Product Design Workshop

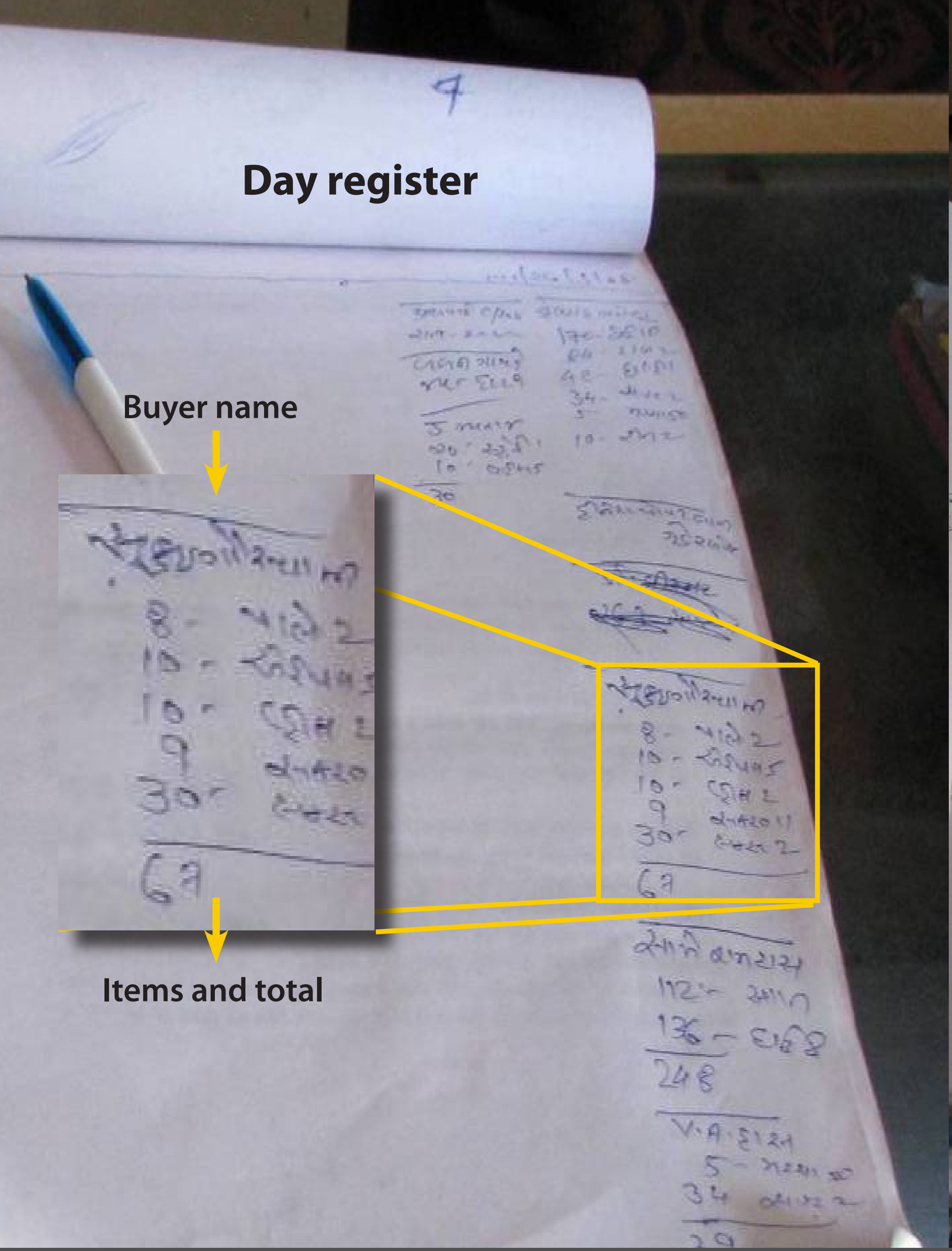
Nai-Hwa Chiang | Antonio Quinones | Swapnil Jadhav | Preethi Lakshminarayanan

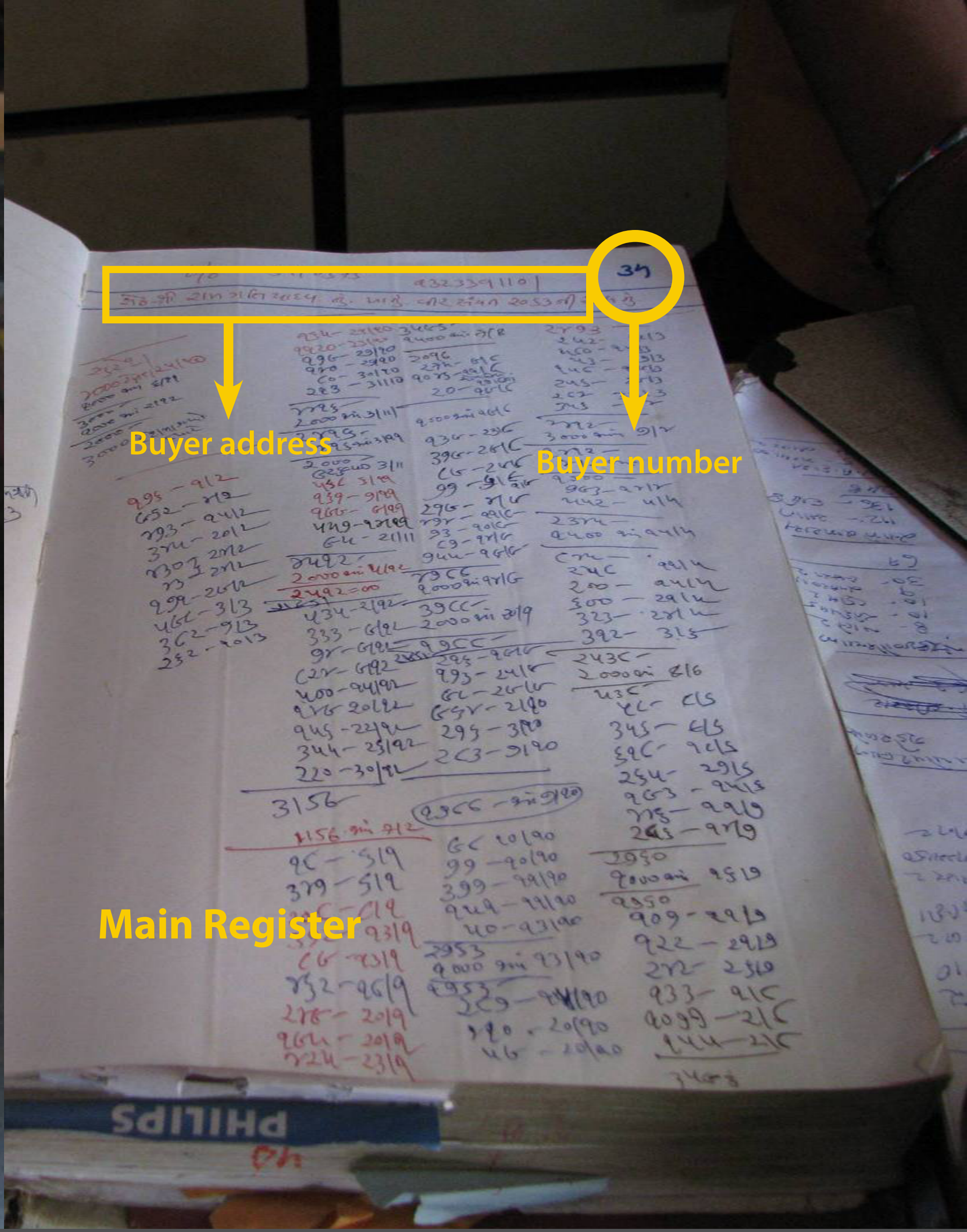
"कॉलेज की लड़की या मम्मी?"
संतूर
अब दो नये रूप में!
तिरुपति
Record Keeping

Powai, India

Project Focus : Kirana Stores

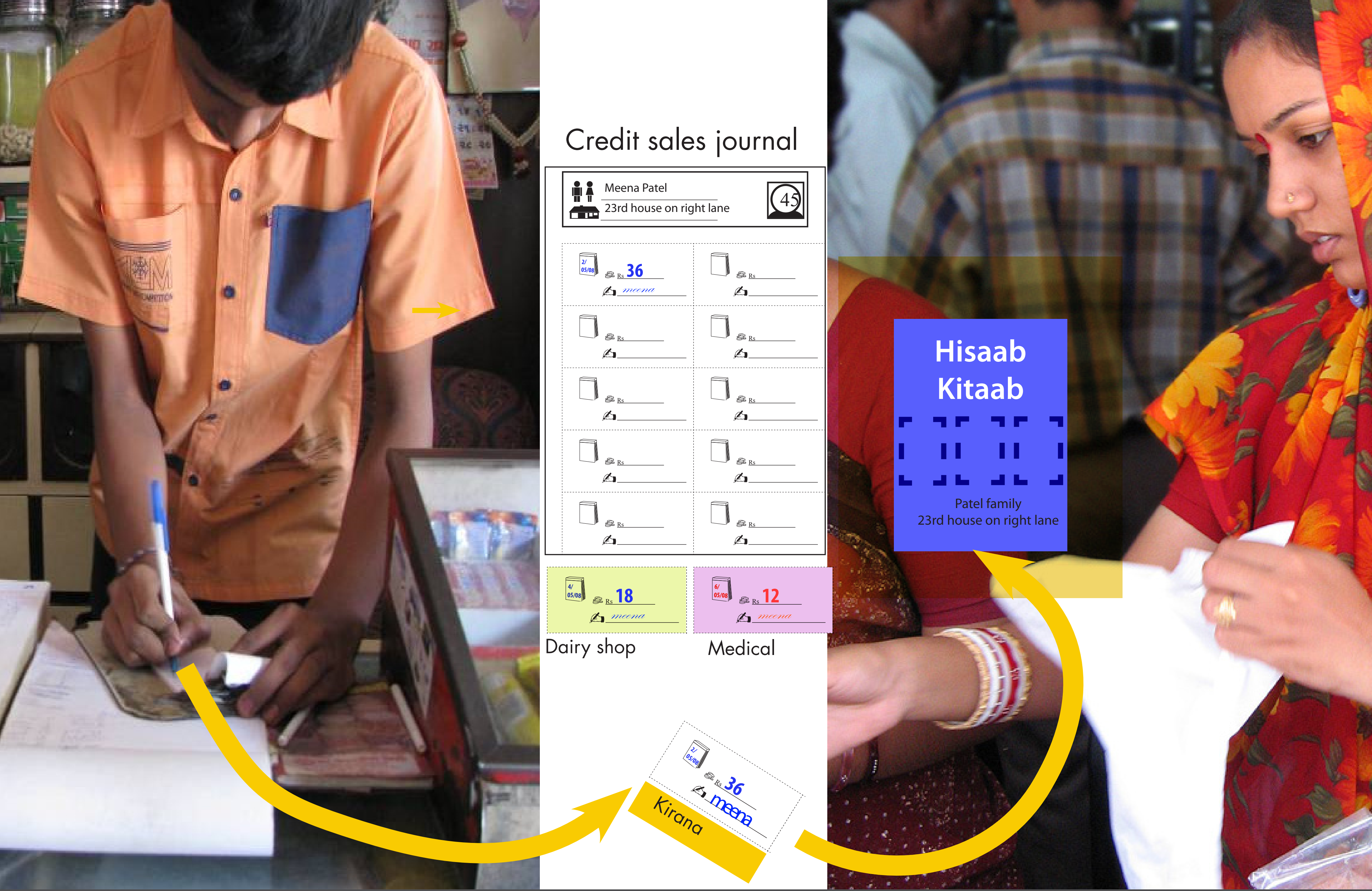
Nai-Hwa Chiang | Antonio Quinones | Swapnil Jadhav | Preethi Lakshminarayanan


