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White, G. (2010) The softer side of going green. In: *New Technologies, Regional Geographies*, UWE, 9th December, 2010.

We recommend you cite the published version.

The publisher's URL is <http://www.regional?studies?assoc.ac.uk/events/2010.asp>

Refereed: Yes

(no note)

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## The Softer Side of Going Green

### Abstract

Based upon a case study of rural, non-profit making organization, this paper outlines the measures taken to improve its environmental impact and the resultant benefits.

It highlights the significance of soft-systems that need to be effectively managed alongside technological developments and implementations in order that strategic objectives are achieved.

We raise the issue of the relevance of new technologies to rural organizations and specifically to those that are non-profit making.

## Case Organization

Founded in 1777 the Royal Bath and West (RB&W) Society was formed to 'encourage agriculture, arts, manufactures and commerce' in the South West of England. In the 19<sup>th</sup> century the Society established the Royal Bath and West Show. The show has continually grown and diversified despite setbacks such as the outbreak of Foot and Mouth disease in 2001 and 2007 and has become increasingly attractive to non-rural communities. The event, now permanently hosted in 200 acres of grounds comprising concert and conference venues, attracts over 160,000 visitors each year. The decline of agriculture and increase in environmental awareness of the general public has prompted an expansion of its role whilst simultaneously created a need to improve its competitiveness among growing numbers of environmentally and rurally focussed government and regional agencies. Modern objectives include the education of a wider audience in the '*ways of the countryside*', contribution to the development of the South West of England's regional strategy and promotion of environmental management and non-food crop opportunities among local farmers.

In order to expand its role, and its ability to service its customers and stakeholders more effectively, RB&W has undertaken a considerable programme of business reengineering.

Initially working toward achieving ISO9001 certification many of the organization's core business processes were radically altered and improved. However, while the costs of training, re-engineering, registration and consultancy were identified as major inhibitors to ISO implementation, a further significant barrier was employee and resistance to change and management preparedness. RB&W's personnel and processes have developed throughout its lengthy existence, largely without exposure to modern business and management techniques and trends. The adoption of ISO 9001 was preceded by extensive discussion and training, however, the moments of truth when individuals were expected to contribute to the redesign of their tasks proved to be a significant barrier to implementation (White, Samson, Rowland-Jones and Thomas, 2009).

## Going Green

It is debatable whether the ISO 9001 standard is an achievable goal for many organisations, especially non-profit small to medium sized enterprises (SMEs). This has been argued to be partly due to the risk-averse nature of these types of businesses and their reluctance to adopt management tools that were developed in other sectors (Myers and Sacks, 2003). Subsequently RB&W has worked towards achieving ISO14001 and EMAS certification since they were perceived to be of greater marketable value, particularly to a rural SME. Such a perspective is mirrored in the general literature though is not unanimously agreed upon (see Hillary, 1995, and Honkasalo, 1998).

The route toward EMAS was based upon the 'Acorn' (BS 8555) 6 step scheme which aims to guide SMEs through development of an appropriate environmental management system (EMS) (IEMA, 2009). The 'Acorn' scheme has the additional advantage of being certifiable at any of the 6 steps. In this way SMEs can gain some immediate value for their efforts. It also affords a flexible path towards EMS development in that organisations may elect to pursue either ISO 14001 or EMAS certification once they reach the final step.

The benefits of developing an effective EMS are many and varied, and stretch beyond the explicit purpose of improving or lessening an organisation's environmental impact. Hillary (2004) categorizes the internal benefits as either organisational, financial or people related, and the external benefits as commercial, environmental or communication related.

Figure 1 lists the common reasons for adopting EMAS found by Strachan, Haque and McCulloch (1997) in order of reported benefits and table 2 shows the benefits of EMS implementation in SMEs as reported by the Institute of Environmental Management and Assessment (IEMA, 2009).

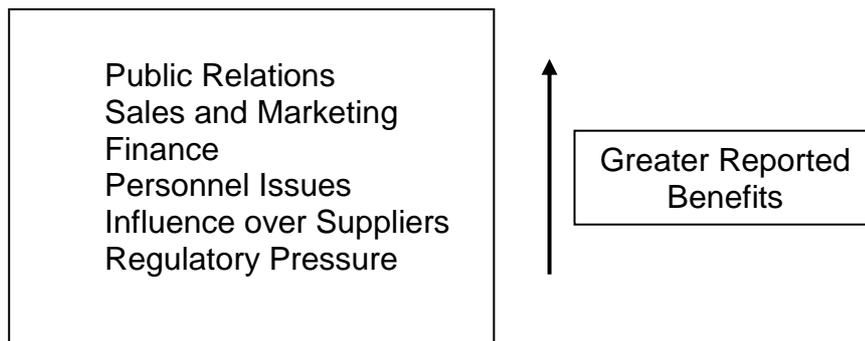


Figure 1: Reasons for adopting EMAS (adapted from: Strachan, Haque and McCulloch (1997))

Table 1: Benefits of EMAS implementation in SMEs (adapted from: IEMA, 2009)

Internal	External
Employee Motivation Employee Morale Cost Savings Efficiency improvements Improved management quality Improved training quality Improved legal compliance	New customers Increased customer satisfaction Reduced pollution Increased recycling

Cost Benefit

One of the most significant project expenditures was the manpower cost of the implementation team. Since they carried out this work in addition to their everyday duties it is difficult to calculate an exact cost, however, we estimate it to be over 2200 hours. The other costs incurred in preparing for EMAS audits and certification can be broadly grouped into two types; those that were 'costs for compliance' to fulfil EMAS and legal requirements, and those that were 'costs for benefit' that generated some tangible improvement or return.

