
WOMEN IN RESOURCE EFFICIENCY CONVERSATION

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SCOPE OF NET ZERO DESIGN



NET ZERO
ENERGY



NET ZERO
WATER



ZERO WASTE
TO LANDFILL

EXTENDED SCOPE OF NET ZERO DESIGN



NET ZERO
ENERGY




NET ZERO
WATER




ZERO WASTE
TO LANDFILL

+



HIGH COMFORT –
INTERNAL +
EXTERNAL



BIOPHILIC DESIGN

+



RESILIENCE



TRANSPORTATION

COMFORT and WOMEN

- Thermal comfort for women is different from thermal comfort for men
- Even in spaces that have 50% or more women, decisions on what defines comfort are mostly taken by men
- Why?
 - Most HVAC Professionals are men
 - Most decision makers in positions of power are men

ASHOKA – Increasing the Comfort Band + Varied Thermal comfort zones in a Building



WORK SPACES – Varied Thermal Comfort Zones in a Building

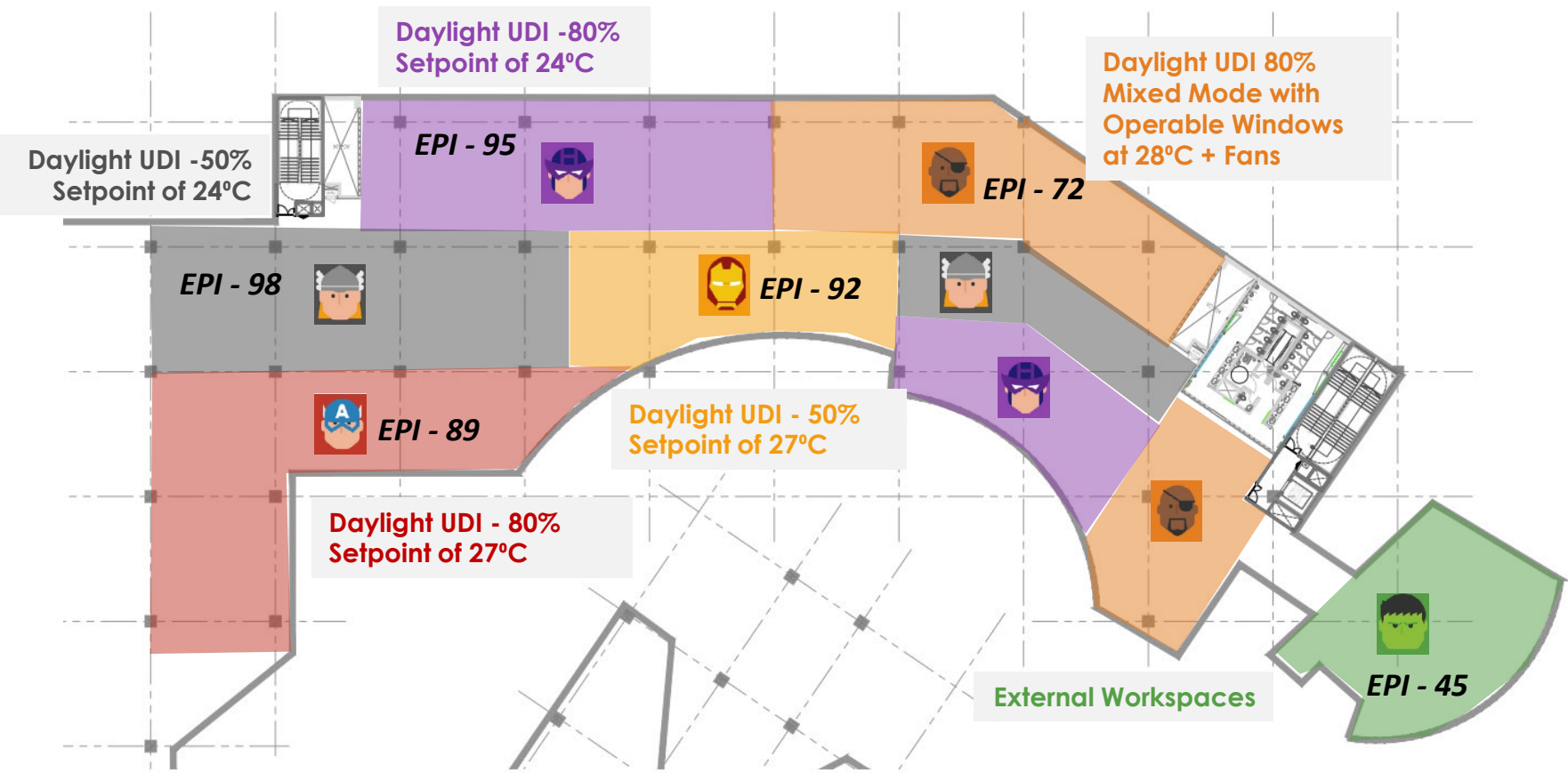
User-centric & customizable work environments

“One Shoe Doesn't Fit All”



Different workspaces with varying **internal conditions** like different setpoints and daylight conditions.