Day register
Buyer name
Items and total


Buyer address
Buyer number
Main Register

Problem : Multiple and Cryptic Record Keeping

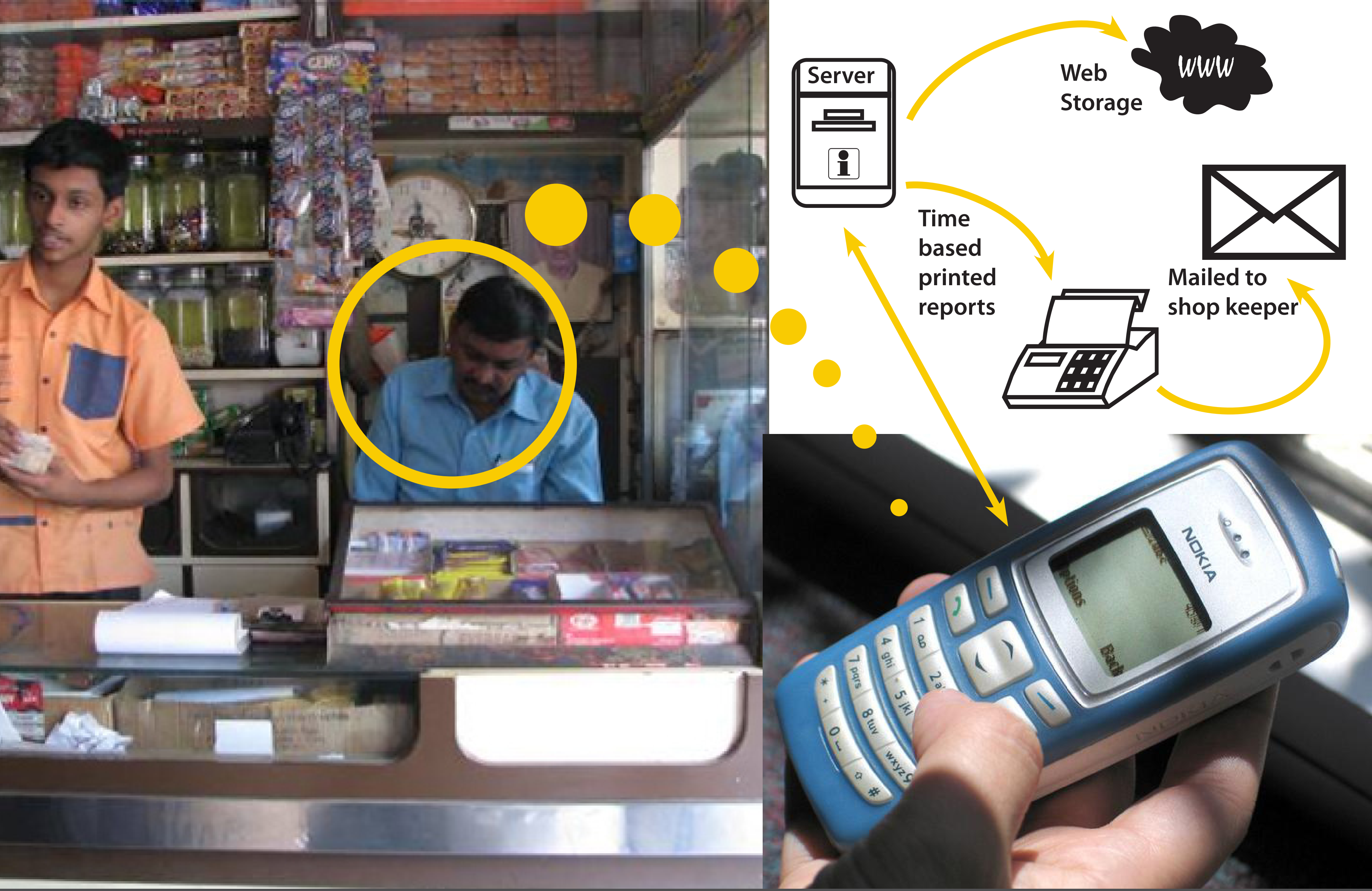
Nai-Hwa Chiang | Antonio Quinones | Swapnil Jadhav | Preethi Lakshminarayanan


Credit sales journal
Meena Patel
23rd house on right lane
45
2/ 05/08
Rs 36
meena
Rs
4/ 05/08
Rs 18
meena
Dairy shop
6/ 05/08
Rs 12
meena
Medical
2/ 05/08
Rs 36
meena
Kirana
Hisaab Kitaab
Patel family
23rd house on right lane

Heavily credit based buying and informal payback systems lead to inconsistency in sales records of both grocer and buyer.

Concept : Hisaab Kitaab

Nai-Hwa Chiang | Antonio Quinones | Swapnil Jadhav | Preethi Lakshminarayanan



Server

Web
Storage

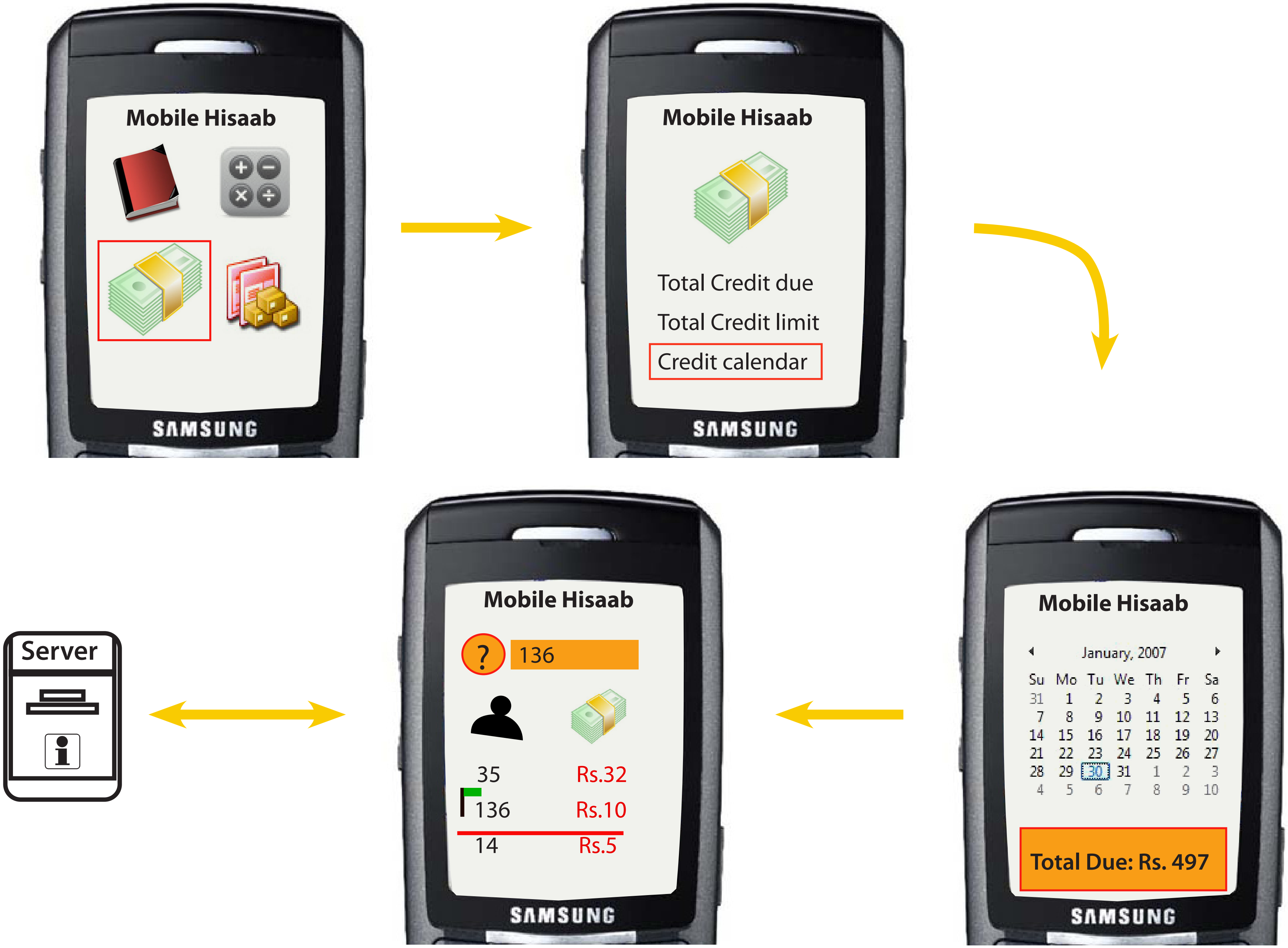
Time
based
printed
reports

Mailed to
shop keeper

Record keeping practices are meticulous but encoded and highly informal; thereby limiting financing options for the shopkeeper.

Concept : Mobile Hisaab

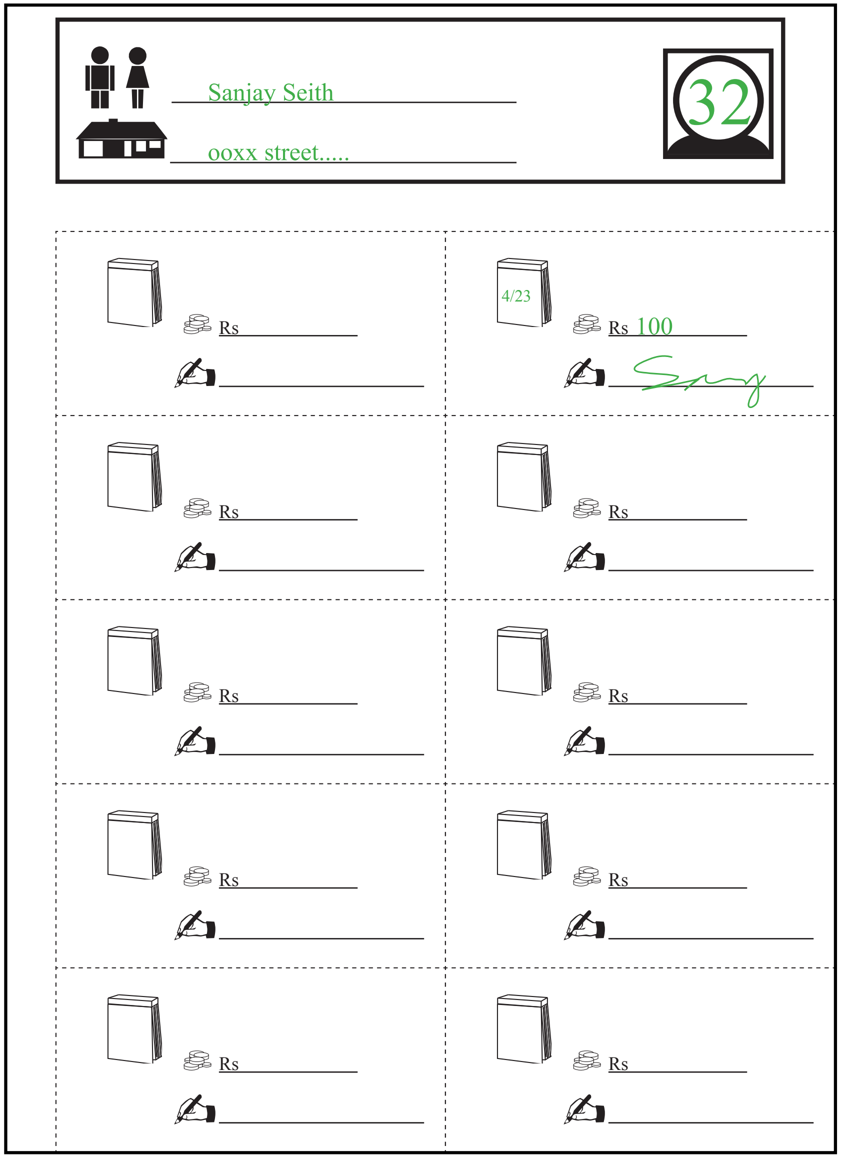
Nai-Hwa Chiang | Antonio Quinones | Swapnil Jadhav | Preethi Lakshminarayanan


Mobile Hisaab
SAMSUNG
Mobile Hisaab
Total Credit due
Total Credit limit
Credit calendar
SAMSUNG
Server
Mobile Hisaab
? 136
35 Rs.32
136 Rs.10
14 Rs.5
SAMSUNG
Mobile Hisaab
January, 2007
Su Mo Tu We Th Fr Sa
31 1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30 31 1 2 3
4 5 6 7 8 9 10
Total Due: Rs. 497
SAMSUNG

Mobile based application allows for the shop keeper to keep his records in order and facilitates greater access to finance from banks etc.

