits, applications for environmental permits and construction.

The most crucial step in the whole process was that related to securing the development permit for the facility. The process included the performance of an environment impact assessment (EIA), which goes into the impacts on all aspects of the environment and the impact on society including the creation of jobs and improvement of social conditions. Embedded in the EIA process are a number of public consultation periods which allow the public to provide input in this development process.

As might be expected, the waste management sector is very much subject to the NIMBY ('not in my back yard') syndrome. Community members complain regarding nuisances from facilities and the fact that such sites are an eyesore. As a consequence there is always a public campaign whenever a proposal for a new facility or upgrading of an existing one is submitted. However, providing information about the benefits of the project helps to convince stakeholders.

Anticipation and management of the impact of green change on quantity and quality of jobs

Impact on quantity of jobs

The implementation of the focused green business practices has mainly led to the creation of more jobs within WasteServ and in other entities collaborating with the company. About 85% of the employees working for the company work in green or green-related jobs. Skills vary from administrative jobs to skilled labour required for the actual operation of facilities which may change from time to time. Arrangements for hiring of labour are in place which therefore allows for a degree of flexibility in operations.

There has been an increase in the number of employees working in new green jobs at both a professional level as well as at the level of ecological operators, that is those involved directly in the operation of the different plants. At professional level the types of jobs created include posts in engineering, scientific posts, technical, economic, finance and research. No jobs were eliminated completely within WasteServ. On the contrary, the company is currently employing additional staff in this business to cater for continuous changes in the sector

and also to ensure compliance with changing requirements.

Skills development

Due to the introduction of green business practices, employees had to enhance their skills in a number of different areas, such as the identification of materials which can be directed for recycling. Enhancement of skills was required at all levels from professional employees to ecological operators and was conducted primarily through on-the-job training provided by the supplier of the plant (the company providing the technology) and technical visits to similar operations overseas. The direct impact of the green business practices may be considered to be high and especially relevant with the creation of green jobs when compared with other sectors. Although transformation of existing jobs, by means of training, to top-up employees' existing skills, was carried out in most sections of the organisation, the professional staff had the highest demand for such transformation.

WasteServ anticipates using green skills on a permanent basis based on the company's needs. An important aspect is collaboration with similar entities operating similar plants overseas. Employees (at all levels) from the company are regularly sent for hands-on training on similar plants overseas. During such visits staff not only gain further knowledge, but they are also able to create useful networks for continuous enhancement of their skills and improving the efficiency of the process. Ongoing discussions are held with employees who, through their experience on the job, hold valuable information on what is to be altered or carried out differently in terms of plant logistics, improved efficiency and related areas. For example, the feedstock inputted into the process is crucial to the generation of biogas. Networking with similar plants overseas may lead to employees coming up with ideas to source different materials which could result in improved quantities and quality of biogas and therefore more renewable energy (electricity) generation.

WasteServ utilises all possible methods to ensure continuous green skills training, including existing training structures (locally and abroad) as well as through the creation of sector-specific training which is tailor-made for the specific needs of the company/sector. For example, WasteServ secured funds from the European Social Fund (2004–2006) to implement a project designed to improve the employability of project participants (as described below). Employees are keen to learn and acquire new skills. Training attendance is high and frequent. WasteServ values the importance of discussing training needs with its employees and gathers feedback after each training session to gain information how best to alter the training sessions. Since employees feel part of the ongoing changes within the company, they do not resist change and new methods of performing jobs. For example, in the past few years WasteServ has been the driving force behind a number of projects which focused on the creation of green skills.

Through one particular project WasteServ in fact provided 29 jobseekers with specialised training which included communications skills, technical knowledge about waste management and also environmental education. On completing the training, the participants then started visiting households throughout the Maltese Islands to explain the concept of waste separation at home to the general public. These trainees came from a variety of backgrounds, with a commitment to promoting waste reduction, reutilisation and recycling. In the first two years, over 30,000 households were reached through the implementation of this project. Although these employees were given the opportunity to become permanent employees of the enterprise, not all took it up.

Following the success of this first project, WasteServ continued to train more participants, thus expanding its reach to more households around Malta and Gozo on a daily basis. The advantages of this project are twofold – jobseekers are given the opportunity to work and learn while also imparting useful information to householders and thus increasing awareness about waste management among the general public.

WasteServ is currently implementing another project called 'Care creates change in people's lives and the environment'. This project, launched in November 2009 is co-funded by the European Union through the European Social Fund with a total budget of €1.2 million. The project aims at enabling and encouraging environmental stewardship through the empowerment of its socially disadvantaged participants via adequate training and skills transfer. The target groups include amongst others young school drop-outs, victims of domestic abuse, ex-convicts, substance abusers and asylum seekers. The intent is to enhance the employability of the trainees within the environmental employment sector including securing jobs as ecological operators within the facility as well as elsewhere.

Other working and financial conditions

The working and financial conditions of employees working in green jobs at WasteServ are at an equal level with other employees working in jobs not directly related to green business practices. Males dominate the operational aspect of the company's activities. Being a public entity, job quality within the company is governed by the norms of public sector employment including principles relevant to health, well-being and balance between working and non-working life.

One of the main barriers in responding to the green skills needs within the company is the identification of personnel ready to take up green jobs and keeping abreast with developments in the sector. Public authorities could facilitate the development of green skills through the establishment of a national framework by certifying training of existing employees performing green business practices for example waste sorters required at the plant. Although such a framework has been established for other employment sectors, such as the transport sector, one relevant to waste management has not been established yet. This should help to improve the standard of the sector as a whole as well as fostering high morale among workers in the sector (both public as well as private operators). Public authorities may play a crucial role through creating and approving the certification framework to be implemented with possible co-financing from the EU or local funding.

Conclusions and recommendations

The green business practice described here involves the use of waste as a resource to generate biogas for electricity generation. The creation of this practice led to the generation of a significant number of green jobs both within the company itself as well as in external entities cooperating with the company. Through the implementation of this practice the company learned a number of lessons which may be replicated in other projects both in this sector as well as in others:

- When implementing change it is crucial to include the stakeholders from the early stages of discussion.
- Consultation helps to make those involved in the process aligned with management strategy and vision.
- Consultation reduces the level of resistance to new practices so that the public is more willing to co-operate since they feel they are part of the project.
- Consultation also empowers employees to learn new skills and enhance their way of thinking.
- Considering the isolated location of the islands and available resources, cooperation with similar entities overseas proves to be an effective tool for employee development.
- By presenting employees with the opportunity to learn new ways of carrying out their jobs and creating a useful network, the company

benefits from the knowledge and new skills acquired.

It is important to keep in mind that in a company undergoing such change all levels of employees are affected, some directly and others indirectly. According to WasteServ, the key to success is education. Government, the major stakeholder for the enterprise, fully supports WasteServ's initiatives.

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