Design for MSMEs

January 13, 2012
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Senior Faculty, Industrial Design
National Institute of Design

“Design for MSMEs”

Science Technology Ind. Design

Idea Business

…humanizing technology

- Converting Constraints into Unique Opportunity
- Offshoot applications - New applications
- Indigenization

…comparison

Design Projects

MSME Unit:
Zandig TQM Solutions, Bangalore, Karnataka

Design Consultant:
Icarus Design Pvt Ltd, Bangalore, Karnataka

Project Brief:
Redesigning an ENT Multiscope (Ear, Nose and Throat)

Salient Features of the New Design:
- The ENT scope is now redesigned from the users perspective.
- It is easy to hold for examining the ear, nose and throat.
- Most used controls have all been ergonomically placed.
- The device accept most popular ENT scopes available in the market.
- The light source which was external is now camouflaged in the device.
- The LED light for the various scopes can be switched with a single button.

“It is not difficult to be different, What is difficult is to be better”

- Jonathan Ive,
**Design Projects**

**Project Brief:**
Design Electric Portable Hydraulic Power

**MSME Unit:**
Suyash Engineering and Automation Pvt. Ltd.,
Pune, Maharashtra.

**Design Consultant:**
AUTOMATI, Pune, Maharashtra

**Salient Features of New Design:**
- New Design: one step ahead of their existing offerings.
- The New Design is primarily portable and mobile.
- Ergonomic in handling and operation
- New Control panel design
- Components packaged under FRP cover, protected & safe
- Clean & neat aesthetics

**Scope of Work:**
- For applications like riveting, lifting, bearing pulling etc.
- Compact for portability to different location.
- Better aesthetics and ergonomic solution for the power pack.

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**Design Projects**

**Project Brief:**
To redesign and reposition the 6.5Hp industrial pump in the domestic.

**MSME Unit:**
Sharp Industries, Coimbatore

**Design Consultant:**
Sundar Sudhakaran,
Icono Design, Bangalore

**Salient Features of New Design:**
- The pump is repositioned with a stylish enclosure.
- Stands out from the competition with its new Design and Product Aesthetics.
- The enclosure covers pump and electrical components.
- Redeigned in terms of its customer category.
- Aesthetically appealing, clean and safe styling.

**Scope of Work:**
- Base in the Centripetal pump area.
- Flexible/portable with transparent opening:
  - Controlling and Power indicator & Switch
  - Housewife friendly.

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**Design Projects**

**Project Brief:**
DBV machine Aesthetics Display & Controls and Interface Design

**MSME Unit:**
Dura Vision Systems,
Pune

**Design Consultant:**
Abhijit R Takale,
Noodles Design, Pune

**Salient Features of New Design:**
- In address functionality, usability and aesthetics.
- Design for mass manufacturing

**Scope of Work:**
- To address functionality, usability and aesthetics.
- Design for mass manufacturing.

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**Design Projects**

**Project Brief:**
Redesign of Ice-cream Freezer.

**MSME Unit:**
Synergy Agro Tech Pvt. Ltd.
Ahmedabad, Gujarat

**Design Consultant:**
Platypus Designs Pvt. Ltd.
Ahmedabad, Gujarat

**Salient Features of New Design:**
- 20% reduction in volume.
- 30% reduction in weight resulting in substantial cost saving.
- Modular cabinet covers helps reducing inventory.
- All controls and relevant display in the front of machine, prevents frequent opening of machine by operator.
- Splashguard and other features to reduce maintenance calls and improves efficiency of machine.
- Machine gets distinct personality through product aesthetics and ergonomics.

**Scope of Work:**
- Rationalization and value engineering.
- Product optimization and cost reduction.
- Aesthetics upgradation.
- Ergonomic improvements in the products.