Concept : Mobile Hisaab

Nai-Hwa Chiang | Antonio Quinones | Swapnil Jadhav | Preethi Lakshminarayanan

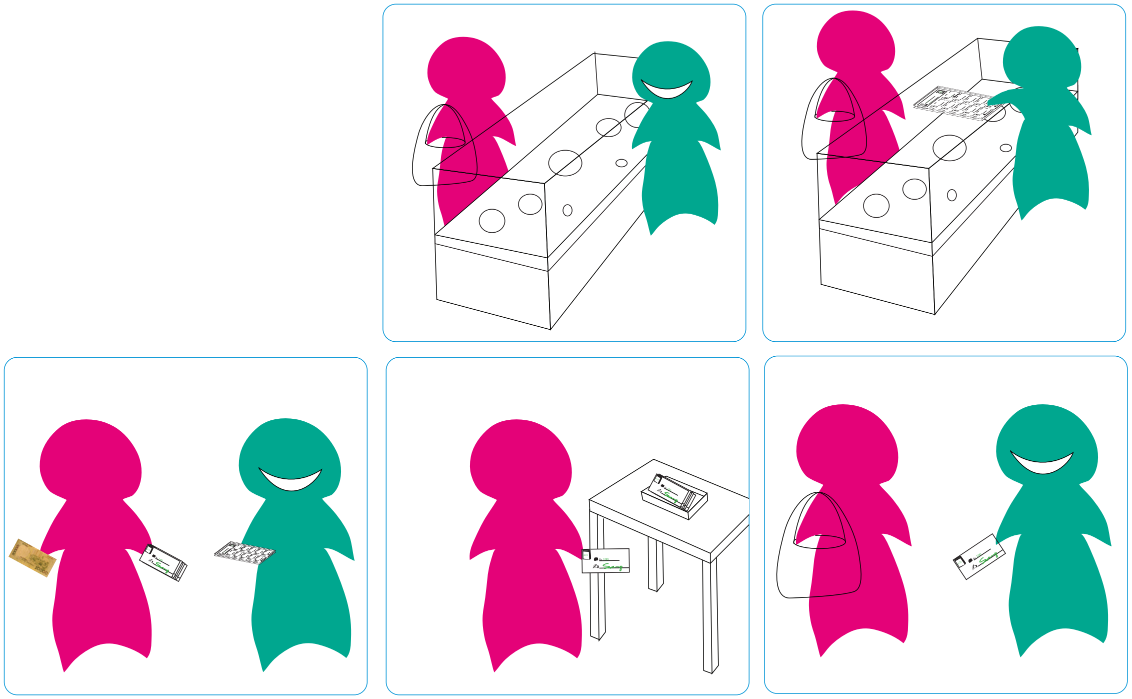


Sanjay Seith

ooxx street.....

32

Rs ______ ______	4/23 Rs 100 Sany
Rs ______ ______	Rs ______ ______
Rs ______ ______	Rs ______ ______
Rs ______ ______	Rs ______ ______
Rs ______ ______	Rs ______ ______



Time frame : 1 week

Results : Still Pending

Validation : Prototype and Scenario

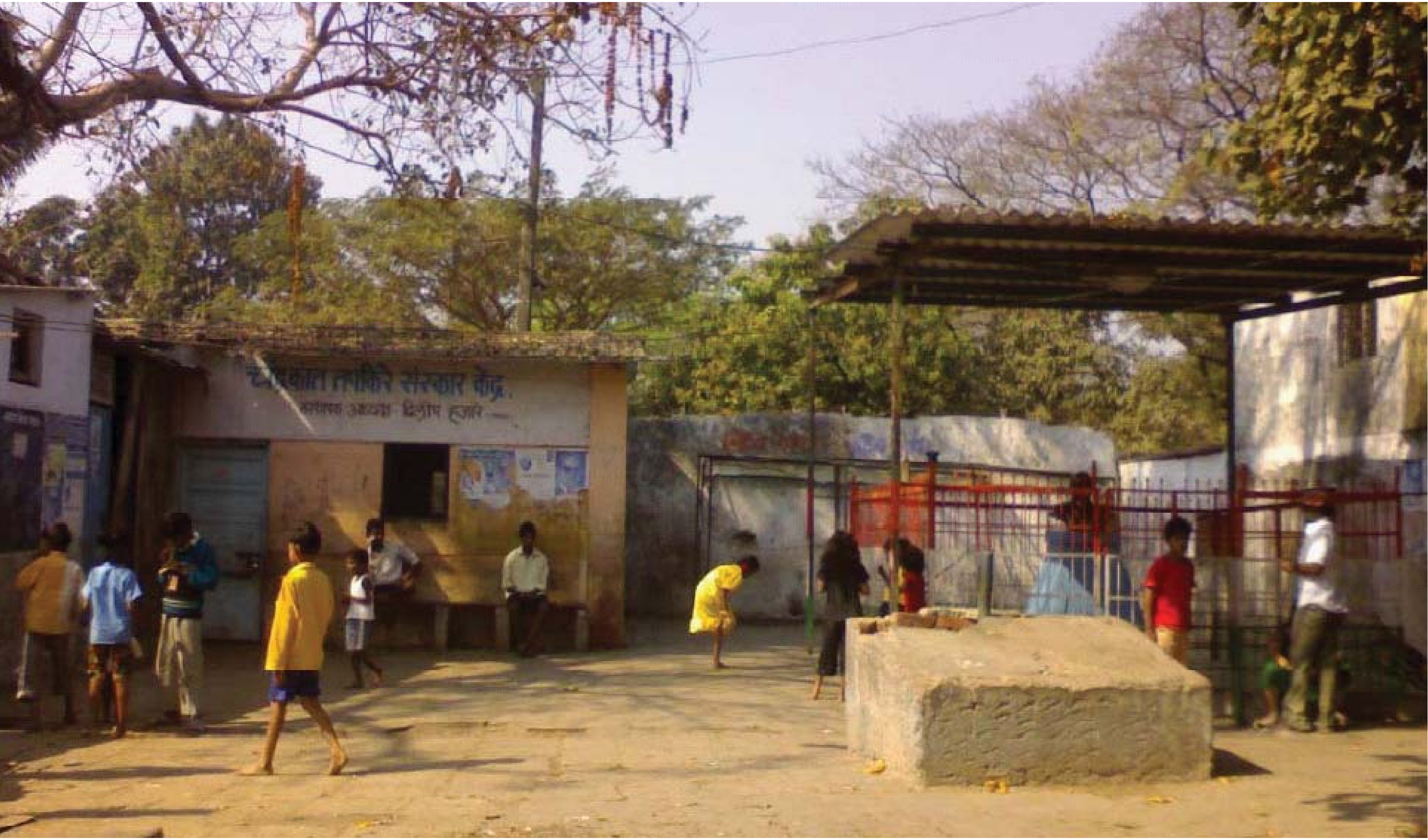
Nai-Hwa Chiang | Antonio Quinones | Swapnil Jadhav | Preethi Lakshminarayanan

Using design to foster social networks in slums of Powai

[IPRO 305] PRODUCT WORKSHOP

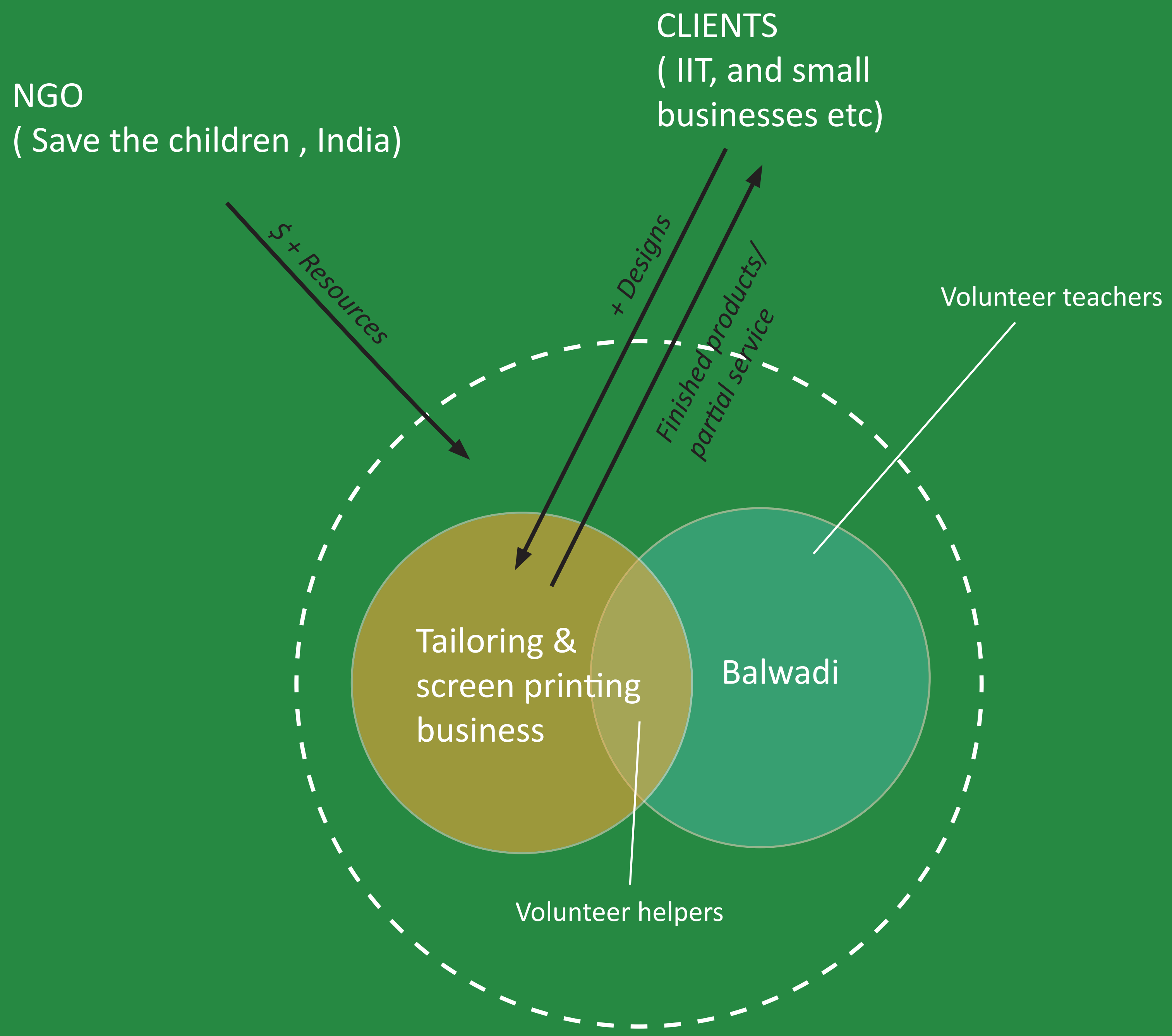
Spring 2008, IIT Chicago
Gauri Verma, Valerie Campbell, Edwin Steinmetz , Vishwesh Kelkar

THE BALWADI - play school - preschool - remedial classes - coaching centre



THE BALWADI : tailoring and screen printing business

EXISTING STRUCTURE


NGO
(Save the children , India)
$ + Resources
CLIENTS
(IIT, and small
businesses etc)
+ Designs
Finished products/
partial service
Volunteer teachers
Tailoring &
screen printing
business
Balwadi
Volunteer helpers

Strengths:

-Manageable scale

-Sharing space

-Combination of women and children

-Strong social bonds

Weaknesses:

-Money doesn’t flow between the two

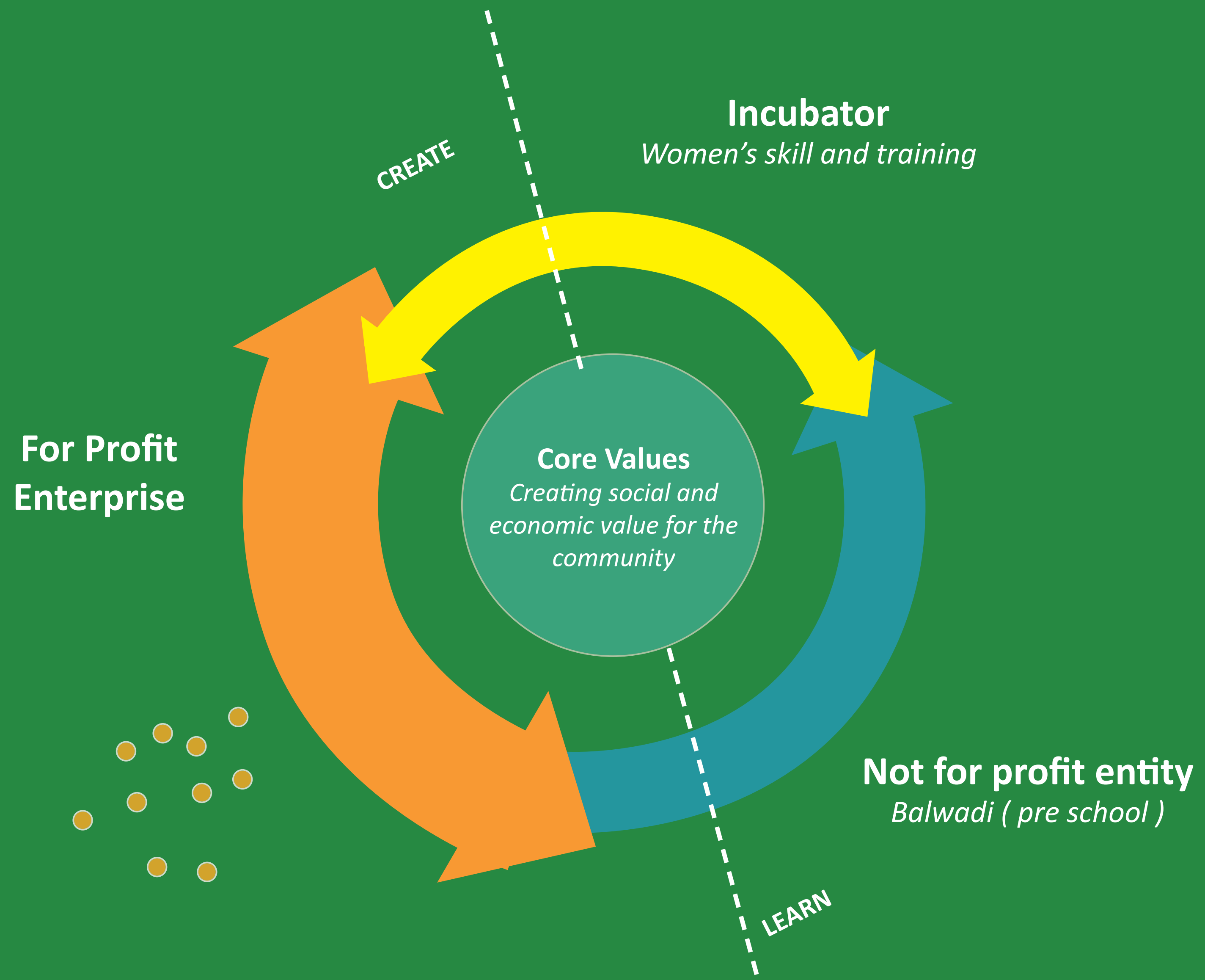
-Dependent on external funding

-Limited in scale.

