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**Relating Systems Thinking and Design
(RSD12) Symposium | October 6–20, 2023**

Unearthing Hidden Treasures: Waste management in urban cities through value generation from the discarded

Parvathi B S, Bibin Babu B S

Turning waste into a desirable commodity

The ever-rising volume and complexity of waste associated with the modern economy is posing a serious and challenging risk to ecosystems and human health all around the globe. Poor waste management, ranging from inefficient collection systems to ineffective disposal methods, leads to waste either being incinerated or ending up in open and unsanitary landfills in turn leading to air, water pollution and soil contamination. One of the main challenges to efficient waste management comes from the lack of proper segregation at the source level, which leads to mixed waste ending up in landfills. Our society has developed into one heavily influenced by consumerism and overconsumption, the result of which is the throw-away culture that has become an attitude and sad reality of the world.

KEYWORDS: systemic design, holistic diagnosis, waste management, waste recycling, biomining

RSD TOPIC(S): Health & Well-Being, Mapping & Modelling, Sociotechnical Systems

Project description

Our project focuses on understanding the systems subsystems involved in the waste management scenario in Urban cities in India and the core issues posing challenges to the effective implementation of infrastructure, policies and regulations. The project is also aimed at understanding case studies involving cities and states that have been able to successfully enforce zero-waste policies and how they can be implemented in different scenarios in India. Furthermore, the project involves systemic changes to formalise the informal sector of waste workers and how segregated waste can be successfully channelled into organisations/platforms from where they can be upcycled or recycled, thereby generating value from this discarded resource.

Format

Our project has been represented in the form of a metaphor map, which incorporates the information collected, inferences arrived at and interventions that we have designed, including three solution systems. The map has been curated using the metaphor "Mining diamonds from the rough," where in the value of the discarded has been compared to that of an uncut diamond. As an uncut diamond gains value when it is beautifully crafted by a skilled craftsman, waste can be turned into valuable resources through efficient frameworks and intervention.

Resources

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