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**Design Projects**

**Project Brief:**
Design of Visitor Management System

**MSME Unit:**
Scrum System Pvt. Ltd.
Pune, Maharashtra

**Design Consultant:**
Aadruil Consultant,
Pune, Maharashtra

**Salient Features of New Design:**
- Smaller footprint compared to the traditional RISC box.
- Desktop and wall mounted versions offered.
- Easy to use and simple — includes bar code readers.
- Touch screen driven user friendly interactive interface.
- Appointment based system, Email invite to visitors.
- Creates instant Employee badges with photograph & thumb print recognition.

**Scope of Work:**
- Redesign of existing product to accommodate the design inputs.
- Structural and aesthetic improvements.
- Ergonomic design inputs.
- Prototypes and final drawings for production.

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**Design Projects**

**Project Brief:**
Redesign of Muit Machine Vehicle for making it more user worthy.

**MSME Unit:**
M/s Wadia Body Builders,
Ahmedabad, Gujarat

**Design Consultant:**
Mr. Amit Paul,
Ahmedabad

**Salient Features of New Design:**
- The vehicle exterior — dynamic and robust
- The water tank is low lying and so the vehicle is more stable.
- The tool box is the side bottom which makes their access faster and better.
- An additional rolling shutter to protect the muiit machine unit for external factors when not in use.

**Scope of Work:**
- Styling of the complete vehicle including redrawing of the front fascia.
- Complete structural and paneling design of the rear including controls.
- Placement of variations aggregates in a simple and easy to use manner.
- Ergonomic issues to be handled.
Design Projects

Project Brief:
Redesign of Volumetric Infusion Pump

Scope of work:
- User friendly and aesthetically appealing look
- Reduce uncertainty in user operation through new interface development

Salient Features of New Design:
- Installation time of 4x set and starting up the device reduced
- Prioritizing the alarms [problems in infusions] made easier during emergency situations
- Anti-freeflow mechanism and orientation of the product was reoriented to make it cost efficient and easier for operation for the end user
- Contemporary aesthetics in interface evokes visual comfort for operation.

Design Projects

Project Brief:
Ceramics Product Design & Development

Products:
- A range of utilitarian products in Ceramics/Terra-cotta/combinations of appropriate materials.
- Kitchen and dining product range designed as Cookware for Flame and Microwave cooking and Serve-ware for Storage/Dispenser

Salient Features of New Design:
- Traditional and sustainable ways of preparing, preserving and serving food
- The product helps in cooking and also adds a unique flavour to the food, making the food healthier.
- Specially designed for the slow cooking process.

Design Projects

Project Brief:
Design of Volume Control Damper

Scope of work:
- Address the issues related to manufacturing, installation
- Reduced assembly time & hence manufacturing cost
- Contemporary style with higher perceived value

Salient Features of New Design:
- Better layout of angle gauge with coloured handle
- Improved visibility of the Angle gauge during inspection
- Handle with direction of the Blades inside the VCD
- Bolting instead of Welding, for better productivity
- Stronger Sections less prone to handling damages
- Clean tools and good aesthetics.

Design Projects

Project Brief:
Design of Language Program / Kit for pre-school children

Scope of work:
- To improve learning ability of children.
- Concept and Prototype development for understanding the design outcome

Salient Features of New Design:
- Help recognize, correlate letters, practice writing both forms of letters
- Enhance vocabulary, visual discrimination skills
- Learn words that rhyme,
- Learn words that are opposites

Design Clinic Scheme for MSMEs

Outlay Rs. 73.58 Cr.  Govt. Support Rs. 49.08 Cr.

200 Design Sensitization Seminars
300 Design Awareness Programmes
100 Professional Design Projects

National Institute of Design – a Nodal Agency

Design Ambition
For MSME Sector

Ministry of MSME, Government of India.

Nodal Agency –

Targets –
200 clusters

Total Budget –
73.58 crores

GDI assistance –
49.08 crores

Design Clinic Scheme for MSMEs

Outlay Rs. 73.58 Cr.  Govt. Support Rs. 49.08 Cr.

