

The difficulties in anchoring a structure to hard pavements and the police not allowing any semi-permanent structures, force homeless to lie on the ground wrapped in blankets without any other physical protection (right). ekSHELTER offers a scalable low-cost solution.



Low-Cost Temporary Shelter for Homeless Families in India

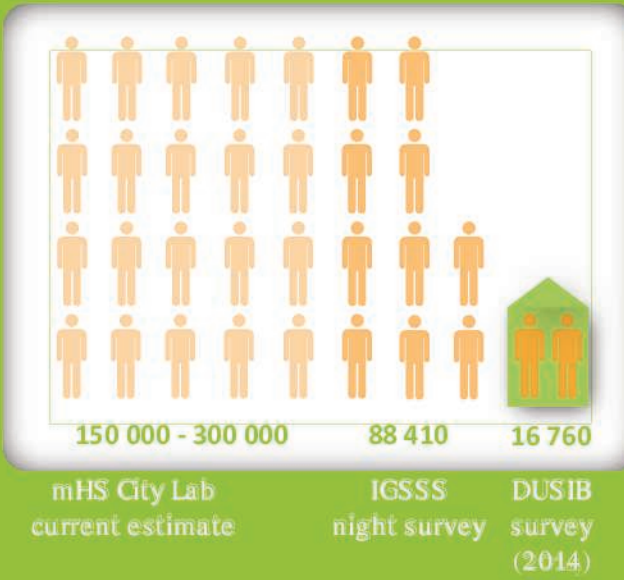
Our project involved the design of low-cost, temporary shelters for homeless families living on pavements and under flyovers in Indian Cities. In Delhi alone, there are over 150,000 homeless. The difficulties in anchoring a structure to hard pavements and the police not allowing any semi-permanent structures, force homeless to lie on the ground without any physical protection. The result of our project is ekSHELTER (Hindi for 'one shelter'), an affordable shelter that can be set up within minutes at night and folded up as quickly to be stored during the day.

After 6 months of design and prototyping, we launched a 100 Shelters Campaign to produce 100 such shelters for homeless families in Delhi through a crowd-funded campaign. More than 100 shelters were distributed with the support of an NGO and its use monitored for 6 months. Our goal was to trigger a debate on homelessness, showing that interim solutions could alleviate the life of homeless people waiting for better livelihood opportunities and support, by designing a scalable sustainable solution.

The pilot project was successful in providing physical and psychological protection to hundreds, especially children and women, while also garnering great attention from the media and the public, bringing to light the need for urgent actions for the homeless in Indian cities.

ekSHELTER
by HS CITYLAB

FIGURES ON HOMELESSNESS

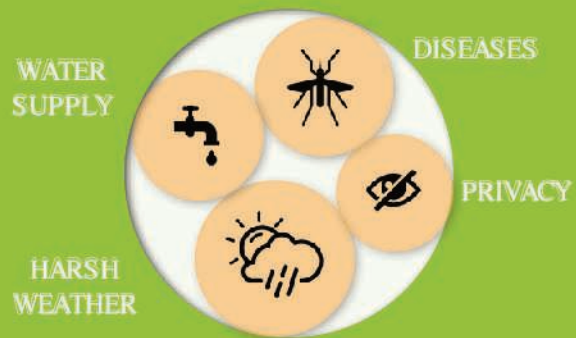


EXISTING NIGHT SHELTERS ONLY FOR
19,764

MAIN PROFILES



MAIN PROBLEMS



The pilot project provided physical and psychological protection to hundreds of homeless in Delhi, especially children and women.



