



Department of Industrial Design, SPA  
21/12/2013

# Inclusive Design

VARANASI. SandHI. HIMALAYAN ECOLOGY. FUTURE CITIES

# Varanasi



# Varanasi

An in-depth ethnographic study and subsequent documentation for the city of Varanasi will be undertaken to analyse and assess the following areas for their potential for design intervention:

- ❖ Visual Identity of the City
- ❖ Social and Cultural Artifacts for the City
- ❖ Reinventing the Toilet and Designing Sanitation Systems
- ❖ Repositioning/Revival of Traditional Heritage

# Varanasi

1a

Department of Industrial Design, SPA  
21/12/2013

## VISUAL IDENTITY OF THE CITY

- ❖ To tie together the chaos and fragmented character of this multi-layered charismatic city to reflect its culture, tradition, spirit & energy
- ❖ To bring about coherence, legibility & consistency by design of objects and tools across various domains
- ❖ To promote a sense of association with the city for its inhabitants as well as visitors



# Varanasi

1b

Department of Industrial Design, SPA  
21/12/2013

## SOCIAL & CULTURAL ARTIFACTS FOR THE CITY

- ❖ Design Interventions to better facilities of public nature across the city and design of measures of safety along the Ghats
- ❖ Design of inclusive adjuncts to better management of mass gathering
- ❖ Tourist Support System design across the city



# Varanasi

1c

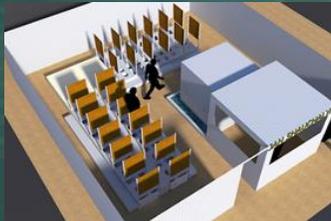
## REINVENTING THE TOILET & DESIGNING SANITATION SYSTEMS

*In mass gatherings, lack of proper sanitation facilities forces people to resort to unhygienic measures. Where temporary toilets are provided, problems of choking, cleaning, flushing still exist.*

- ❖ Easy and Quick install Toilet Modules for mass gathering: Design of modular sanitation system that is easy and quick to install in open areas to cater to large volumes of people and to facilitate hygiene with a proper waste management and disposal system.

*Using public toilets has always been an issue with women for reasons of hygiene and security. Most public toilets for women lie locked or harbour illicit activities as women avoid using them, worsening the issue for those who want to.*

- ❖ Public Toilet Design for Women with focus on Safety and Hygiene and design of urinals for women



# Varanasi

1d

## REPOSITIONING/ REVIVAL OF ITS UNIQUE TRADITIONAL HERITAGE

- ❖ Preserving methods of traditional preparation and value adding by means of packaging, hygiene factor etc for items like the famous Banarasi Pan for maintaining its authentic nature
- ❖ Revival of original age old craft based techniques required for e.g.. weaving of the Banarasi Silk Saree by equipping them with simple handheld toolkits and facilitate improving working conditions by ergonomic design of work-areas and spatial layouts

Department of Industrial Design, SPA  
21/12/2013



# Science & Heritage



# Science & Heritage

2

Using the power of design & application of technology as mediums to better the legibility and accessibility aspects related to:

- ❖ Museums and Cultural Centres
- ❖ Historical Sites
- ❖ Reinventing the Toilet and Designing Sanitation Systems

# Science & Heritage

2a

## MUSEUMS & CULTURAL CENTERS

- ❖ Travelling and pop-up interactive science museum to inculcate fundamentals of basic sciences among school children specifically in rural and semi urban areas
- ❖ Designing “experiences” that enrich museum tours and encourage holistic understanding of the subject. e.g.. for the National Museum, New Delhi
- ❖ Research and design of Instruments that aid a personalized interaction with exhibits to decipher them better, for e.g.. at the Jantar Mantar to understand the working of the instruments

Department of Industrial Design, SPA  
21/12/2013



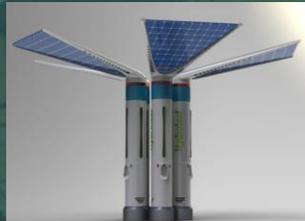
# Science & Heritage

2b

Department of Industrial Design, SPA  
21/12/2013

## HISTORICAL SITES

- ❖ Design of inclusive sustainable-mobility and ability-enhancing devices to aid elderly (who form a large section of visitors to places of historic interest) and others.
- ❖ Design of water dispensing systems to provide a reliable alternative, to eradicate the need of packaged drinking water, the volumes of which presently pose an alarming environmental hazard.
- ❖ Use science as a tool to designing sensory spatial zones to experience historic settings as they must have been.



