



Hunnarshala Foundation for Building Technology & Innovations

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Community Empowerment

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Community empowerment is the core initiative of Hunnarshala where master artisans and our building professionals work together to develop contemporary solutions using traditional materials and building knowledge to empower communities. Communities that have been displaced and affected due to various reasons like natural disasters, acts of vandalism, communal violence etc. The objective of this initiative is to use the process of design and building as a means



of empowerment and strengthening communities.

Artisan Empowerment

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Building artisans have a deep understanding of traditional materials and techniques which has been passed onto them through generations. But they stand on the brink of becoming obsolete due to fierce competition from modern materials and construction techniques. Hunnarshala understands the potential and capabilities of these artisans and thus has involved them in different projects so that they can demonstrate their skills with dignity and not just as mere laborers.



Knowledge Networks

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Karigarshala is a platform where students who have to discontinue their studies due to various reasons, can have a chance to learn and develop hand skills in a specific trade. It is an attempt to rebuild confidence in the students who have higher chances of getting exploited as child labourers and lead

them to live a dignified life as professionals in the future.



Research and Development

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Many types of building technologies are practised in the rural regions of India. These technologies are conducive to the specific region but are still untapped. The technical team of Hunnarshala learns these technologies from the rural region, validates them and makes them available as technologies along with the practitioners of the specific building art.



Community Empowerment

Rajiv Awas Yojana

The Central Government of India has initiated Rajiv Awas Yojana (RAY), for the slum dwellers and the urban poor population of the country. Bhuj was included in the list of cities where government wants to implement the RAY project. According to a survey conducted in 2009-10, there were about 76 slums in Bhuj in need of about 11000 houses. This was an opportunity for Hunnarshala and NGO's working for the development of the slums in the city. Hunnarshala submitted a proposal to the Central and State government for the redevelopment of slums in Bhuj city.



Meeting with the community



Proposed Redevelopment



Meeting with Collector

Hunnarshala Foundation has been appointed as the Project Management Agency for implementation of RAY in three slums in Bhuj, Gujarat by Bhuj Nagar Palika. 314 houses shall be redeveloped in 3 slums; Bhim Rao-1 Nagar, Ramdev Nagar and GIDC relocation site. The design team is working on unit plans and cluster design with the community to come up with a solution which is best accepted by all.

A city level steering committee, under the chairmanship of the District Collector met to discuss the agenda for RAY and Slum Free City Plan of Action. The committee members include officials from BHADA, Bhuj Nagarpalika and representatives from Hunnarshala and other supporting NGOs. The inauguration date for implementation of RAY was discussed and finalised in the meeting. The committee would meet every month to take the implementation agenda forward.

Technical Facilitation for Indira Awas Yojana in Gujarat

Consortium of Hunnarshala Foundation, People in Centre Consulting, BuildAur and Thumb Impressions is collaborating to provide technical facilitation with mandate received from CRD. The objective is to ensure technical support for IAY implementation at district level through development of appropriate design options, technical guidelines for each option, prototype demonstrations and training.

The team of 41 members of the consortium did a study of the existing typologies of houses in Gujarat which were published and accepted by the Technical Committee. Appropriate designs were developed for the next phase with extensive involvement with the IAY beneficiaries. The designs have been submitted to the technical Committee for approval. Meetings and discussions have been going on with the Technical Committee for the next phase of prototype construction to start.



Studying existing typologies in Kutch and North Gujarat

Housing for Poor in Shamli

Hunnarshala was invited by an umbrella organisation called Joint Citizen's Initiative formed by Sanathkada, Vanagana, Sadbhavna Trust, and some independent citizens in response to the communal riots in Muzaffarnagar which displaced thousands of families. People from 9 worst affected villages in riots were given compensation by the Government. Some families have bought land from the compensation money. Hunnarshala and JCI are working together to rehabilitate these families. Hunnarshala is building houses while JCI working towards taking steps for a more holistic rehabilitation. It includes working for healthcare, sanitation, education, spreading awareness about various government schemes for the people etc.

Hunnarshala started work with 17 families in the month of May, 2014 in the Aryapuri village of Kairana block of Shamli district. Construction of 2 houses is complete and another 10 shall be completed by the end of October, 2014. Hunnarshala and JCI are in talks with various funding agencies to secure funds to cover about 300 families in the rehabilitation program.



Houses in different stages of construction at Shamli

Lakhpatri Tourism Facility

Hunnarshala has completed the construction of the Lakhpatri Tourism Facility. Lakhpatri is a village located on the northwest tip of Kutch district. It's on the coast of the Great Rann, the white desert border between India and Pakistan. Once a flourishing village it has now been impoverished and relying on the industrial and mining jobs found in the area.