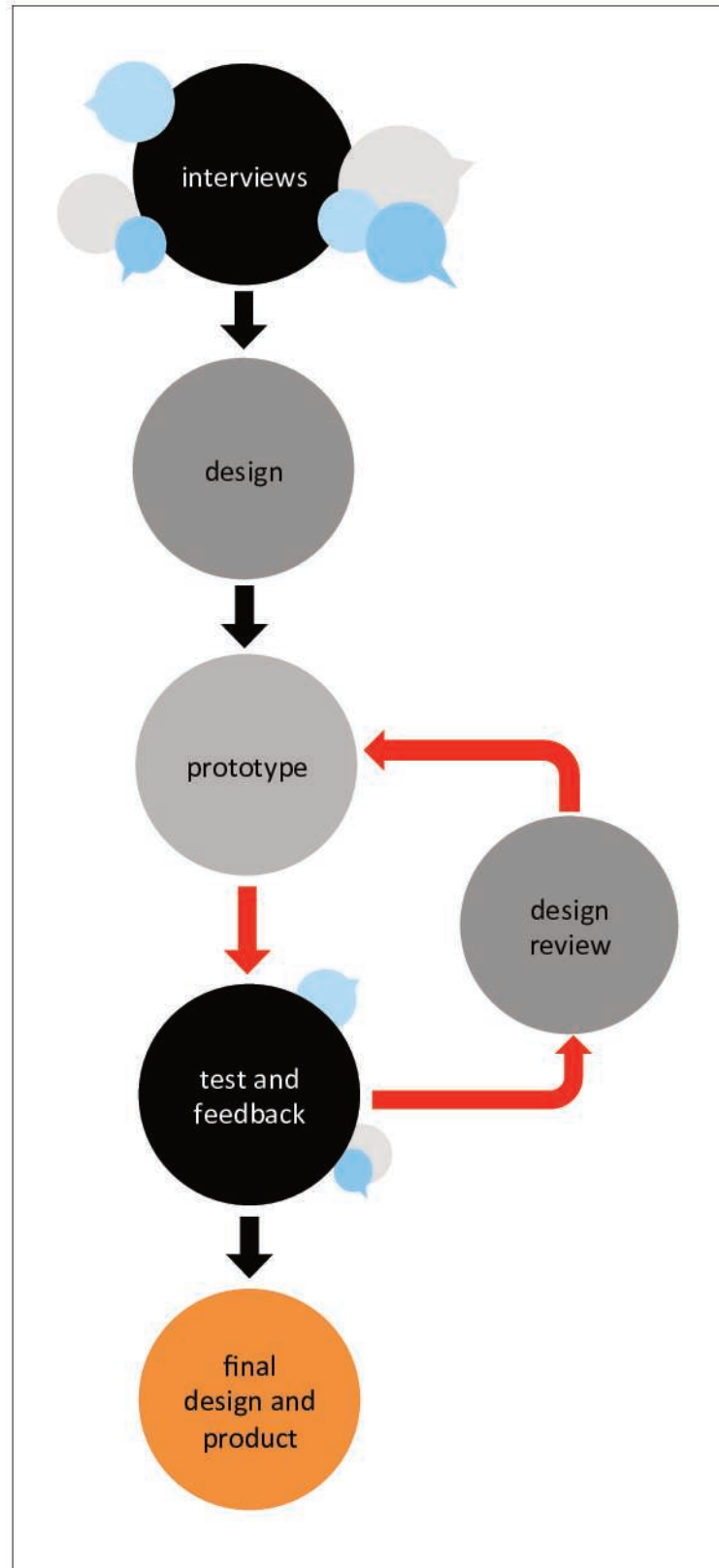
Defend, promote and enable access to adequate and dignified habitat for all as a Fundamental Human Right¹ [*from Hasselt Charter]

The homeless are the most marginalized in Indian cities and could be the destitute, migrant workers, mentally ill, or victims of multiple evictions. However, many are employed as daily wage laborers, service providers such as rickshaw-pullers, sweepers or rag-pickers. Despite their contribution to the life of the city, they have hardly any rights. The ekSHELTER project aims to provide a basic shelter so that homeless families can sleep with a roof over their heads, with privacy, dignity and safety of their children. While the private and public sector in India have failed in providing affordable housing solutions, ekSHELTER offers a possible alternative to the government night shelters, limited in numbers and capacity. With the existing night shelters available mostly to single men, 90% of the homeless - including families, single women and children are left on the street without any other options.

The scope of our project was to trigger a debate on homelessness and the rights of the homeless in Indian cities. The ekSHELTER initiative received great attention from the media (national dailies and news channels) and has also been selected as a case study for the Skoll Social Innovation Case Competition in 2016 at Oxford, further turning the attention within India to the state of its urban homeless.



Made up of locally available and affordable materials such as bamboo, rebars and waterproof canvas, the shelter also uses the simple local skills of a welder to make the joints and a tailor to stitch the skin (above).