-Limited profitably

-Does not support learning new skills

PROPOSED STRUCTURE : For profit and not for profit hybrid with an incubator for learning experience



Incubator
Women's skill and training

For Profit Enterprise

Core Values
Creating social and economic value for the community

Not for profit entity
Balwadi (pre school)

Maintains:

-Manageable scale

-Combination of women and children

-Strong social bonds

Added Benefits:

-Self sufficient

-Scaleable and repeatable

-Shared space and resources

-Supports sharing and learning new skills

RELATIONSHIP : Between the Incubator and the Balwadi

Learning by teaching

+

Learning by participation

Trainees get experience in teaching / helping in the Balwadi

Kids learn by making and participating

+

Both imbibe the core values of the organization from the start

RELATIONSHIP : Between the Incubator and the For profit enterprise

Learning by teaching
+
Learning by participation

Trainees get experience by helping in the
for profit business
+
Experts train and teach the others in
order to become independent

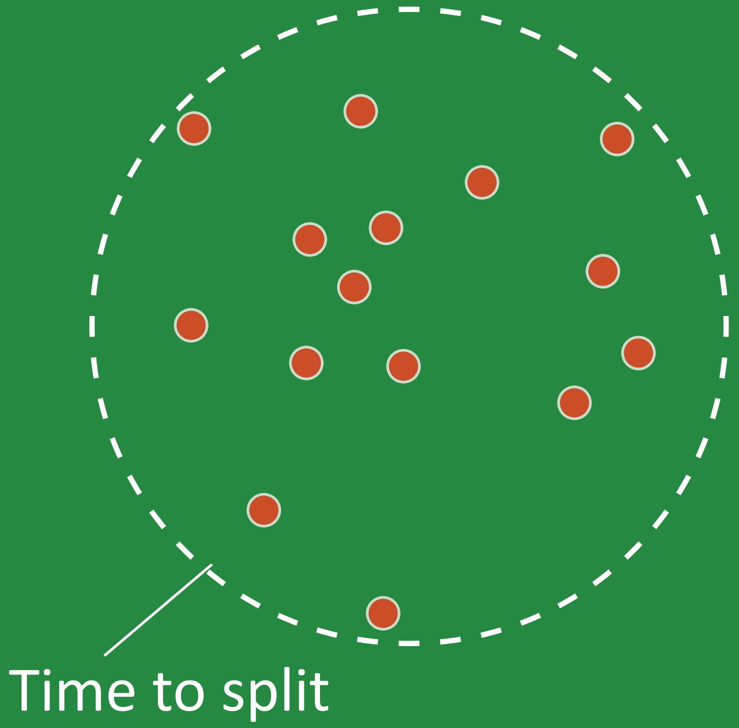
RELATIONSHIP : Between the For profit enterprise and the Balwadi

Channelizing profits
+
Channelizing expertise back into the organization

A percentage of profits from the For profit has to go to the Balwadi

Knowledge and products made by the For profit can be utilized in the Balwadi

RELATIONSHIP : Between the For profit enterprise and the satellite workers



Rewarding expertise
+
Encouraging self reliance
+
Collaboration

Once a member has reached a level of expertise he can choose to:

Work from home /
Join any part of the organization/
Take his share and split with others to form a new Balwadi

POTENTIAL CLIENTS - CUSTOMERS - PARTNERS - ALLIES

RETAILERS
Crafts, apparel, home furnishing , accessories

INDIVIDUALS
Customized products

NGO's
(child education)
Expertise exchange, children involvement, Educational aids

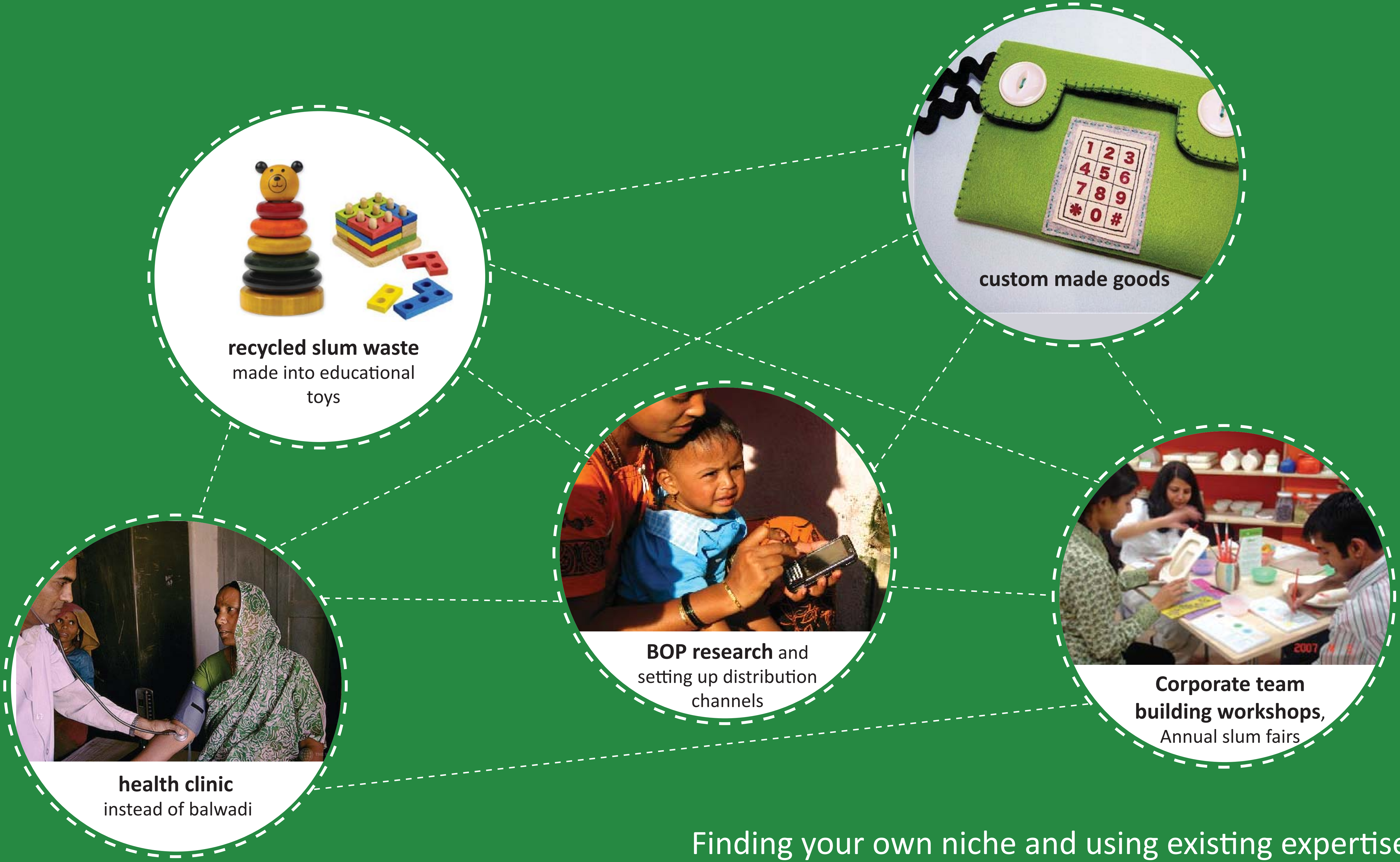
SOCIAL ENTREPRENEURS
Expertise exchange, children and community involvement

CORPORATES
(CSR Ddepartments)
Co creation workshops

ENGG. / INFO TECH
Expertise exchange, BOP research, technology & product development

Other **BALWADIS...**

NETWORK : sharing resources between balwadis



recycled slum waste
made into educational toys

custom made goods

BOP research and setting up distribution channels

Corporate team building workshops,
Annual slum fairs

health clinic
instead of balwadi

Finding your own niche and using existing expertise

Home based assembly businesses

in Powai

IPRO 305 – Design Workshop

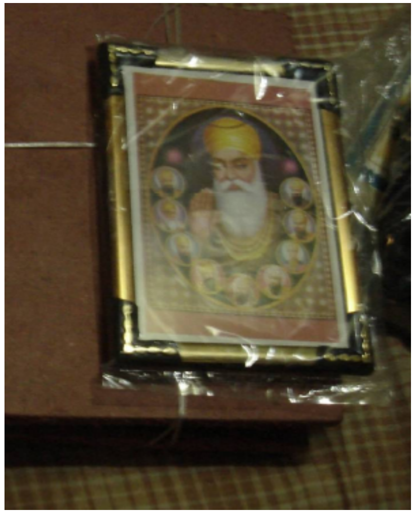
Soham Patel
Bhumi Gajjar
Anshul Maheshwari

Design Principle

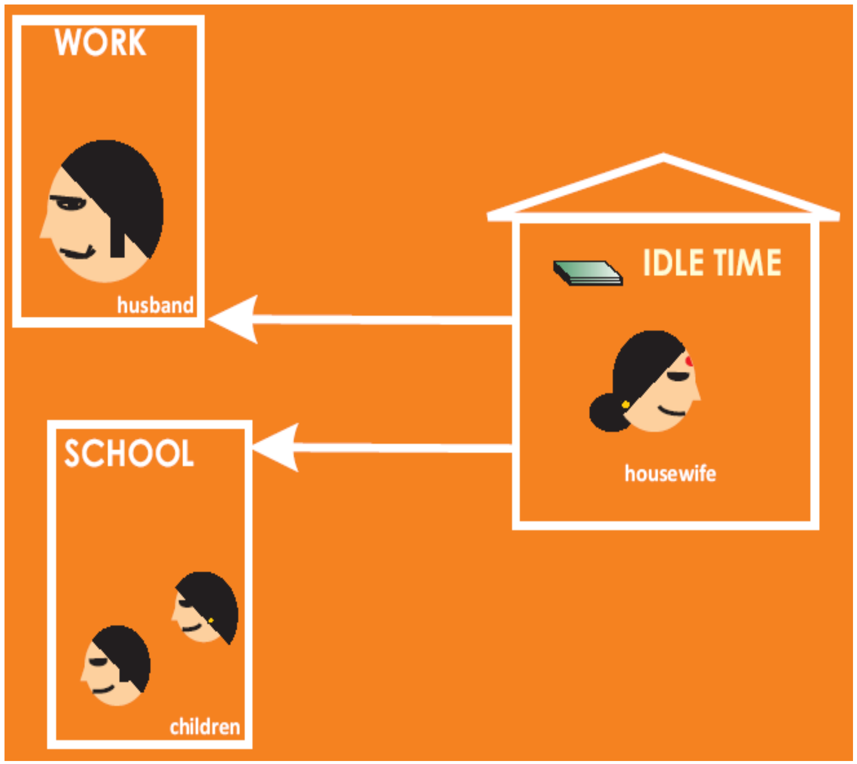
Enhance the social networking aspect of working and sharing responsibilities of women workers in slums in order to:

