

**Organization: Brandix India Apparel City**

Brandix India apparel city (BIAC) is a 1000 acre textile apparel park in Vishakhapatnam, India, for the textile specific industries providing required infrastructure which supports a plug and play operating model. Located in one of the biggest apparel hubs in the world BIAC offers close proximity to cost effective labor, raw materials and resources that are needed to create our 'Fiber-to-Store' concept.

Infrastructure facilities provided include a central Effluent treatment plant (ETP) to treat textile effluent. Brandix India Apparel City as a leader in social and environmental sustainable practices is committed to ensuring infrastructure and services are meeting international standards and have minimal possible impact on the environment.

**Project Title:** Bioremediation for removal of colour in effluent treatment plant & reduction of de-colorant chemicals

**Project objectives:** The grand objective is to find a solution to responsibly treat and dispose of effluent while decoupling the amount of chemicals used for this process in line with UN SGD 12: Responsible consumption and production.

In keeping with the company vision and to align with the UN SGDs, Brandix India apparel city is seeking a solution to increase efficiency of the effluent treatment plant, reduce usage of chemicals and find alternative and more sustainable solutions including the use of bioremediation in general. Specifically the focus of this project would be to explore opportunities of further removing the colour of the effluent by biologically using Aerobic/Anaerobic bacteria as a bioremediation mechanism.

The current capacity of the Brandix India apparel city ETP plant is 20MLD ( which allows for treatment of effluent of 20 million liters per day ). The current daily volume treated is 4MLD and is expected to increase to 6MLD in year 2022. By 2028 we expect this volume to further increase to about 10MLD. Main inflow for the ETP is from Fabric mills which contain Colour effluent , as a part of the treatment process through chemical treatment over 90% of colour is removed from the effluent. With the increase in volume of effluent the amount of chemicals required for the treatment process is increased in conflict with our environmental sustainability goals.

WE would like the Future17 team to explore the start-ups and established companies around the world to see if a sustainable solution that can help reduce the use of chemical dye is being introduced by any of them.

**Expected Outcomes:** Market analyses of start-ups and research projects that can contribute to the main objective of removing the colour of the effluent by biologically using Aerobic/Anaerobic bacteria as a bioremediation mechanism

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**Deliverables:** Report on start-up and research projects focused on reduction in De-colourant chemical usage, including benchmarking analyses of each of the recommended organizations.

**Is this project reoccurring?**

Yes - and the horizon is two years.

**Would you like for this project to be delivered by more than one team?**

Yes

**Which sector is this project focused on?**

Textile

**Which skills might be required for the successful delivery of your project?**

**Microbiology**

Research / Lab Research

**Can the project outcomes be shared with the public?**

Yes - After sign-off from Bredix

**SDGs related to this project:**

SDG# 9, 12

**Resources available to the team:**

<https://brandix.com/inspired-solutions/what-we-do/brandix-india-apparel-city>

**Contact person:**

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