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Skills and strategies

Making eco-efficiency happen – Skills and strategies

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Eco-efficiency for the Marine Industry Fact Sheet

Do you want to

- ☑ foster a culture of continuous learning within your organisation?
- ☑ keep up-to-date with technologies that allow you to improve efficiency and environmental performance?
- ☑ have employees take ownership of environmental issues?
- ☑ implement eco-efficient practices, but you are unsure where to begin?

Eco-efficiency

Improving efficiency while reducing environmental impacts is a strategy that makes sense. While some practices are simple to change, others require access to technical advice, trials of new technology or training. This fact sheet gives you some ideas on how to implement eco-efficiency and ensure long-term improvement in your business.

Keeping informed

Keeping up-to-date with new technologies and strategies is a key to continuous improvement. The best ways to stay informed are:

Ongoing relationships with suppliers

Suppliers will often have environmentally preferable alternatives to most products. Develop a network of competing suppliers to ensure you find out about more efficient products as they are developed.

Industry networks

Many companies are willing to share information on how they manage their environmental issues, especially if they manage them well. Attend boat shows, industry workshops and training courses, and meet members of your own industry to find out how they deal with environmental issues.

Learn from other industries

Other industries are often willing to share information about their manufacturing processes to members of the marine industry. For example, the aerospace industry could provide direction on fibre composite manufacture, and the car manufacturing industry could provide direction for aluminium boat manufacturing techniques. The Department of State Development, Trade and Innovation (DSDTI) has also released a Technology Roadmap for Recreational Boat Builders, which charts the likely direction of technology for the marine industry.[1]

Collaboration

Some problems might require some more research. It might be too much to do yourself, but if it is a problem that is also faced by other companies, they might be willing to contribute. If it is an innovative solution, government agencies such as the Environmental Protection Agency or DSDTI might also be willing to provide support through some of their existing programs.

Education and training

Businesses often operate below maximum efficiency because of a lack of knowledge of the equipment or process that they are working with. Ensure that employees stay up-to-date with new technologies through regular training. Conducting trials can also help to determine the potential of new and efficient technologies, while also developing the skills necessary for their successful adoption. It is difficult to find time and money, but properly targeted training can be well worth the investment. Contact DSDTI's Marine Industries Sectoral Development Group (www.sdi.qld.gov.au) about training opportunities in your area.

Trials of new technology give employees a chance to become familiar with them and ensure that promised gains are realised [2]

Digital manufacturing allows for virtual simulation of workflow arrangements and avoids costly setup mistakes [2]

Eco-efficient strategies—frameworks for success

Management systems can be useful in structuring business activities, helping them to become more efficient and reducing environmental impacts.

Lean manufacturing

Lean manufacturing is about implementing strategies to reduce wasteful practices such as overproduction, excessive inventory, unnecessary transport, waiting, defects and rework. Reducing these practices can significantly improve resource efficiency, increase profitability and decrease environmental impacts. For more information, see Fact Sheet 10 - Lean Manufacturing, which has been developed as part of this series.

Digital manufacturing

Digital manufacturing is a technique using integrated software that assists in product design, planning, resource management and supply chain management. The software helps to test structural properties, visualisation of designs, workspace, workflow and scheduling before manufacture, avoiding costly rework and redesign. For more information, see Fact Sheet 11 - Digital Manufacturing, which has been developed as part of this series.

Environmental management systems

An environmental management system (EMS) is a systematic approach to managing environmental issues. EMSs are designed so that companies can stay ahead of regulation and continually improve their environmental performance, thereby also improving efficiency. For more information, see Fact Sheets 17 and 18 – Environmental Management Systems, which have been developed as part of this series.

Queensland Skills Formation Strategy

The marine industry in Queensland has grown rapidly in recent years, leading to a shortage of skilled labour and a workforce that requires more training. As growth continues and competition increases worldwide, innovation and efficiency will be the keys to a sustainable industry. The Queensland Department of Employment and Training, in collaboration with DSDTI, has undertaken a Skills Formation Strategy for the Marine Industry, to improve skills and increase the supply of skilled labour. The aim of the strategy is to attract, develop and retain a highly skilled, adaptive workforce that is able to innovate and compete in a global economy. The strategy looks at issues such as workforce management, industry growth and regulatory influences, and how to use the supply chain more effectively and efficiently. Ongoing initiatives include training, collaboration, networking and education. For more information on how the Skills Formation Strategy is being implemented in your region, contact the Marine Industries Sectoral Development Group at DSDTI (www.sd.qld.gov.au).

References

1. QMI (2005) Technology Roadmap for Recreational Boat Builders, Department of State Development Trade and Innovation, Report Prepared by QMI Solutions, Brisbane.
2. HKPU (2005) Digital Factory - Image Gallery, Hong Kong Polytechnic University - Department of Industrial and Systems Engineering, Hong Kong. Retrieved 24-06-2005 from: 158.132.205.160/Digital_Factory/Systems/Photo_Gallery.htm#

For further information

Ecobiz can assist you to reduce costs and improve eco-efficency in your business Call 1300 369 388 for further information.

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