Lakhpatri Tourism Facility is a project with the objective of developing the lacking tourism infrastructure of the village with the involvement of the community in the entire process that includes, formation of a village committee, and providing livelihood to the local artisans during the construction activity and finally guiding the village committee to manage the facility efficiently.

The first phase of this initiative is complete with the construction of 4 permanent guest rooms with allied facilities such as dining hall, kitchen, washrooms, reception and landscaping of the entire locale.



Lakhpatri Tourism Facility

Office and Research Centre for The Banni Pashu Ucherak Maldhari Sangathan

The Banni grassland of Gujarat is the largest natural grassland in the Indian subcontinent, and an area that is both socio-culturally unique and ecologically valuable. Ethnic communities that comprise the "maldhari" pastoralists have inhabited this region. Their livestock graze in this landscape and the main occupation of this community is animal husbandry.

Atree, a research institution in the area of biodiversity conservation and sustainable development has initiated a research program that studies the long-term impact of changing ecological patterns and social processes on the Banni grassland and the implications for its pastoralist communities.

Sahajeevan, works closely with the pastoral community with the objectives to make livestock based livelihood a viable economic option and set up an economically viable concept of grassland development. Thus came into existence the Banni Pashu Ucherak Maldhari Sangathan (BPUMS) with an aim to strengthen animal husbandry occupation in the Banni region. For further organizing this sangathan Atree, Sahajeevan and Hunnarshala came together to build an office building for the community from where various activities of the Sangathan can be performed. Hunnarshala has designed and the construction phase of the project is over.



Office and Research Centre for The Banni Pashu Ucherak Maldhari Sangathan in different phases of construction

Panch Mahabhut- Cultural Centre

Hunnarshala was invited by Komal Bhai from an NGO, Mahatru Vandana to develop a cultural centre to serve as a platform for knowledge sharing through different cultural activities and art forms. The centre should cater to people of all religions and thus it was decided to evolve the design of the Cultural centre around 5 elements calling it "Panch Mahabhuta Cultural Centre. The design of the centre has been finalised and the construction phase shall begin soon.



Proposed design for Panchmahabhuta Cultural Centre

For more information about the Community Empowerment Unit, get in touch with Co-ordinator, Mahavir Acharya. You can contact him at mahaviracharya@gmail.com

Artisan Empowerment

Hunnarshala has worked with Artisans for more than a decade. Apart from being committed to their skill and craft, the artisans have the potential and the capacity to become entrepreneurs and take up projects on their own. To hone their capacity as entrepreneurs, 4 artisan entrepreneur companies were formed. Hunnarshala supports the companies in providing them the required infrastructure to function. Links them to the market and provides technical as well as administrative guidance. Websites for the companies have been designed too to help them tap the potential clientele with ease.

“Wood Grains”- a proprietorship company started by Mr. Shравan Bishnoi, an artisan associated with Hunnarshala since 11 years. Wood grain specializes in making wooden roof understructures and louver windows. The company worked on the following projects:

- Roof understructure work for kitchen, dining and laboratory area in the office and Research Facility for BPUMS, Hodko
- Roof understructure work for house of Harsukhbhai Patel in Rajkot

“Span”- space frame systems, a proprietorship company started by Mr. Magan R Bijlani who has been associated with Hunnarshala since last 10 years. SPAN specializes in assembling and installing space frame roof understructure. They worked on the following projects:

- Prepared, assembled and installed the roof understructure made of M.S pipe for a automobile showroom in Mumbai
- Installed space frame for the children’s play area at Sinchan School, Bhuj



Work in progress for the BMPUS research and office facility



Space frame installed at Sinchan School



Rammed Earth wall in making

“Layers” – the rammed earth company, is a partnership company consisting of 4 members. They specialise in the construction of stabilized rammed earth walls. They engaged in the following projects:

- Build rammed earth walls of a farmhouse for Dr. Villas Sathey

“MathaChhaj”– A thatch company”, the women’s collective specializing in thatch roof solutions. The company worked for the following project:

- The company completed the thatch roof work at workshop of the hostel building for Hunnarshala Foundation

Thatch roof work done by MathaChhaj in Karigarshala



For more information about the Artisan Empowerment Unit, get in touch with co-ordinator, Tejas Kotak. You can contact him at tejas.hunnarshala@gmail.com

Karigarshala

After working with both the rural and urban communities in many parts of India, Hunnarshala realized that a huge chunk of the youth had to drop out of mainstream education due to various reasons like poverty, non availability of proper schools etc. They had little chance of getting education and would end becoming labourers in different trades. On the other hand, the communities had traditional knowledge and hand skills which were soon getting obsolete due stiff competition from the modern markets. Hunnarshala decided to start Karigarshala with the objective of providing a platform for educating the youth who had to discontinue their education and keeping the traditional skill and knowledge alive. It is an attempt to “educate” and not just “train”.