200 Design Sensitization Seminars
300 Design Awareness Programmes
100 Professional Design Projects

National Institute of Design – a Nodal Agency
Design Awareness Seminars

- Awareness
- Design Case Studies
- Discussion and Platform Building

* 628 Participants in 114 Seminars
* 40 Participants per Seminar
* 20 Industries per Seminar
* 130 Seminar expenses reimbursed

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As on 17th Mar 2007

Design Awareness Programme

- 5 to 15 Days Survey
- 1 to 5 Days Workshop

Design Awareness Programme Expenses – 4 Lacs max.

Rs. 3,00,000: Govt of India +
Rs. 1,00,000: MSME Asso. Contribution

...strategizing scope for design intervention

- product design
- product diversification
- package design
- branding
- exhibitions
- displays
- product graphics

...strategizing scope for design intervention

- skill up-gradation
- workstation design
- tool designs
- materials & processes design
- joineries & details
Display and controls
(Need Assessment Survey and Design Clinic Workshop)

Product Ergonomics – Legibility of data
(Need Assessment Survey and Design Clinic Workshop)

Product Ergonomics – Safety
(Need Assessment Survey and Design Clinic Workshop)

Design Awareness Programme Status
(Need Assessment Survey & Design Clinic Workshop)

Design Clinic Scheme, National Institute of Design, Paldi, Ahmedabad 380007
designclinicsindia@nid.edu

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- Display small for the viewing distance
- Complicated controls

- Design Awareness Programme Progressed/Completed
- Design Awareness Programme Proposed/Scheduled

Activities
East
NE
West
North
South
Total

Completed/In progress
13
15
11
04
04
47

Proposed/Scheduled
03
20
06
05
03
37

As on 11th Jan – 2012

INTERACTIVE DESIGN STUDY
THANGASHI - 2010

© Thangash and Arpan Soni

INTERACTIVE DESIGN STUDY, winter 2010
THANGASHI
**Awareness Programme**

Organizer: CAD CAM People’s Association, Pune Engineering & Fabrication Cluster

Observation during need assessment survey:
- Improper/No fixtures, lack of standardization
- Old and copied designs, user designed and lack of optimization
- Improper communication for inventory, production and packaging

Scope for Design Intervention:
- New product design / Redesign for distinction and premium at market place
- Automation and Ergonomic condition improvement for better quality and productivity
- Standardization of product and packaging for cost effective production and distribution
- Designing of communication, collaterals for better presentation and reach.

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**Student Design Projects**

- **Up to 6 Months**
  - Project Duration: 4 - 6 Months
  - Project Budget: Rs. 2,00,000/-
  - Financial Assistance by Design Clinic Scheme: Rs. 1,50,000/-
  - MSME Contribution: Up to Rs. 50,000/-

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**Design Projects**

Implementation Status - Design Projects

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<th>Phase</th>
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- Online Application and proposal facility on website
- Professional project guidelines
- Project proposal format

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**Professional Design Projects**

- **Up to 08 Months dedicated**
  - Design intervention in Product/Process
  - Full Ownership by MSME Unit/s
  - Reduced Investment on Design Resources
  - NID Controlled Administrative / Funding Process

- Rs. 15,00,000/- Cost for 1-3 MSME Units/ (Assistance up to 9 Lacs)
- Rs. 25,00,000/- Cost for Group of MSME Unit/s 4 and more (Assistance up to 15 Lacs)
- 50% Financial Assistance Provided by Govt of India

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**National Workshop on “Enabling MSME to be Competitive through Quality Tools”**
MSMEs interested in taking up design projects may provide details for designer’s reference.

Designers contact interested MSMEs and discuss the project for further processing.

Registrations

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As on 11th January 2012

DESIGN CLINIC SCHEME, NATIONAL INSTITUTE OF DESIGN, PALDI, AHMEDABAD 380 007 designclinicsindia@nid.edu

Thank You!!