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Communicating Environmental Performance: Engaging Internal and External Stakeholder Using a Case Study Approach

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Abstract

Environmental management practice over the past 30 years has generally used systems based on the Plan-Do-Check-Act (PDCA) quality management approach. Internal stakeholders have been engaged in the process through targets or objectives often applied in a top-down manner through the organization.

While this approach continues to be practiced, it has important limitations. First, recognition of local initiatives and achievements can be difficult, especially in large or geographically dispersed organizations. Second, external stakeholders may not accept reaching organizational objectives as an indication of environmental achievement, or best practice. Third, internal stakeholders may not always be sufficiently motivated by a management-by-objectives approach.

This paper describes a program developed to overcome these limitations and examines the importance of communications to further drive environmental performance improvements within an oilfield services company.

Initially sourcing material from established health, safety and environment (HSE) recognition programs and from management recommendations, an environmental case study project was launched. Each case study describes a unique example of an environmental practice that reflects the realities of environmental performance improvements and offers a structured way of thinking about both direct and indirect improvements—challenge, solution/process, results. Topics include resource efficiency, waste reduction, recycling and local compliance programs, among others and increasingly individuals are named to highlight the important role everyone can play.

In order to reach the broadest possible audiences who wish to know about these practices, a wide range of communication channels have been used including internal websites and direct presentations to selected audiences. Case studies are intended for an audience comprising both internal and key external stakeholders.

Two years into the program, as awareness increased, environmental case study contributions have increased from locations worldwide. This has incentivized improved environmental performance by sharing knowledge and indicating direction as well as recognizing individuals and teams. Further, the case study library has shown that the whole is greater than the sum of the parts and that the improvement journey is made up of many small steps.

Introduction

Over the past 30 years environmental management practice has favored process improvement systems based on the quality management approach known as Plan-Do-Check-Act (PDCA). In the PDCA process, internal stakeholders are engaged through objectives applied by managers throughout the organization in a top-down manner (Deming, 1986).

Invented by William Deming, an American statistician and professor, the PDCA continuous improvement approach to organizational management was adopted for health, safety and environment (HSE) programs in the 1970s. The approach continues to enjoy widespread use in many industries and forms the basis of the HSE management system in the oilfield services company referred to in this paper (Sealy, 2005).

While the approach continues to be practiced, it has limitations. For example, in large or geographically dispersed organizations the recognition of local initiatives and achievements can be challenging, internal stakeholders may not always be

sufficiently motivated by a management-by-objectives approach, and external stakeholders may not accept reaching organizational objectives as an indication of environmental achievement, or best practice.

To overcome these limitations, an employee recognition program using a case study approach was developed within the company to recognize and to further drive environmental performance improvements.

Early Recognition Programs

The company first began to try to overcome the limitations to the PDCA approach through an environmental excellence recognition initiative in 2001. In the majority of instances, projects that were selected for recognition were initiated at the local (site) level by a group of employees often led by a manager. Projects originated in both field operations and manufacturing sites, and in almost every case the initial motivation involved either solving a problem in the field or reducing project costs. Environmental benefits were secondary, or tertiary, objectives. Nevertheless, the environmental benefits, although indirect, were frequently significant.

In the first year of the program five projects were selected for recognition, and this increased to 24 the following year. After that, interest in the program varied and the number of successful projects ranged from three in 2003 to seven in 2005. Projects would typically be written up in a summary format describing the environmental and organizational benefits. Employees would be recognized by managers in a ceremony at the local level, and a description of the project would be posted on the corporate intranet site.

New Methods of Outreach

By 2007 senior management at the company began to feel that established environmental recognition programs, although useful, were not well accepted by employees outside process-related areas such as those in engineering and manufacturing centers. It was felt that some audiences would respond better to an approach that was less technical, and less engineering-oriented. Another limitation was that while environmental improvements were recognized at the local level, recognition was difficult to effectively achieve across the entire organization. At the same time, it became apparent that some external stakeholders were skeptical of the idea that simply achieving organizational objectives was a true indicator of industry-wide best practice.

As these limitations became evident, the company began looking for new methods of outreach. It was felt that a new format for recognition would further drive performance improvements.

Case Study Approach

The environmental case study project that emerged offers a structured way of thinking about environmental improvements—from challenge to solution or process and results. This has incentivized improved environmental performance by sharing knowledge and indicating direction as well as recognizing individuals and teams. Case studies reflect the realities of environmental performance improvements and offer a structured way of communicating both direct and indirect improvements.

The case study program is driven by the company's environmental director. To launch the initiative, a call for case studies was made through the environmental and HSE managers at locations worldwide. Each case study submission is individually assessed by the the company's environmental director.

The objective of cases studies is to tell an accurate and compelling story of an environmental performance practice improvement. Case studies are two pages in length and include an illustration. Three key sections structure the cases:

1. Challenge
2. Solution
3. Results

Case Study Characteristics

To qualify for a case study, an example must contain sound facts and be supported by clear data. The case studies seek to put performance and data in context while describing and illustrating the environmental practice. In their submissions employees are encouraged to clearly describe the environmental benefits and the resources used to achieve them. The characteristics which make a case study robust include:

1. Concentrates on one specific challenge and remains as objective as possible.
2. Includes any independent third party input that might be available.
3. Provides context and background against which the achievement can be benchmarked.
4. Explains the challenges faced in coming up with the improvements.
5. Explains benefits clearly both in the heading and within the text.
6. Demonstrates resources it took to make the achievement e.g. expertise, time, money, negotiation, particular complexities.
7. Describes the role of data and any technologies deployed in the solution, shows quantitative as well as qualitative results.
8. Includes illustrative graphics—photos and/or diagrams.
9. Engages the reader and encourages emulation by other locations or parts of the business.