The “shala” started with a course on carpentry in November 2011. The following year a course on walling systems was also offered. Last year the third batch of carpentry and second batch of walling systems course was in progress. Up to now 48 students have graduated from “Karigarshala” since November 2011.

The new batch of Karigarshala started on 15th June, 2014 with 18 students with 9 each in carpentry and masonry courses. The students are from Kutch and Madhya Pradesh. 4 students have left the course due to various reasons. The batch at present has 7 students each in both the courses

Workshop with IPSA students

Every year, Karigarshala and IPSA Rajkot organises workshops to help artisans and designers collaborate and develop a mutual respect and understanding of each other’s skill. The first phase of the workshop was organised in the Hunnarshala campus where the students from IPSA Rajkot visited the campus and worked with the carpentry students of Karigarshala. The workshop provided a knowledge and skill sharing platform for the students.

The students of the masonry course are helping an NGO, Unnati on The Wall Technology Park in Bhachau. The students shall have hands on experience in building with various technologies like, stabilised adobe, CSEB, Rammed Earth. Such exposures help the students gain confidence on professional ground.

Students of Karigarshala and IPSA, Rajkot working together during the workshop



Incubation Company Kamerai Mason Guild & Ozari

Kamerai is a partnership firm for the walling system students and Ozari for the carpentry students. After the course of one year is complete the students have an option to be part of the company for a period of 15 months and thereafter they are replaced by the next batch of students passing out. All the students are partners in the firm and have elected their representatives for legal compliances.

Kamerai Mason Guild worked on the following project:

- Wall Technology Park developed by an NGO, Unnati in Bhachau

Ozari worked on the following project:

- Installed and made wooden floorboard at the farmhouse for Dr. Villas Sathey



Ozari Joinery artisans working on Dr. Villas Sathey farm house



Kamerai Mason Guild artisans working on the wall technology park

In the Pipeline

Karigarshala is brainstorming on the possibilities of starting courses on plumbing, electricity and fabrication soon. A team is also working on preparing an interactive curriculum for the courses to structure the learning for the students.

For more information about the Karigarshala, get in touch with co-ordinator, Atul Vyas. You can contact him at artisansschool@gmail.com

Research & Development

Hunnarshala's efforts are to mainstream the use of eco-friendly building techniques by scientifically validated them through research initiatives on a regular basis.

- Hunnarshala has been making constant efforts to mainstream the use of Compressed Stabilised Earth Blocks technology. One such effort is a hydraulic press which has been designed with Gramvidya to ease the cumbersome production process, quality control and standardized production. The first version of the design is complete and has been used to build a house. Work is going on to bring a second version of the hydraulic press which can offer more efficiency.



The hydraulic press designed with Gram Vidya

- A hydrometer test has been going on the laboratory to generate data for different types of soils.
- Hunnarshala is collaborating with Massachusetts Institute of Technology for various research initiatives. Research and study on thermal comfort patterns in different roofing materials and walling systems has been going on. The generated data shall be used for the community housing schemes. Software is also being developed to aid the designing process of housing.

Hydrometer test performed in the Hunnarshala lab



Temperature sensors installed in different roof types



- Hunnarshala has been associated with waste water treatment plants and is working constantly to increase the efficiency and optimize the waste water treating systems. It has worked on 15 Dewats systems since 2003. Consortium of Dewats Dissemination is helping Hunnarshala set up a chemical dry laboratory to test samples of treated and untreated wastewater. The generated data from the testing of samples shall be used for betterment of the Dewats system.
- Debris wall research is going on under the guidance of Prof. Reddy to understand how it can be optimally and potentially used in the RAY housing scheme.

Debris Wall Testing



Waste Water Testing



For more information about the Research and Development Unit, get in touch with co-ordinator, Tejas Katak. You can contact him at tejas.hunnarshala@gmail.com

Please get in touch with the Editor Bhawna Jaimini for any suggestions, queries and requests to help us engage with you through our initiatives at bhawna.jaimini@gmail.com