- Boost productivity
- Provide entertainment
- Improve health and well-being
- Increase financial gain

om



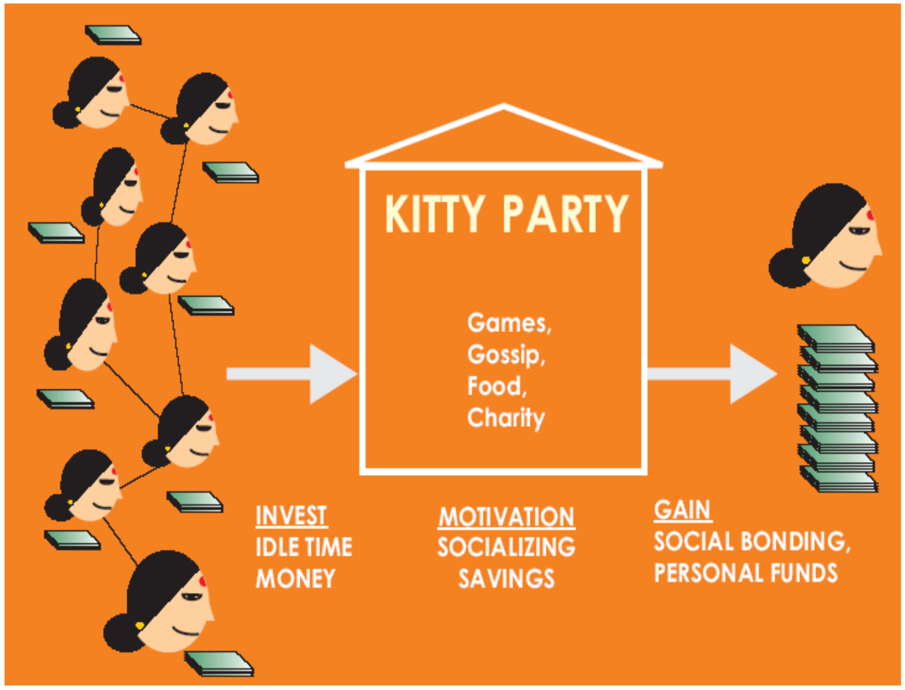
Kitty Party Model: Upper and Middle class housewives


WORK
husband
IDLE TIME
housewife
SCHOOL
children

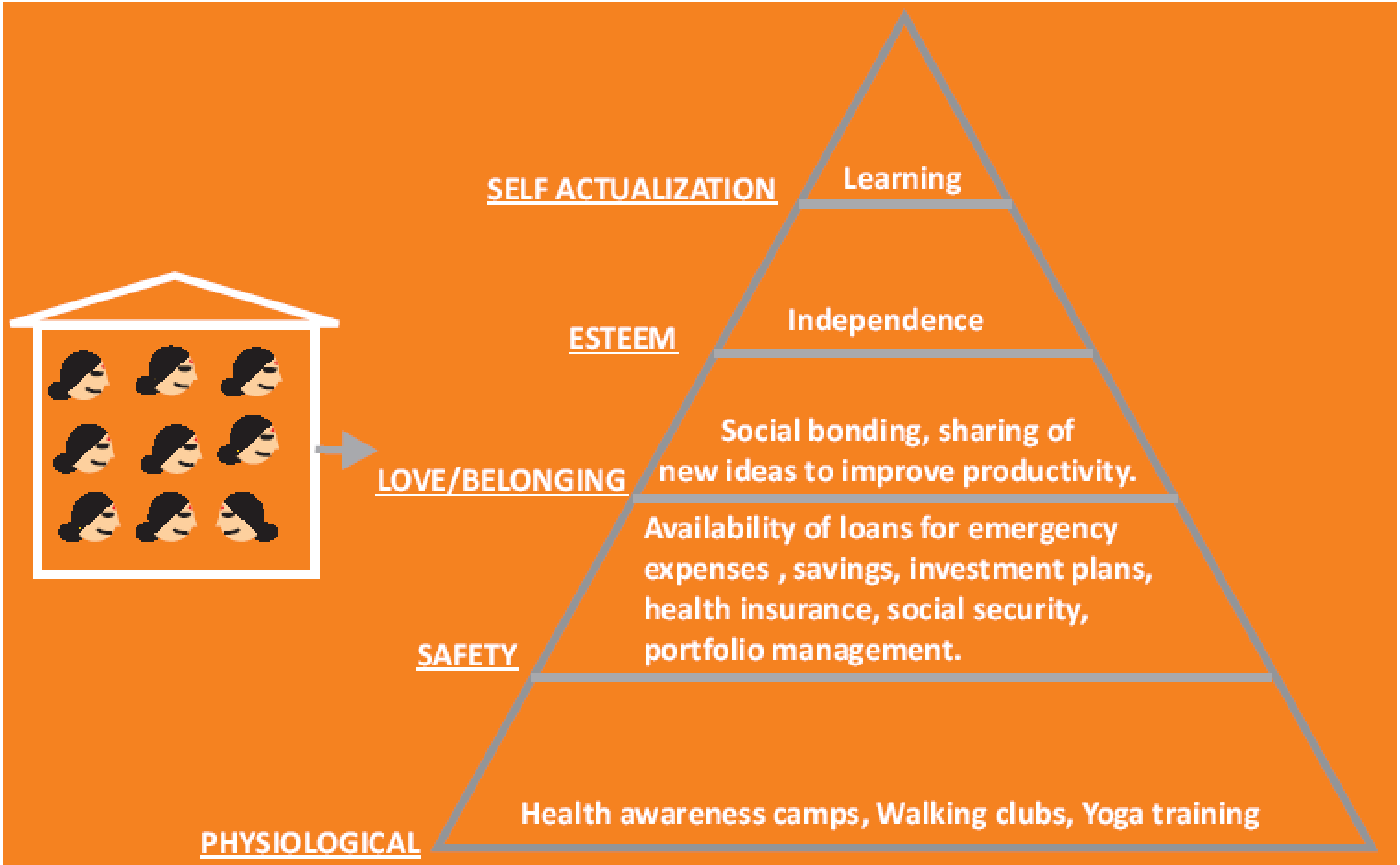
Stay at home wives
have idle time and money

Kitty Party:

- Create a network amongst themselves
- Come together at a venue
- Socialize, play games and earn money


KITTY PARTY
Games,
Gossip,
Food,
Charity
INVEST
IDLE TIME
MONEY
MOTIVATION
SOCIALIZING
SAVINGS
GAIN
SOCIAL BONDING,
PERSONAL FUNDS

Enhanced model for women workers in slums



SELF ACTUALIZATION	Learning
ESTEEM	Independence
LOVE/BELONGING	Social bonding, sharing of new ideas to improve productivity.
SAFETY	Availability of loans for emergency expenses , savings, investment plans, health insurance, social security, portfolio management.
PHYSIOLOGICAL	Health awareness camps, Walking clubs, Yoga training

MASLOW'S HIERARCHY OF NEEDS

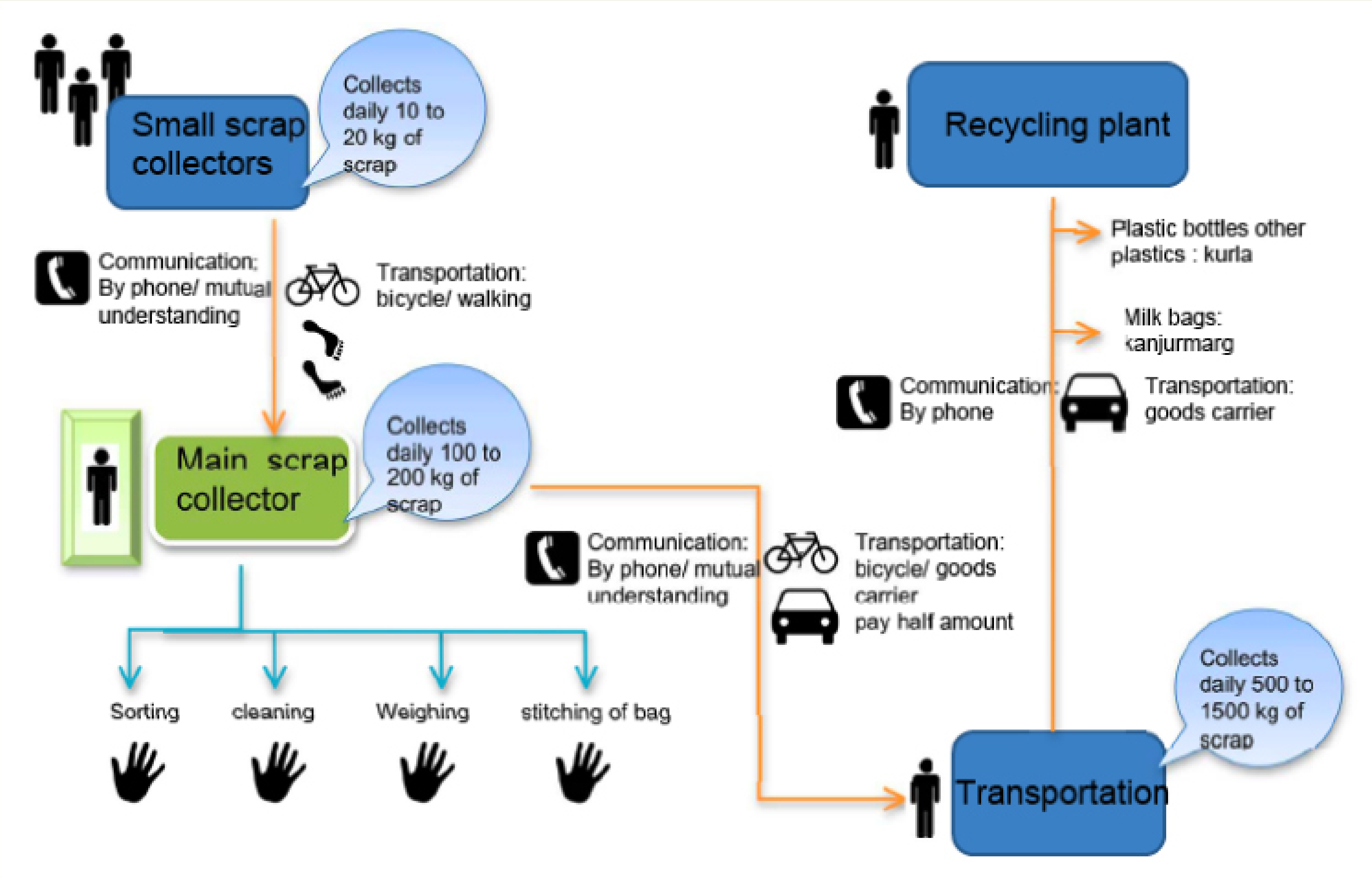
Kitty Co-operative addresses all needs for women workers in slums

