2018

Environmental Certification Program ISO 14001: A Study of Membership Motivation and Effectiveness

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Environmental Certification Program ISO 14001: A Study of Membership Motivation and Effectiveness

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Introduction
In 1996, the International Organization of Standardization (ISO) launched the environmental standard known as ISO 14001 to provide a framework for managing ecological impacts. ISO 14001 is presented as a 47-page document that features a series of guidelines which help organizations introduce effective Environmental Management Systems (EMS). These systems allow companies from any size or sector to identify, manage, monitor and control environmental issues in a holistic manner while enhancing environmental performance. An updated version of the standard was released in 2015 so that newer challenges including climate change, water use, and energy consumption could be addressed.

Currently:
• Over 223,000 organizations are certified
• ISO 14001 exists in 159 countries
• 5,000 certifications issued in the United States
• 8,000 total in North America
• 18,000 certifications issued in the United Kingdom
• 120,000 total in Europe

Top 10 countries for ISO 14001 Certifications - 2016

<table>
<thead>
<tr>
<th>Country</th>
<th>Number</th>
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<tbody>
<tr>
<td>China</td>
<td>137,120</td>
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<td>Japan</td>
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<td>United States of America</td>
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</table>

Environmental Benefits
• Meet legal requirements - develop practices that ensure environmental performance satisfies government regulations
• Improve environmental performance - integrate updated technology/create new procedures which reduce environmental impact
• Leadership commitment - managers address environmental issues
• Employee involvement - workers perceive Environmental Management Systems to be essential
• Stakeholder relations - business partners and investors support companies with green initiatives
• Supplier commitment - suppliers feel compelled to establish environmentally conscious practices

Business Benefits
• Meet stakeholder objectives - enhance confidence in the quality being provided
• Improve company reputation -customers trust establishments willing to mobilize a positive agenda
• Improve efficiency and production - new equipment may result in more efficient manufacturing techniques
• Improved financial state - reduced operation costs and increase in business opportunities
• Connections to larger markets - efficient transactions in international markets
• Competitive advantage - customers more likely to support those with extensive credentials

Changes Expected Following Certification:
• Increased recycling
• Reduced paper use
• Reduced raw materials consumption
• Materials sourced from environmentally conscious suppliers
• Decreased energy consumption
• Decreased quantity of waste entering landfill
• Effective management of hazardous waste
• Reduced emission
• Decreased pollutant load
• Accurate documentation of environmental data

Issues

Variable outcomes
• Success depends on the severity of a country’s established performance regulations
• Enforcement varies depending on requirement flexibility in each nation

Symbolic adoption
• Defined as a way to legitimise environmental efforts while failing to institute real commitment
• Stakeholders perceive increased environmental awareness existing follow certification
• Adoption by symbolic firms and committed firms may compromise confidence in the standard

Motivation
• Firms driven by external motives experienced minimal lasting positive impacts

Cost
• High certification costs hinder ISO implementation
• Smaller firms perceive Environmental Management Systems to be difficult and costly to adopt

Data
• Data challenging to analyse / numbers are not standardized
• ISO does not assemble a list of all certified organizations

Environmental impact
• The extent to which ISO 14001 improves environmental outcomes remains contested

Environmental improvements
• Reduced material costs
• Reduced energy consumption
• Increased energy efficiency

Risk avoidance
• Reduced exposure to liability
• Improved company reputation
• Reduced environmental impact

Growth
• Improved company performance
• Improved customer satisfaction

Number of ISO 14001 Certifications vs. Year

ISO 14001 USERS - SIZE OF ORGANIZATION (NUMBER OF EMPLOYEES)

ISO 14001 - World annual growth (in %)

Factors Impacting Success/Case Study
• Ford Motor Company adopted ISO 14001 in 1998
• Became the first automotive corporation to receive ISO 14001 certification at every manufacturing location in 2005
• All 140 plants in 26 countries have adopted the standard
• Ford now has more individual facilities certified under ISO 14001 than any other company

Performance improvements gained after ISO implementation include:
1. Decreased quantity of disposable packaging
2. Reduction in paint solvent usage and volatile organic compound emissions
3. Reduced hydrogen sulfide, sodium hydroxide, and chloride used in wastewater treatment
4. Increased electrical output from hydroelectric power plant
5. Reduced water consumption
6. Switch to energy efficient light bulbs

Conclusions
• Data must be standardized to compare environmental performance outcomes in different regions
• The extent to which ISO 14001 helps the environment remains uncertain due to the fact that companies detect their own objectives
• Motivating factors dictate the type of benefits gained from the standard
• Symbolic adoption may cause the level of commitment to environmental preservation seen in certified organizations to be highly variable

ISO in the Future
Scholars have suggested means of improving ISO 14001 in order to make the standard more successful in the future:
1. Tax exemptions, eco-labeling, financial support, and exemptions from frequent inspections for certified corporations
2. Adoption encouraged among small, local, and private organizations
3. Technical financial support, training initiatives, and simplified targets for small and medium sized institutions
4. Increase in government regulation and involvement
5. Encourage primary focus to be on establishing internal motives and enhancing environmental performance

References

Factors Influencing Adoption

Motivations

External
• Public image/reputation
• Social and marketing positions/rewards with foreign consumers
• Stakeholders, customers, competitors, government, suppliers, and society

Internal
• Competitive advantage
• Employee awareness

Environmental Management System effectiveness
• Efficiency, production, and financial position
• Environmental issue responsiveness
• Environment performance

Factors Influencing Adoption

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