These provide the optimum work environments for the **varying needs and activities**

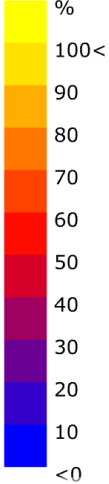
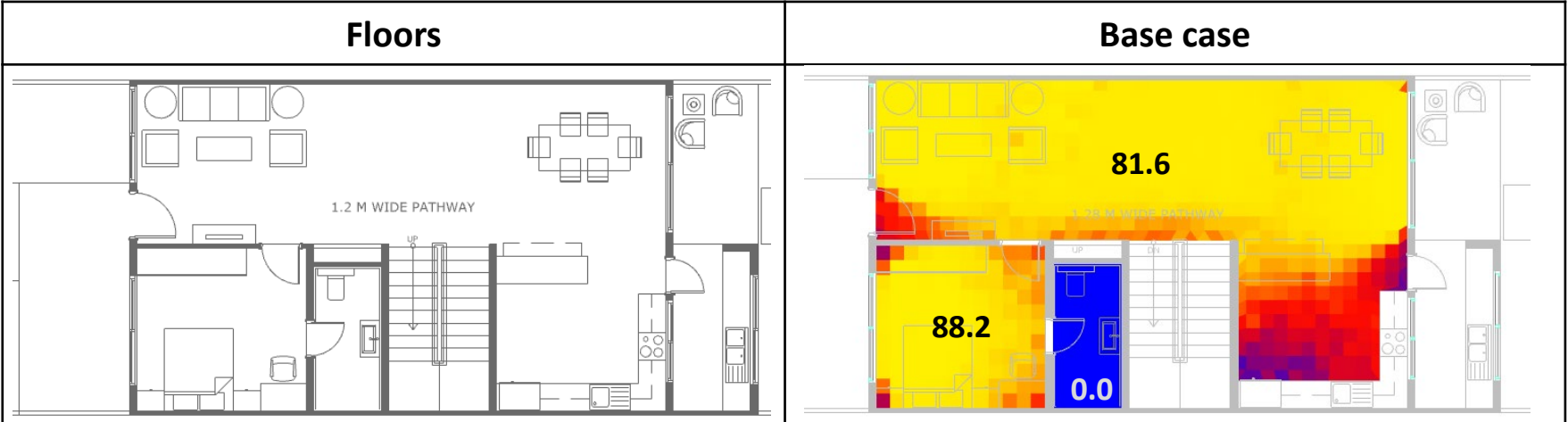


COMFORT and WOMEN

- In Residential sector, women are the primary users of spaces such as Kitchens, Utility balconies, back of house areas etc.
- However these are the most neglected areas in design wrt to comfort, daylight, views out and ventilation

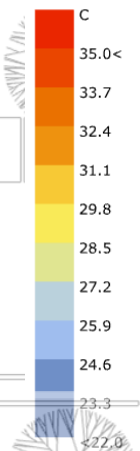
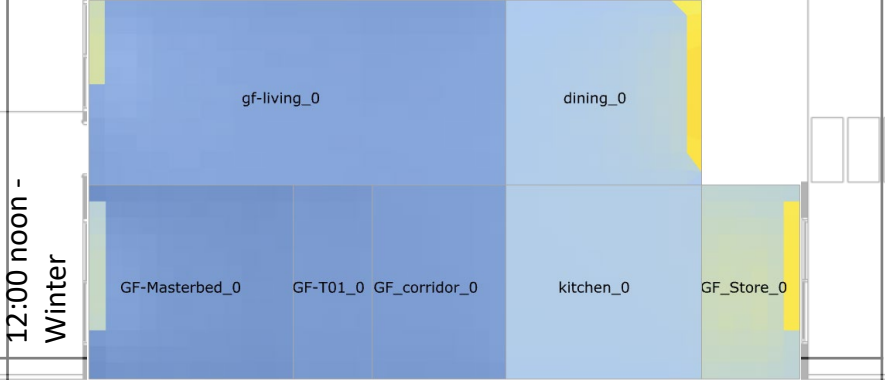
Daylight and Comfort in Kitchens and Utility Areas

