
67th Year - NASA India

ANDC

67TH YEAR ANNUAL NASA DESIGN COMPETITION 2024-25



67th Year Unit Council for
Z310- MKSS's Dr. Bhanuben Nanavati College of Architecture, Pune
 Faculty Co-ordinator- Prof. Ar. Mahesh Bangad
 Unit Secretary - Trupti Thapa Unit Designee -
 Mohini Mandke

67th Annual NASA Design Competition

Introduction

The **67th Annual NASA Design Competition (ANDC)**, organized by NASA, India, was announced in September 2024. The competition tasked students with collaborating with an NGO to design and develop an intervention benefiting both the NGO and the people it supports. The event was coordinated by our **Unit Secretary, Trupti Thapa**, and me, the **Unit Designee, Mohini Mandke**, under the mentorship of **Prof. Ar. Mahesh Bangad, Prof. Jayant Patwardhan, and Sujata Mehta Ma'am**.

The initial phase of the competition involved identifying and reaching out to various NGOs. After carefully evaluating their needs, we decided to **collaborate with the SWaCH Foundation** to contribute to their initiatives and create a design aligned with the competition's objectives.

The project, named **SwachArohan**, focused on redesigning and improving the Pinjara storage units used by waste pickers associated with SWaCH. This initiative addressed critical shortcomings in the old design, including issues such as rust, pest infestations, insufficient storage capacity, and poor usability. The redesign emphasized durable materials, improved security features, and ergonomic compartments, ensuring enhanced functionality, longevity, and user satisfaction.

The new Pinjara design was a collaborative effort involving multiple stakeholders, including the NGO, waste pickers, and technical experts. Feedback from waste pickers was central to refining the design.



The initial stages of understanding the NGO and its work and discussing various design solutions

The SwachArohan project successfully addressed the shortcomings of the old Pinjara design, delivering a durable, efficient, and user-friendly solution. It not only improved the livelihood of waste pickers but also fostered a sustainable waste management system in Pune.

Budget and Logistics

- The project had an initial budget of ₹60,000, but actual costs amounted to ₹62,908.58 due to material upgrades and transportation expenses. The total cost was completely covered by the NGO.
- Materials were sourced locally to minimize costs, and the structure was fabricated and assembled in a college workshop before being transported to the site.

Challenges Faced

- Maintaining the budget while incorporating high-quality materials.
- Coordinating between vendors, fabricators, and transport providers to ensure timely delivery and assembly.
- Addressing user-specific needs through iterative design modifications.

Experience and Impact

Operational Impact

The new Pinjara design significantly enhanced operational efficiency for waste pickers by:

- Providing well-ventilated, pest-resistant, and durable storage solutions.
- Offering individual compartments and optimized space for organized waste segregation.
- Creating a relocatable structure that can adapt to urban development changes.

Social Impact

- Empowered waste pickers, particularly women, by providing them with better working conditions and recognition as key contributors to waste management.
- Fostered community engagement through interactive design elements like murals and stickers, raising awareness about recycling and the role of waste pickers.

Environmental and Financial Impact

- Encouraged recycling by facilitating organized waste storage and segregation.
- The design's scalability and modularity promise cost reductions in future mass production.

User Feedback

- Waste pickers and community members praised the improved organization, security, and aesthetics of the new Pinjara.
- Coordinators reported positive responses regarding the design's integration into public spaces and its usability.



The Old Design



The New Design

Acknowledgments

The students of our unit, Z310, completed the trophy work with great dedication and effort. The design was successfully brought to life with the support of technicians our wood workshop, Mr. Ahmed and Mr. Tejas. We are also deeply grateful to the members of the NGO for their ongoing guidance and valuable feedback throughout the process.

NGO Members:

- Lubna Ananthakrishnan (Managing Trustee)
- Amogh Bhongale (Outreach and Communication)
- Gandhar Joshi (Project Executive)
- Monali Tupe (Vibhag Coordinator)

Team Members

- | | |
|-------------------------------|------------------------------|
| 1. Sudiksha Ananthraman FoY A | 11. Haritha Raghvendran SY A |
| 2. Anushka Kale FoY B | 12. Madhura Phadnis SY B |
| 3. Khushi Parakh FoY B | 13. Sanvi Jituri SY C |
| 4. Sharayu Gadekar FoY B | 14. Mohini Mandke SY C |
| 5. Rutuja Urney FoY C | 15. Aarya Potnis TY A |
| 6. Rhea Deshmukh FoY C | 16. Trupti Thapa TY A |
| 7. Jigyasa Mundra FoY C | 17. Anooja Suryavanshi TY B |
| 8. Radhika Joshi FoY D | 18. Ananya Samanpure TY B |
| 9. Maosami Tatiya FoY D | 19. Khushi Jagtap TY C |
| 10. Tanvi Satpute FoY D | 20. Vaishnavi Bhide TY |