Recycling System in Powai

Product Design Workshop | Spring 2008 | Institute of Design

Team 3 | Vasile Bora, Dan Folwaczny, Kyungsun Kim, Shilpa Rao , Amy Sprague

Current Ecosystem



Small scrap collectors

Collects daily 10 to 20 kg of scrap

Communication: By phone/ mutual understanding

Transportation: bicycle/ walking

Main scrap collector

Collects daily 100 to 200 kg of scrap

Sorting

cleaning

Weighing

stitching of bag

Communication: By phone/ mutual understanding

Transportation: bicycle/ goods carrier pay half amount

Transportation

Collects daily 500 to 1500 kg of scrap

Recycling plant

Plastic bottles other plastics : kurla

Milk bags: kanjurmarg

Communication: By phone

Transportation: goods carrier

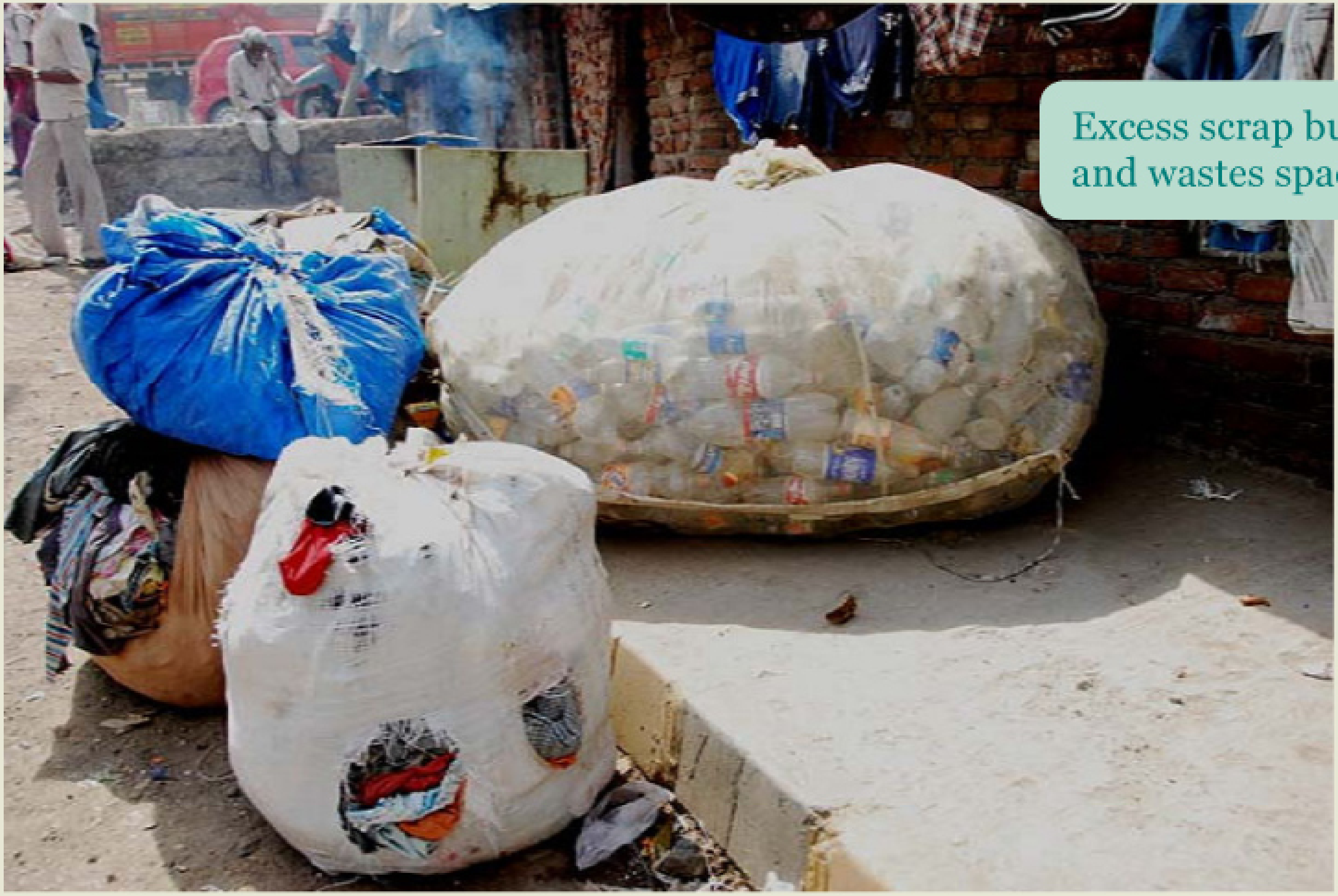
Current scrap collection system

No set time schedule for collection

Current scrap collection system

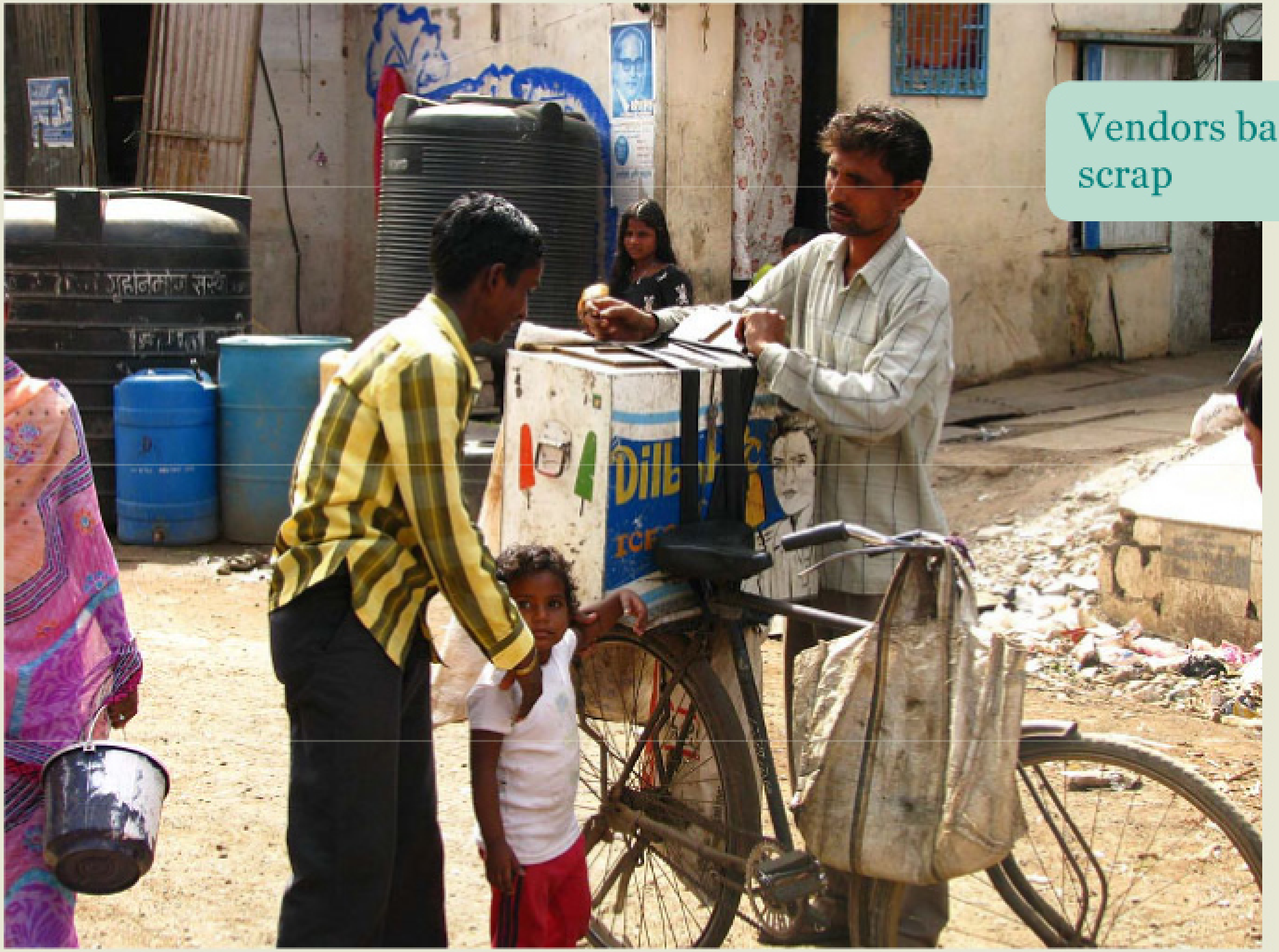
Value of scrap changes

Current scrap collection system



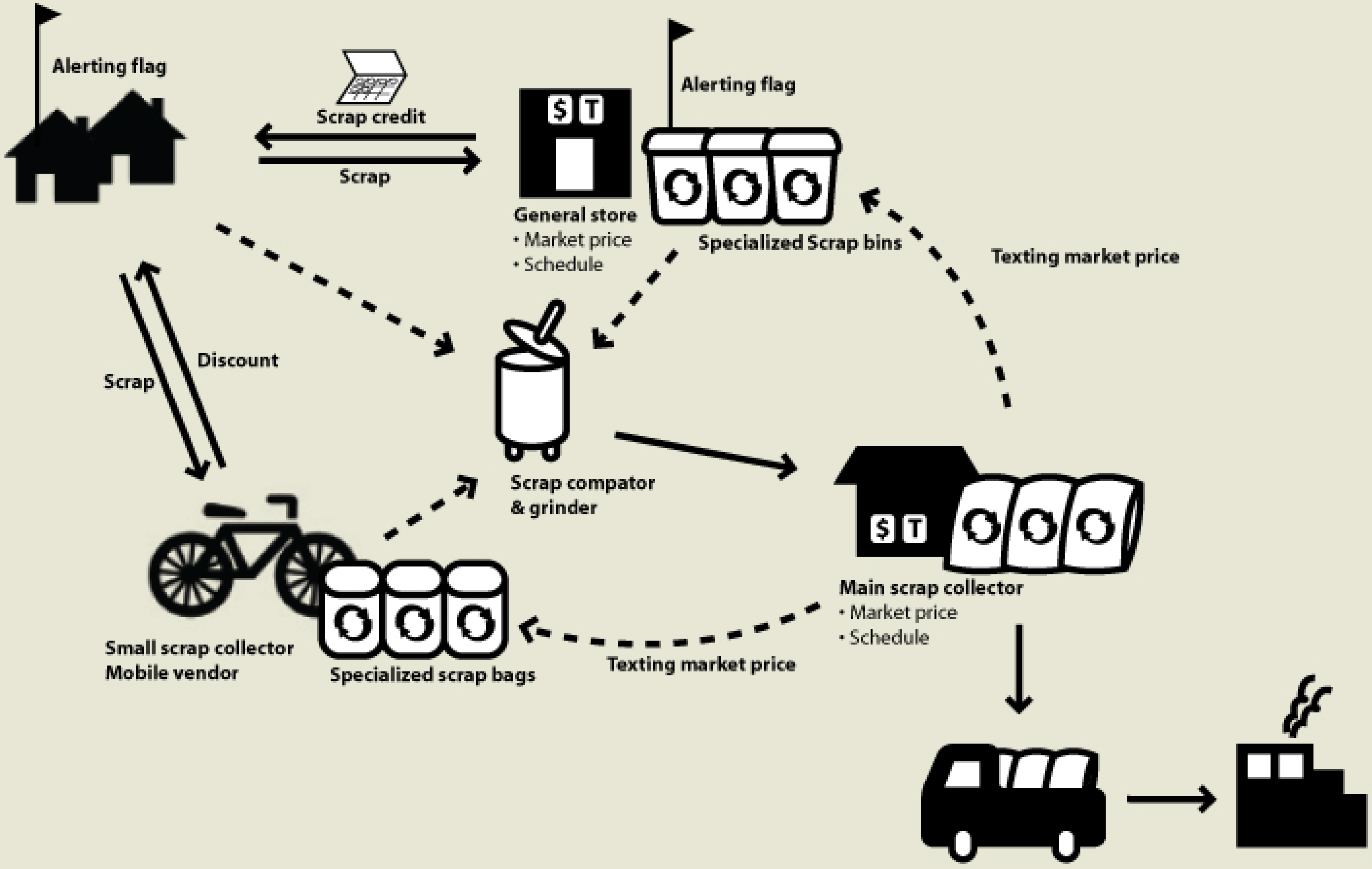
Excess scrap builds up and wastes space

Current scrap collection system



Vendors barter with scrap

Concept Model



Alerting flag

Scrap credit

Scrap

General store
- Market price
- Schedule

Alerting flag

Specialized Scrap bins

Texting market price

Scrap

Discount

Scrap compator & grinder

Main scrap collector
- Market price
- Schedule

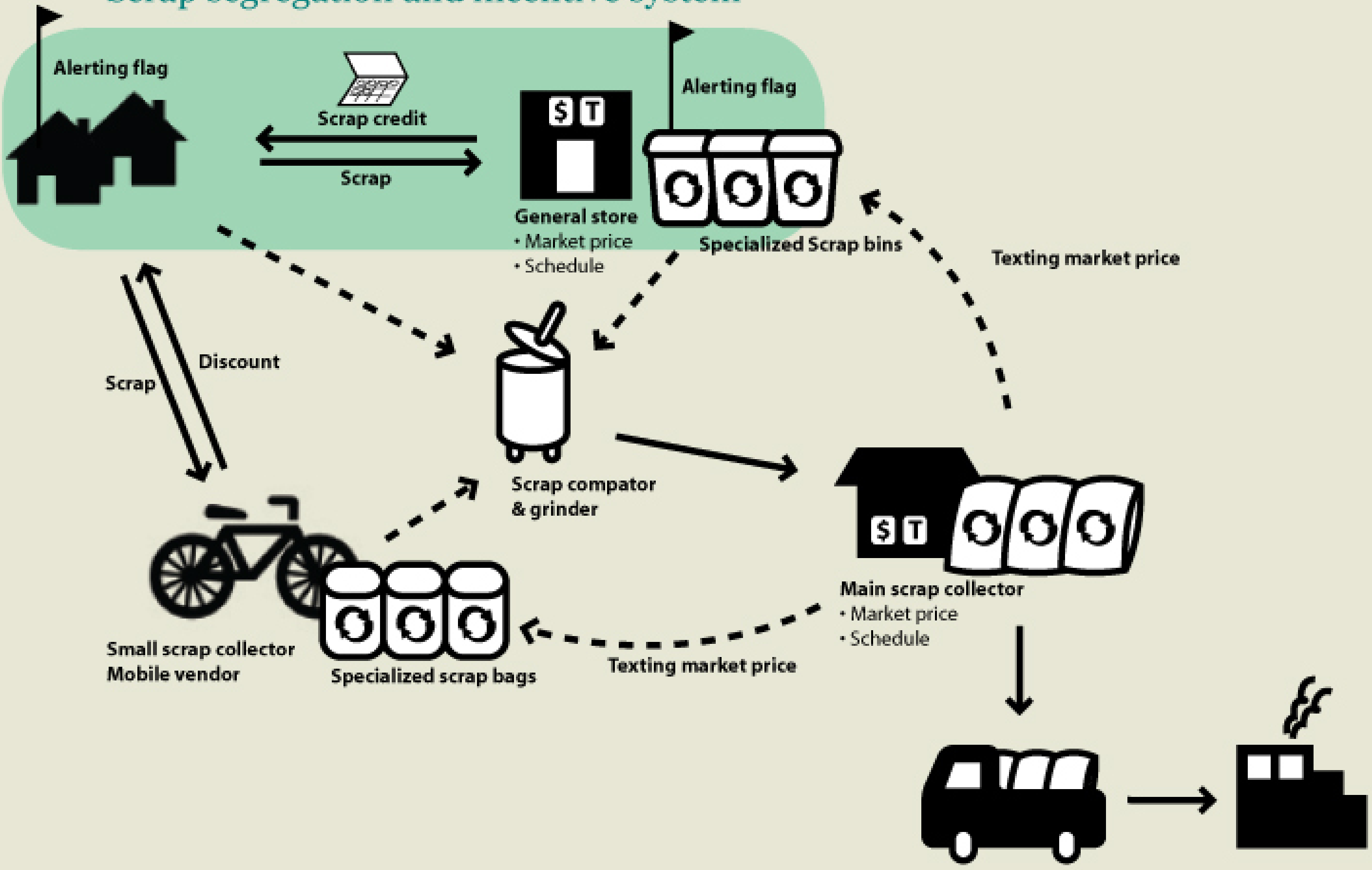
Small scrap collector
Mobile vendor

Specialized scrap bags

Texting market price

Concept Model

Scrap segregation and incentive system



Alerting flag

Scrap credit

Scrap

General store
- Market price
- Schedule

Alerting flag

Specialized Scrap bins

Texting market price

Scrap

Discount

Scrap compator
& grinder

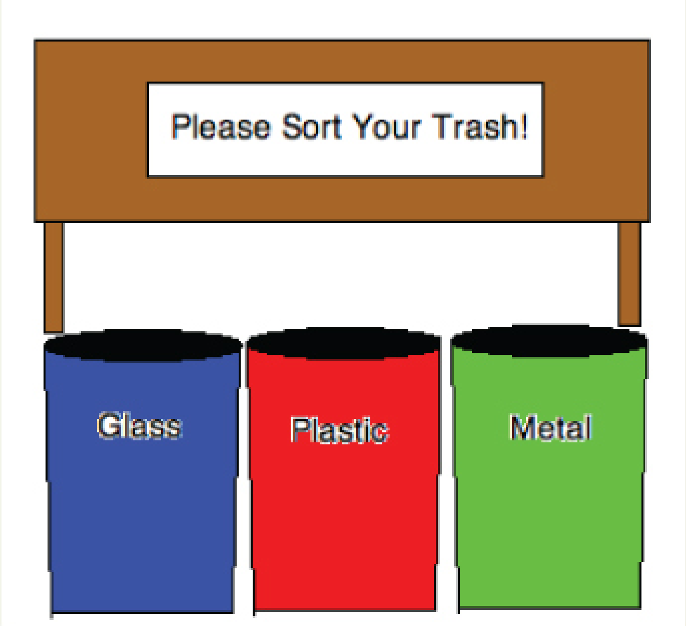
Main scrap collector
- Market price
- Schedule