Ground Floor

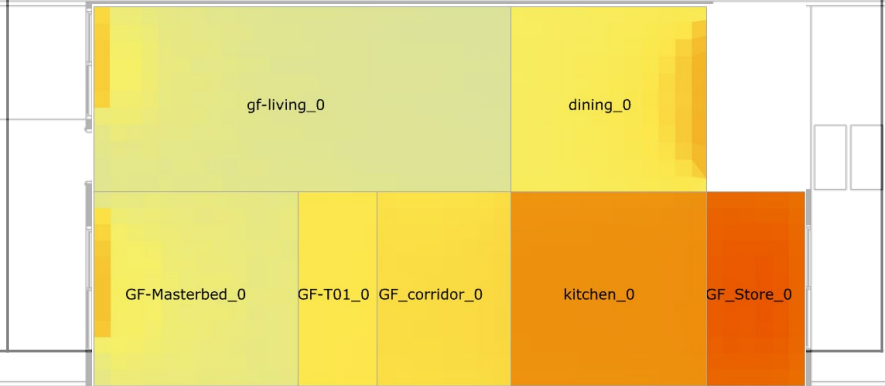


Daylight – DA 150 lux
Kitchen < 50%

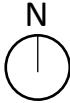
Thermal Map – Winter 12 Noon
Kitchen - 2 deg C > Living and Bedrooms
Utility – 4 deg C > Living and bedrooms



Thermal Map – March 12 Noon
Kitchen - 4 deg C > Living and Bedrooms
Utility – 6 deg C > Living and bedrooms



ORGANO Damarigidda –
FHD Architects



TRANSPORTATION and WOMEN

- Best way to reduce motorized transportation is to design for
 - Safe Pedestrian movement - separate cycle and pedestrian pathways and crossings
 - Improve Public transportation use – Comfortable and clean stations and transportation networks
 - Safety – well lit pathways, CCTV cameras, separate compartments
- Is this enough for Women?
 - Safety in numbers is important
 - Safe pathways with no isolated corners or sections

AMARAVATI – Public pathways were designed to be busy with commercial activity



*Amaravati Masterplan
Foster + Partners*

MANIPAL UNIVERSITY JAIPUR – Ground level in Hostel complex has busy commercial spaces all along



MUJ Hostels
Architect Hafeez Contractor

IS DESIGN ENOUGH?
LOOKING BEYOND to ACHIEVE NET ZERO IN ACTION



SOCIAL
INCLUSIVENESS



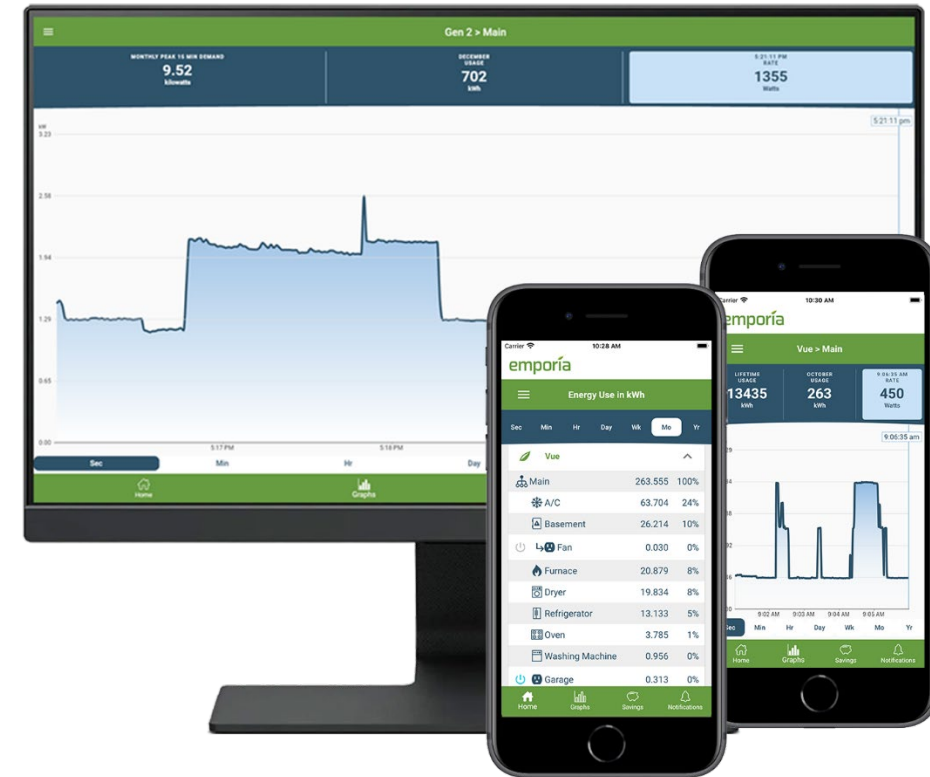
FOOD SELF
SUFFICIENCY



REGERATING
LOCAL ECOLOGY

- Women are more sensitive towards sustainable lifestyle actions than men (71% women vs 59% men)
- More women are entering the sustainability workforce