Submissions that are not robust enough to be accepted as a case study are considered for article content in the company's internal communications vehicles, such as employee magazines.

Case Study Submission Template

A common template for case study submissions was developed to capture specific, useful, clear, and credible information so that a designated case study writer can then produce the study. A final version for fact-checking and approval is forwarded to the submitter. The template stresses objectivity, third-party input and the industry context in which the achievement may be benchmarked. Information captured in the template includes:

- Proposed case study title.
- Background and context of the challenge. For example: What were the drivers or pressures for change that prompted the establishment of the practice? How did you become involved in the project?
- Solution: outline steps that led to implementation of the practice. For example: What did you or your colleagues decide to do to address the situation? What was your objective behind the practice? What resources were required and how did you source these? (For example, materials, budget, skills, staff and training.) Was there any third party involvement? If so, what was their input?
- Results: provide a summary of how and why the practice has been effective. For example: What were the most successful outcomes from the project? What achievements and benefits have resulted? Quantify the benefits where possible.
- How will the practice evolve in the future? Outline any next steps to be taken. For example: How the improvements will be maintained or are there any new initiatives that stemmed from the practice?
- Provide photographs and/or diagrams that help to illustrate key points and enhance understanding.

Case Study Examples

One of the first environmental success stories to be documented in a case study was a program initiated at one of the company's factories to recycle polyurethane from streamer skins used in marine seismic vessels. The case study showed how the decision to work with a supplier to design and implement a recycling initiative not only improved product quality, it resulted in significant environmental benefits—reduced marine vessel fuel consumption and at least 100 fewer metric tons of waste material requiring disposal every year—and saved the company more than USD 130,000 annually.

One of the most widely read case studies was developed from an idea by one of the employees responsible for supplying parts to the factory floor at one of the company's technology centers in the United Kingdom. The employee observed that the process for discarding wooden crates used to transport tool collars and then building new crates for the completed tools was inefficient. Based on this observation, a new process was put in place. The supplier of tool collars was given specifications for longer, stronger crates that could be reused for shipping the completed, finished tools, rather than just the collar. The new process has eliminated the environmental impact of wasted crates, saved valuable storage space and savings are approximately USD 500 per tool, plus labor and disposal costs. The improvements were also documented as a company Lean Six Sigma project with almost USD 74,000 saved in the first year. Further planned improvements include implementing the same packaging changes with a supplier of collars in the United States.

In yet another example, the HSE team at the company's well testing base in Brazil raised concerns over the safety of one of the degreasers used in its operations. The discovery that one of the degreasers used did not comply with its HSE standards prompted the team to undertake a rigorous investigation into all the degreasers used in the country, which were supplied by many different manufacturers. As a result of the exercise, degreaser purchase and use have been standardized, and suppliers of noncompliant degreasers have been removed from the procurement system. The degreaser purchase procedure now requires that, before a new product is selected, a chromatography test be performed to ensure the absence of aromatic and chlorinated compounds. In addition to identifying which of the existing degreasers to retain, the analysis also identified an effective new degreaser that complies with company and regulatory requirements, and is available locally.

Library of Case Studies

An internal on-line environmental case study library has been built and contains more than 50 case studies. The case study library illustrates the realities of performance improvements—that the whole is greater than the sum of the parts and that the improvement journey is made up of many small steps. The library is organized into five areas:

1. Waste Minimizing and Recycling
2. Environmental Management Systems
3. Technology and the Environment
4. Environment and the Supply Chain
5. Resource Efficiencies

Communicating the Case

Published case studies are delivered to internal and key external stakeholders using a variety of communication routes including internal and external web sites as well as direct presentations to selected audiences. They are also used in employee environmental training programs.

Case studies are posted on the company's environment intranet site, the main repository of the company's environmental information. Case studies are also featured on the company's Global Citizenship intranet site with a print on demand option for employees, and notification about new case studies is posted on an internal HSE bulletin board for employees working on HSE programs around the world. An environmental case study booklet, printed on sustainable forest paper, has been developed for external communications at targeted thought-venues.

Conclusion

In the early days of recognition using the PDCA approach, cost-cutting and efficiency improvements were major motivators, while environmental benefits were seen as secondary. Now the reverse is true. Environmental impact reductions are seen as significant and financial and performance benefits are viewed as a bonus.

Two years into the program, more than 50 case studies have been identified. Awareness of environmental performance has risen, as evidenced by increased case study contributions arriving directly from employees at field locations worldwide and the number of visitors to the internal on-line library of case studies. Although there are no empirical performance indicators, the case study approach appears to have improved environmental performance within the company.

Recognition of individuals and teams now occurs in an organization-wide context, with increased knowledge-sharing among employees. In addition to providing guidance and direction, the case study approach motivates employees to develop other environmental improvement projects. For external stakeholders the case study approach provides a factual and easy to understand examples of environmental performance improvements and illustrates that the improvement journey is made up of many small steps.

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