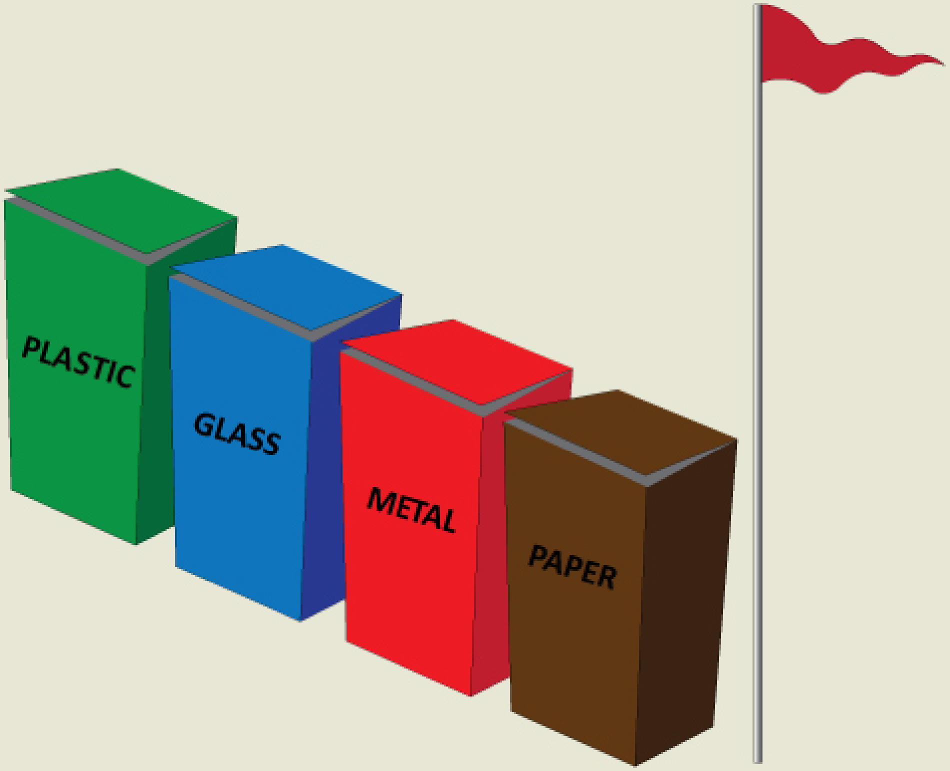
Small scrap collector
Mobile vendor

Specialized scrap bags

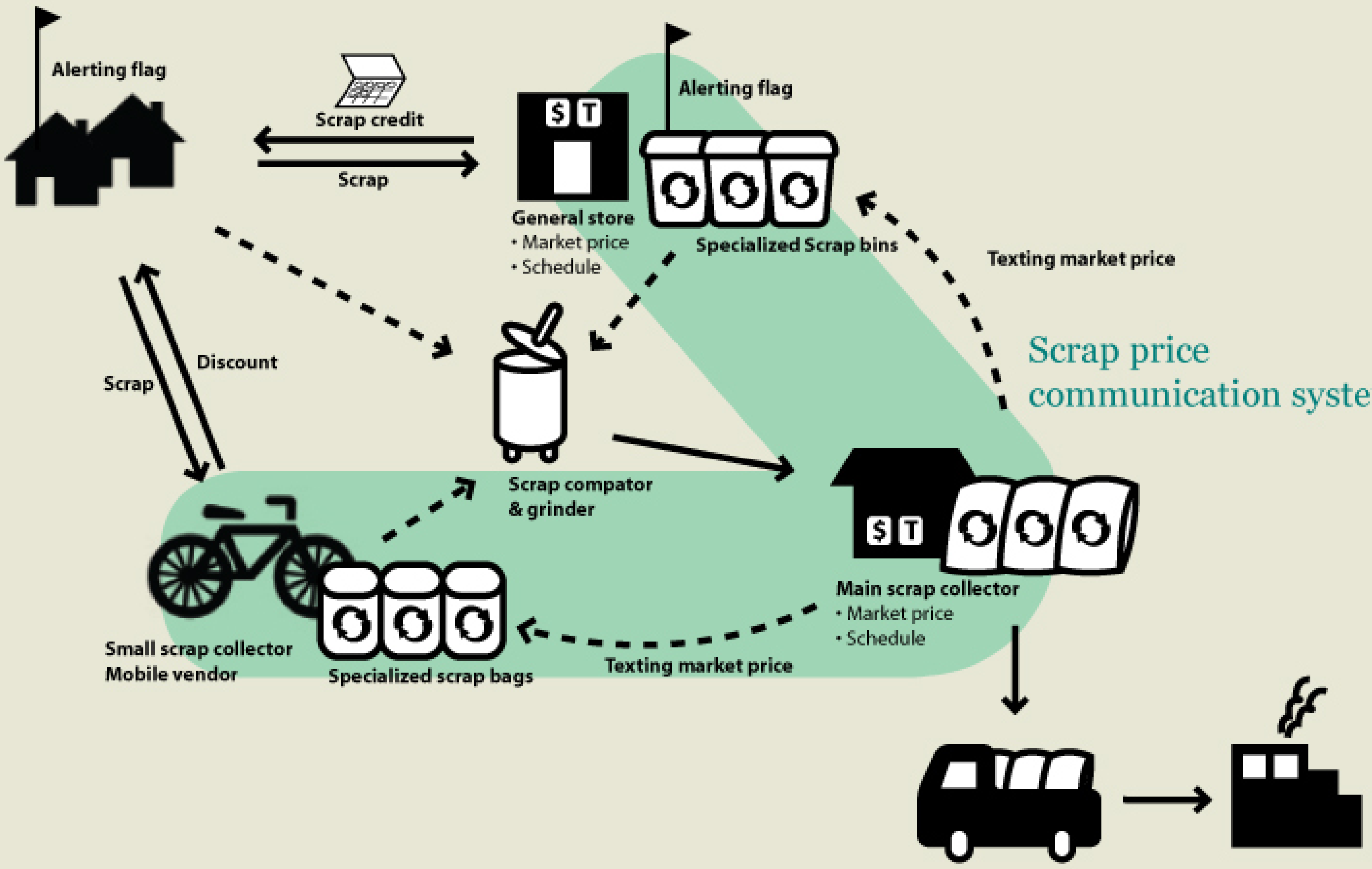
Texting market price

Product Concept:
Color Coded Bins


Please Sort Your Trash!
Glass
Plastic
Metal

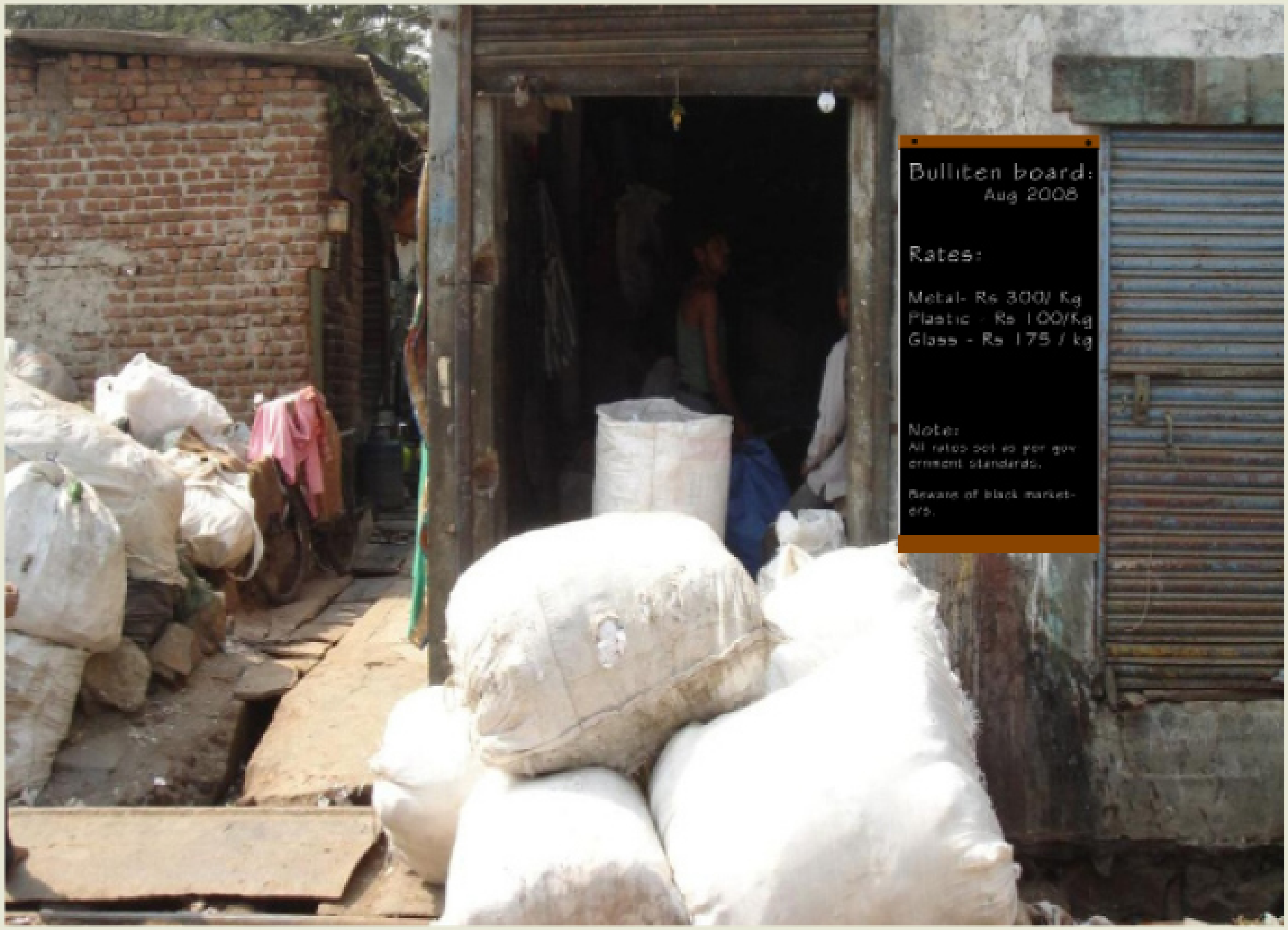

PLASTIC
GLASS
METAL
PAPER

Concept Model

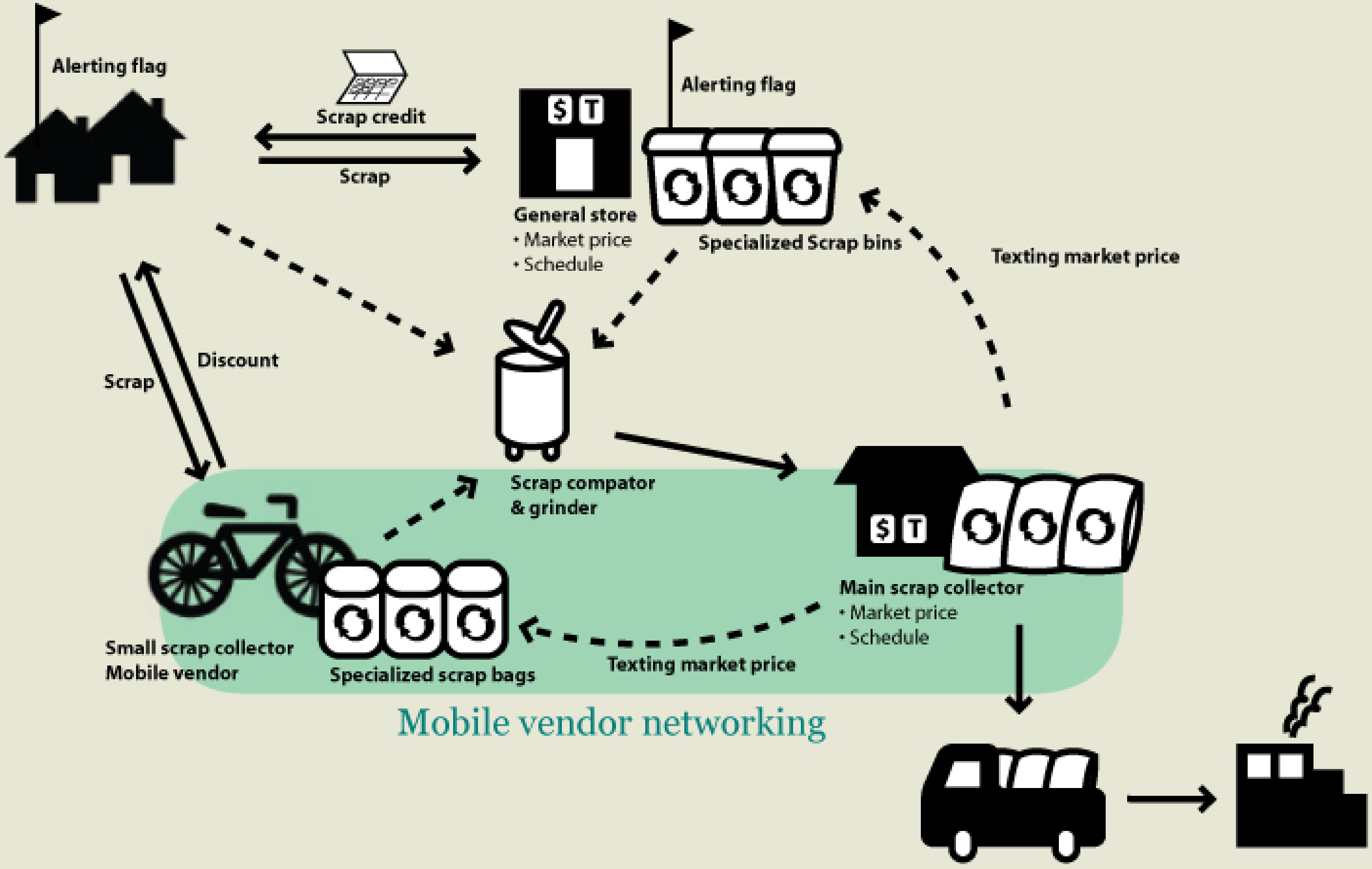

Alerting flag
Scrap credit
Scrap
$ T
General store
• Market price
• Schedule
Alerting flag
Specialized Scrap bins
Texting market price
Scrap
Discount
Scrap compator
& grinder
Scrap price
communication system
$ T
Main scrap collector
• Market price
• Schedule
Small scrap collector
Mobile vendor
Specialized scrap bags
Texting market price

Product Concept:

Bulletin board to display market prices of scrap

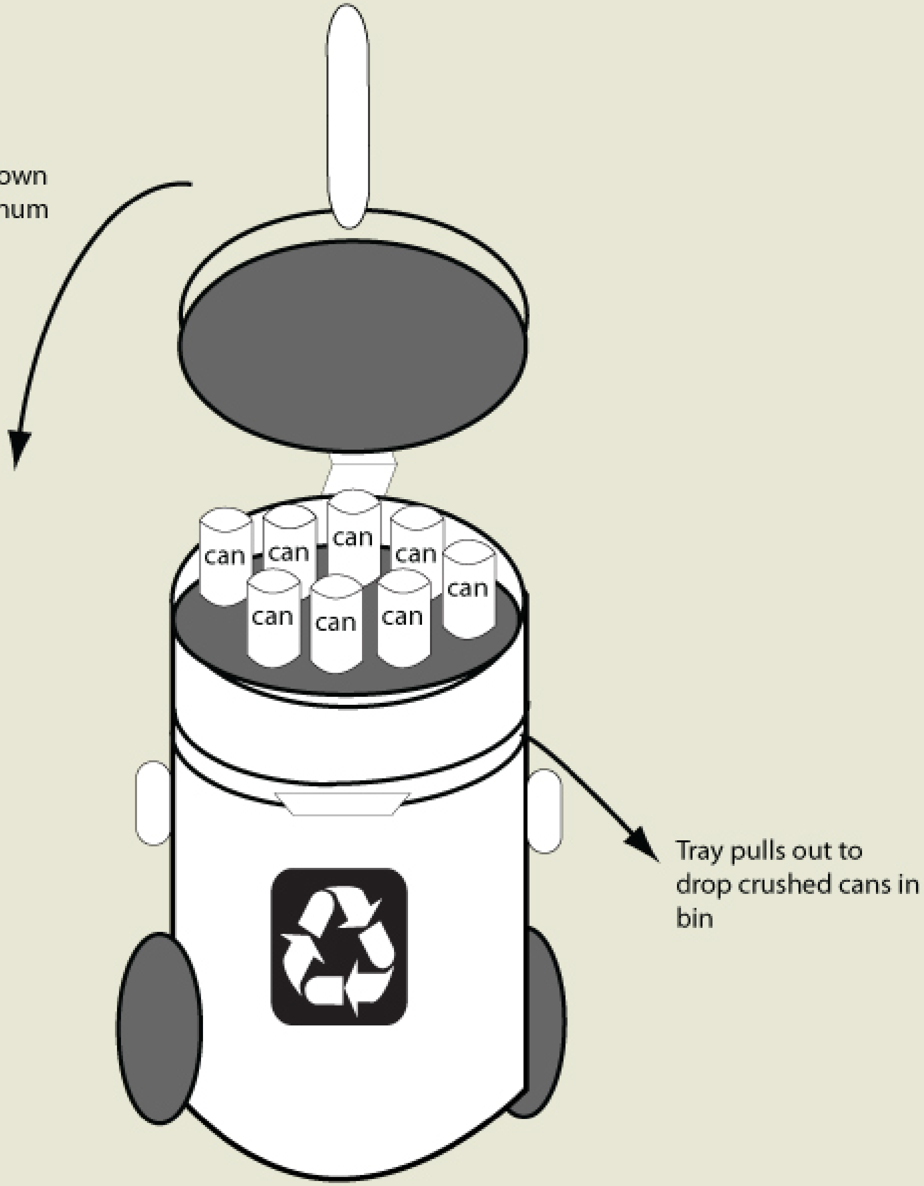

Bulliten board:
Aug 2008
Rates:
Metal- Rs 300/ Kg
Plastic - Rs 100/Kg
Glass - Rs 175 / kg
Note:
All rates set as per government standards.
Beware of black marketers.

Concept Model