Tools to track energy and water consumption at a household level



- Traditionally women have always been responsible for energy, water, food and waste management.
- Their intrinsic knowledge is high
- Pioneers of sustainable living
 - Zero Waste Cooking
 - Waste minimization and Upcycling
 - Food preservation
 - Water conservation, recycling and reuse

Agri-produce Waste Management and Women

- Low Cost Solar Dryer
 - Tapping into traditional knowledge on food preservation
 - Using local masonry and materials (stone, brick, cement, mud plaster)
 - Low cost
 - Easy to repair
 - Use simulation tools to improve efficiency
 - Develop products for urban markets
 - Increase women's income levels and economic independence
 - Connecting the burgeoning urban market with these products



*Aarti Home, Kadapa
– VeraTatva Engineers +
Team Catalyst*

Waste Management and Women

Aarti Home, Kadapa
– Lalitha Cooperative

- Tapping into traditional knowledge on upcycling
- Support with new technologies and design
- Getting them to appreciate their skills
- Skilling the new generation
- Develop products for urban markets



Nothing was wasted - Our 'Stitch and Save' Program

We respect people who are forced to receive help due to unforeseen circumstances

A lot of people who were affected are from the lower income groups who are forced to receive donations due to the circumstances. Most of these people did not receive any help as they could not rush in to collect aid packages thrown from helicopters or those left on the roads. In order to reach out to such people, we will be distributing our aid packages to each household.

We respect their dignity and so only items that can be used effectively are included in the aid packages. Only clothes of good quality were chosen from the donations and new sarees and lungis were bought. The older clothes were recycled through our 'Stitch and Save' program as illustrated below.

Durries

1. Old cotton sarees were cut to size
2. Two layers of sarees are tacked together. With the good quality saree on the outside.
3. A Layer of polyfill is laid on top.
4. A final layer of saree is tacked
5. This is then stitched together on a sewing machine.



Pillows and Covers

1. Old bed sheets and curtains were cut to size to make a casing for the pillows.
2. Scraps of material from making duvets and school bags were used to stuff the pillows.
3. Old bedsheets of good quality were then used to make removable pillow covers.



School Bags

1. Jeans and old trousers were cut into shape
2. Old clothes were used to line the insides
3. These was folded and sewn together and a long handle added.



Doormats and Dusters

1. Dusters were made from old material cut into rectangular shapes, stuffed, folded and sewn together.
2. Doormats were made from weaving old pieces of fabric.



Vijay Foundation Trust 
www.vftrust.org

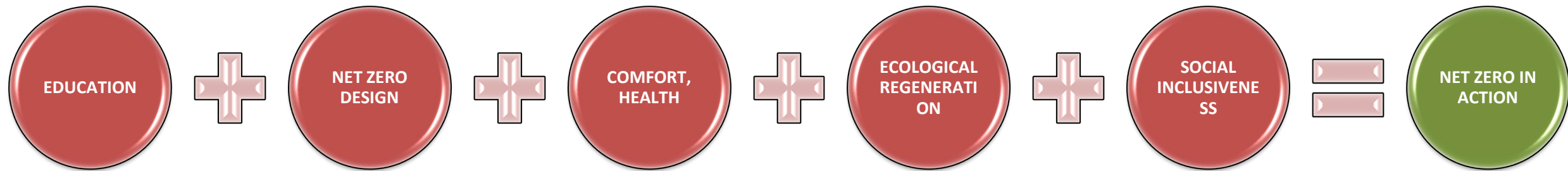
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#WStory

ONE WOMEN REPURPOSING
PLASTIC WASTE WITH CHARKHA

NET ZERO IN ACTION



- Focus has to broaden beyond just building design to see tangible results towards Net Zero Carbon
 - Social Inclusiveness in design and operations, keeping women's specific requirements in mind
 - Design for Comfort and Health for all
 - Design for safety, specifically from a woman's perspective
 - Learn and appreciate traditional skills and knowledge
 - Sustainability Education targeted at women at all social strata
 - Skilling in sustainable livelihoods targeted at women at all social strata
- Look back to move forward