# Science & Heritage

2c

Department of Industrial Design, SPA  
21/12/2013

## REINVENTING THE TOILET & DESIGNING SANITATION SYSTEMS

*Physically challenged people with motor disabilities face immense challenges in using regular toilets in public places like Historical Places, where usually entail long travel and waiting periods . Demographically India accounts for one third of the world's population affected with motor disabilities, making this a huge problem area.*

- ❖ Wheelchair Redesign to facilitate ease of use of the WC: To redesign a wheelchair that can facilitate using the toilet seat independently in public toilets or with minimal assistance keeping the users psychological and physical state in consideration.



# Himalayan Ecology



# Himalayan Ecology

An in-depth study of the region and subsequent documentation will be undertaken to analyse and assess the following areas which are vital for the Himalayan region and promise tremendous potential:

- ❖ Design for Sustainability
- ❖ Reinventing the Toilet and Designing Sanitation Systems

# Himalayan Ecology

3a

## DESIGN FOR SUSTAINABILITY

- ❖ Sustainable solutions for alternative transportation systems for eco-tourism- the popularity of which is growing tremendously.
- ❖ Disposal of garbage poses a huge threat in Himalayan mountains regions. Design of localized recycle and reuse solutions.
- ❖ Potable water in the Himalayan region is abundantly available, yet measures like RO are adopted. Design of a basic water filtration system at a community level

Department of Industrial Design, SPA  
21/12/2013



# Himalayan Ecology

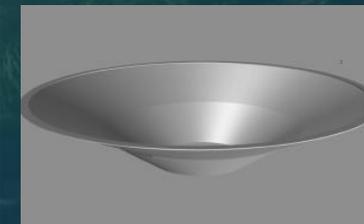
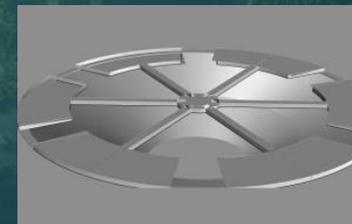
3b

## REINVENTING THE TOILET & DESIGNING SANITATION SYSTEMS

*Caught in a lifestyle where habits of open defecation that have been practiced for many years, if forced to use tiny latrines, people resort to extremely unhygienic measures. Women and children are particular sufferers for reasons of safety and hygiene.*

- ❖ To design a toilet that requires minimal investment and is a step up for people used to open defecation, is easy to adapt to and that provides a hygienic sanitation system.
- ❖ To design minimal water usage toilets that use locally available material for flushing and composting purposes.

Department of Industrial Design, SPA  
21/12/2013



# Future Cities



# Future Cities

4

The School of Planning and Architecture recently conducted a Seminar on “Future Cities” which covered various aspects of cities at multiple levels. Combining the expertise and resources available across disciplines in the school; future projections, research and product development will be undertaken under the following heads:

- ❖ Inclusive Products for Public Spaces
- ❖ Reinventing the Toilet and Designing Sanitation Systems

# Future Cities

4a

## INCLUSIVE PRODUCTS FOR PUBLIC SPACES

- ❖ With the future looking at much smaller personal living spaces and larger public spaces for everyone to use, a whole plethora objects in the form of public furniture, lighting, food kiosks, garbage bins, charging stations for electric vehicles, post boxes etc. needs to be evolved specific to our socio-cultural context.
- ❖ Health and wellness, the buzzwords for tomorrow will lead to creation of shared exercise and yoga spaces, parks etc. Public furniture to aid these will be required. Emphasis on food and nutrition will require new systems of storage, monitoring and sale of food items.

Department of Industrial Design, SPA  
21/12/2013



# Future Cities

4b

Department of Industrial Design, SPA  
21/12/2013

## REINVENTING THE TOILET & DESIGNING SANITATION SYSTEMS

*Design for very high density urban settlements that house mostly migrant population*

- ❖ Minimal cleaning and low maintenance toilets for urban scenarios where there is no continuous running water facility and toilets shared by multiple families

*Space will be at an even larger premium in the future. Design of toilets for space optimisation*

- ❖ Minimising the toilet area footprint in Low Income Group Housing to be able to perform all sanitary activities in a minimum possible area by using convertible systems.



# Future Cities

4c

Department of Industrial Design, SPA  
21/12/2013

## REINVENTING THE TOILET & DESIGNING SANITATION SYSTEMS

*In regular households, there is a lot of wastage of resources, viz. water & electricity in the form of inefficient systems, fixtures and people's habits. Inefficient flushing, shower heads etc. can all be very high on water consumption. Without being apparent, all of us end up consuming a lot more than required. Resource management will take centre-stage in the future.*

- ❖ Integrated toilet system to minimise water and electricity consumption