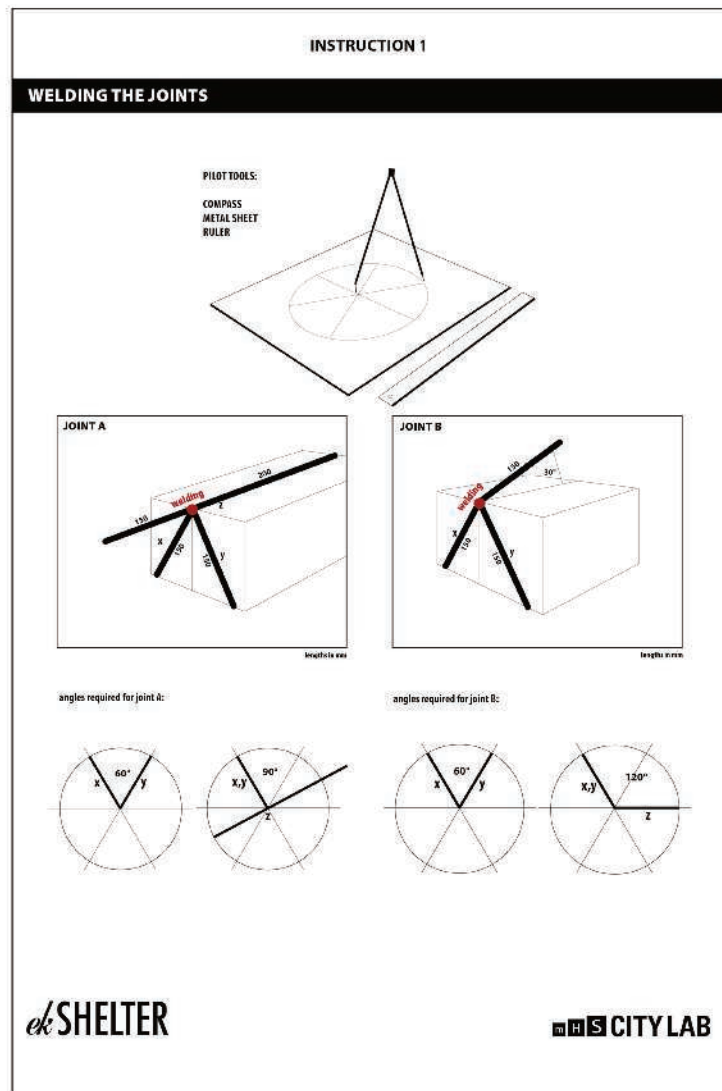
Above the process followed to design and produce the tent. Being on the field for over a year has been a critical factor that allowed to follow a Human-Centric and Lean approach to the design challenge.

The design is tailored to the target group and takes in consideration the main challenges of homeless or populations in post-disaster context. The self-supporting structure use a simple system that even kids can assemble. Below a ekSHELTER set with the Canvas, the 5 Bamboos and the 2 metal Joints.



Facilitate the use of appropriate technologies, materials and labor adequate to local values, to the cultural specificity and responsive to the natural environment [*from Hasselt Charter]

The ekSHELTER design makes its fabrication possible everywhere in India, as the materials are available all across the country and no special skills are required. It uses affordable and locally available eco-friendly materials such as bamboo and waterproof canvas which can be easily repaired or replaced. Its fabrication requires only the basic local skills of a welder -to make the joints, and of a tailor to stitch the skin. Being designed in collaboration with the target group, it has been well received. ekSHELTER is a tent with a self-supporting structure with key design innovations of two simple metal joints. A waterproof skin keeps one warm in the winter and can be opened on both sides for cross ventilation during the hotter months. Amosquito net has been provided for the openings to offer protection from dengue and malaria while pockets allow for storage of various items. In the past year, mHS CITYLAB has been reached by various organizations interested in the ekSHELTER design and with whom we have shared simple design instructions. These organizations vary from other NGOs in India to a student led organization that provided immediate



Cooperate for fair and sustainable development initiatives in active collaboration with disadvantaged people or communities [*from Hasselt Charter]

The objective behind ekSHELTER is to empower and enable homeless communities, which possess the required skills, to create their own shelters due to the absence of such options by the state. While some homeless people, especially migrant construction workers, build their own temporary shelters, many lack the technical know-how or incentive to create their own solutions.

The design process of ekSHELTER involved various homeless families, first reached to understand their needs and later during the prototyping phase, to test the various models built before the final design. Knowing that a tent can't solve the complex problem of homeless, we reached out and partnered with an NGO that is already providing various facilities to homeless communities to design a more holistic approach. The same NGO identified community leaders to represent the homeless community and help identify the families who needed the shelter the most. We focused on minimizing the cost of the tent (the final version cost about 24 US\$) and approached microfinance organizations that could provide the homeless a small investment to buy the materials or a complete set. By involving the homeless communities this way, we can



Partnering with the NGO IGSSS has been critical to mobilize homeless communities across Delhi, identify families who needed the shelter the most and finally monitor the use of the shelters and get feedback for the next scale up phase.

On the top left the simple page of instruction to weld the 2 metal joints. mHS shared this along with similar instruction for the canvas-skin and the bamboo with other organizations interested in replicating the shelter.

On the lower left 2 canvas-skins packed. mHS shipped few of these to an NGO in Kolkata that procured and produced the bamboo and the joints based on mHS instructions. When the skins reached Kolkata the tents have been immediately distributed and set up.