Alerting flag
Scrap credit
Scrap
$ T
General store
• Market price
• Schedule
Alerting flag
Specialized Scrap bins
Texting market price
Scrap
Discount
Scrap compator
& grinder
$ T
Main scrap collector
• Market price
• Schedule
Small scrap collector
Mobile vendor
Specialized scrap bags
Texting market price

Mobile vendor networking

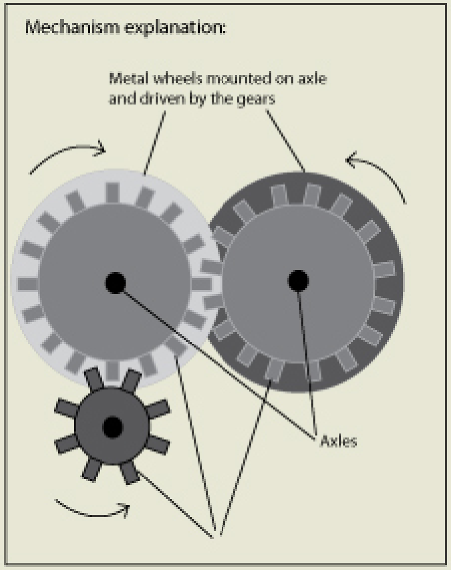
Product Concept:
Can Compactor

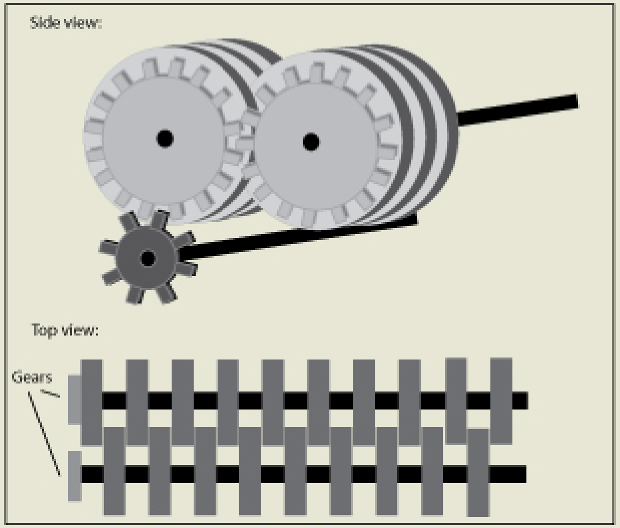

Handle pulls down to crush aluminum cans

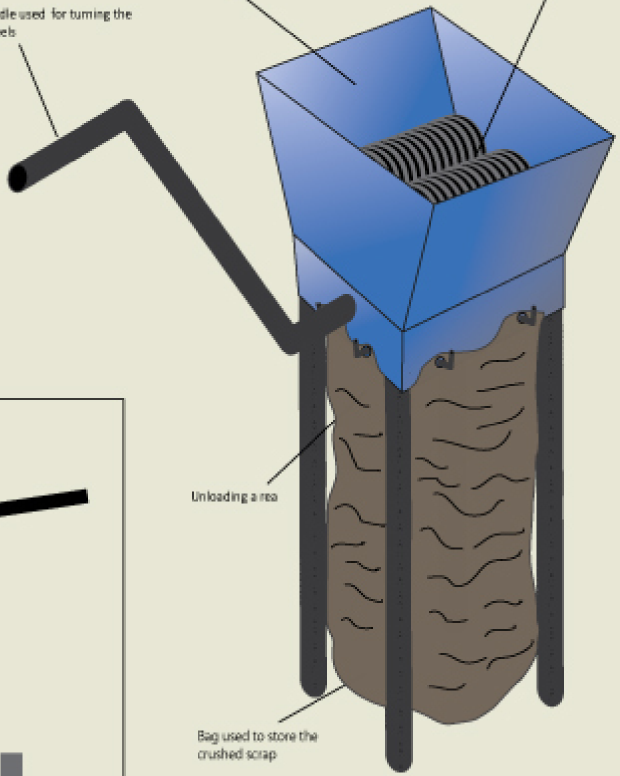
Tray pulls out to drop crushed cans in bin

can
can
can
can
can
can
can
can
can

Product Concept:
Scrap Grinder


Mechanism explanation:
Metal wheels mounted on axle and driven by the gears
Axles


Side view:
Top view:
Gears


Handle used for turning the wheels
Loading area
Rotating wheels mounted on two paralles axes that intertwine and crush the inserted scrap; the two sets of wheels turn in opposite **directions**
Unloading area
Bag used to store the crushed scrap