EPSRC Centre for INDUSTRIAL SUSTAINABILITY

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CASE STUDY

Competencies to Deliver World Class Performance

Brandix India Apparel City (BIAC) is a 1000 acre, Special Economic Zone in Visakhapatnam (Vizag) in the state of Andhra Pradesh, India. It embodies an avant garde 'Fibre to Store' concept with a current implementation and a clear plan to expand a large scale apparel system that can deliver world class performance from fibre-to-store including strong environmental and social performance.

The Challenge

BIAC needed to understand the skills and competences required to deliver world class sustainability performance improvements. BIAC and the Centre for Industrial Sustainability are working with Vizag academic partners to deliver specific improvements in technology and practice and to help create a local system capable of supporting a world leading activity.

Our Approach

Researchers from the Centre have enabled the creation of various new competences using tools and methods developed by the Centre - in particular, the Industrial Sustainability Competency Development Toolkit. Four major competences have been identified (efficiency, internalisation, collaboration and co-ordination, whole system design) that move manufacturing from benchmark excellent to world leading in industrial sustainability.
This programme focusses on the competence of internalisation, which implies bringing costs that others externalise into the control of BIAC. Specifically BIAC seek to internalise waste by using internal and external (partner) knowledge to find new uses for waste.

Outcomes

The first set of projects have been identified and are in planning for implementation:

- Improving value capture - C rolls and big cut waste – improve the value recovered from C roll waste and big cut waste. Current valorisation methods see the rolls sold to a recycler.
- Improving value capture – Chemical sludge - improve the value of chemical sludge produced by the BIAC effluent treatment plant by improving the quality of the waste by tackling both inflow and post processing stages.
- Improving value capture – Effluent water - recovering value from water, which is currently processed by BIAC to meet local regulations and which is then disposed of out to sea, by employing a number of strategies to valorise the wastewater tackling both inflow and post processing stages.
- Efficiency – Fabric mill dyeing and finishing - improving the current operation of dyeing and finishing processes in the fabric mill, reducing the amount of energy, water and waste produced by processes.
- Finding the best next partner - understanding the process of selecting partners to maintain or enhance the economic, social and environmental performance and long-term sustainability of the city.

Next steps

A group of BIAC staff will be brought up to the highest level of competence so that skills and knowledge are transferred and BIAC become capable of systematically innovating to deliver new levels of economic, environmental and social performance. By 2016 BIAC will have increased economic value from waste and by 2020 BIAC will have zero waste to landfill.

Wider Lessons

The competency assessment tools and methodology can be used by companies from other sectors to diagnose the current performance and identify potential areas of action, which can deliver substantial performance improvements, and develop a collaborative plan for long-term competency development.

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