It is possible to provide financial justification even for the 'costs of compliance' since these could often be conceived as preventive expenditures. For example, the cost to upgrade the bunding around one oil store was £500. However, the potential cost of not performing this work could equate to £5000 upon summary conviction and even rising to an unlimited fine should a conviction on indictment be made. In addition to this could be the cost of cleaning up the oil in the event of a spillage which has been estimated to be in excess of £50,000 should the oil reach a natural watercourse. The scale of 'costs of compliance' will obviously depend upon the nature of the work that the organisation is undertaking. However, the argument for offsetting these against the potential costs in the form of statutory fines and the negative impact that non-conformance would have upon environmental stakeholders is relevant for all organisations.

The 'costs for benefit' are usually easier to justify especially when expressed in terms of operational improvement. Table 2 shows the investment realised by RB&W in improving its gas, electric, water consumption and sewerage production. A significant reduction in utility costs has been achieved at no cost simply by raising environmental awareness. It must also be noted that these figures are subject to seasonal fluctuations to some degree, however, the magnitude of improvements are considerably larger than the observed variations in business activity.

One of the key reasons for pursuing EMAS was its perceived marketable value to the organisation. While it is difficult to give this a precise figure we can confirm that a significant contract was gained as a consequence of RB&W being able to materially demonstrate its commitment to environmental concerns. Furthermore, the improvements to date, expressed in Table 2 as operational benefits, could be communicated in the annual EMAS disclosure in terms of its environmental benefits. The financial benefit is of concern to the organisation but this could be expressed in volume or units of gas, electric, water and wastes consumed or produced. For example, changing the general waste disposal contractor provided no financial benefit but has resulted in the organisation increasing the proportion of general waste that it recycles by 82% over the previous year. This form of disclosure would be of greater interest to environmental stakeholders, particularly public stakeholders, and thereby be more likely to have some positive marketable value.

<b>Costs and Main Initiatives</b>	<b>Benefit</b> (cost reduction on previous year)
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Gas	£minimal Phased change to wood-burning boilers.	25%
Electricity	£minimal Phased change to low-energy lighting.	4%
Water	£minimal Phased change to waterless urinals.	5%
Drainage and Sewerage	£15,000 Redirect rainwater runoff from sewers.	16%

Table 2, Benefit Realisation

### Soft Systems Management

*Hillary (2004) reports the disbenefits of EMS implementation as resource based, lack of reward or as 'surprises': problems that would be familiar to a great deal of other management system implementations.*

After briefing the organisation's management and executive and gaining approval for project commencement, initial problems surrounded identifying and securing the necessary human resources. Despite its national and international renown RB&W is a lean organisation, dictated in part by its non-profit nature, comprising only thirty full-time employees. Resources to support the development of an EMS were therefore difficult to spare from other core and daily activities. Additionally, and as highlighted in White et al (2009), many of the organisation's employees have had little exposure to modern business practices thereby reducing the pool of potential resources to select from even further.

The relative lack of employee skills contributed to the predicted problem of understanding the vast array of legislation that was relevant to the organisation. This is not to suggest that the organisation was not already compliant but the challenge would be for the implementation team to become familiar with the details of the requirements so that they could generate suitable management procedures and carry out the necessary improvements to buildings and equipment etc.

In order to assist with this process a consultant was hired to provide expert advice and guidance. Most interestingly, after only briefly discussing the broad legal requirements with the implementation team he commented "*you now know more than me!*" It transpired that individuals possessed very narrow knowledge of the relevant legislation, however, the consultant confirmed that collectively they possessed knowledge of the majority of the requirements. Initial concerns therefore appear to have been fears over 'not knowing what we don't know' rather than 'not knowing enough'.

The complex requirements and implications of EMAS and the difficulty that many of the implementation team had in trying to understand them continued to be an issue to overcome throughout the project. Ultimately, many actions could in fact be completed without the implementer needing a complete understanding of the relevant legislation: for example, arranging for oil stores to be bunded does not require the person responsible to have detailed knowledge of the Control of Pollution (Oil Storage) (England) Regulations 2001. The project thus became focussed on 'Actions' rather than 'Requirements' which had the desirable effect of overcoming the problem of training, consequently speeding up the project work, but also had the benefit of removing some people's anxiety and frustration at being less aware of the regulations than other more experienced members of the team.

### Summary

SMEs are known to find the implementation of quality and environmental management systems problematic in terms of resources, time and cost. The Royal Bath and West Society highlights the further difficulties that are present for rural, non-profit organizations whereby a lack of technical skills can be a significant hindrance to project success and financial pressures are arguably more pressing.

The 6-step 'Acorn' scheme gives SMEs a common path to follow in order to develop an EMS while affording them the freedom to elect to ultimately pursue either ISO 14001 or EMAS certification depending on their strategic intent. This degree of flexibility is valuable particularly for SMEs that comprise a highly heterogeneous sector of commerce.

The absolute benefits of any EMS to the environment are not clearly understood and the advantages of developing an effective EMS are often reported in terms of operational benefits to the organisation

Encouragingly, RB&W has made significant improvements to its environmental impact through the adoption of established technologies. This complements the intrinsically risk-averse nature of these business types. Established technologies and the implications of their adoption are also more likely to be understood by less 'technically aware' employees, which in turn facilitates their effective implementation.

While the development of 'greener' technologies will undoubtedly offer organisations new ways of reducing their environmental impact the rate of technology adoption may be determined more by the nature of the business sector and the individual organization than the efficacy of the technology itself. We proffer that it is vital to not only match the level of technology with the

sector and organisation, but that the level of product or service education and implementation support is congruent with the peculiarities of the individual organisation particularly in the case of rural, non-profit SMEs.

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