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**RSD7 - RELATING SYSTEMS
THINKING AND DESIGN 7**

Turin, 24-26 October 2018

**TRACK 4
TERRITORIAL METABOLISM AND
FLOURISHING ECONOMIES**

PACKAGING RECONDITIONED HOUSEHOLD APPLIANCES

Marco Bozzola, Claudia De Giorgi

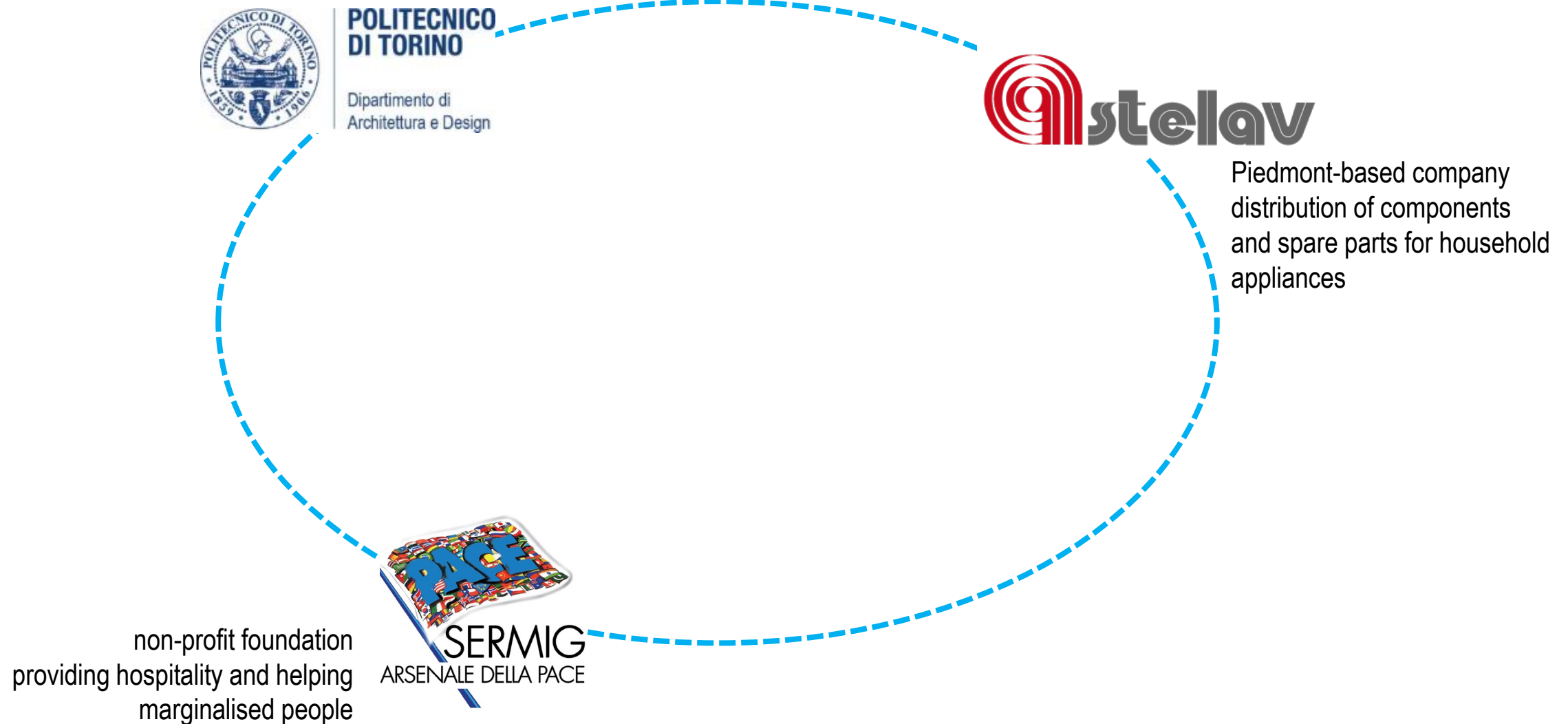
DAD Department of Architecture and Design, Politecnico di Torino, Italy



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PARTNERSHIP



GOAL



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Piedmont-based company
distribution of components
and spare parts for household
appliances

Development of new systems for the
**protection, transportation,
presentation** and sale of used
and **reconditioned household
appliances**



non-profit foundation
providing hospitality and helping
marginalised people

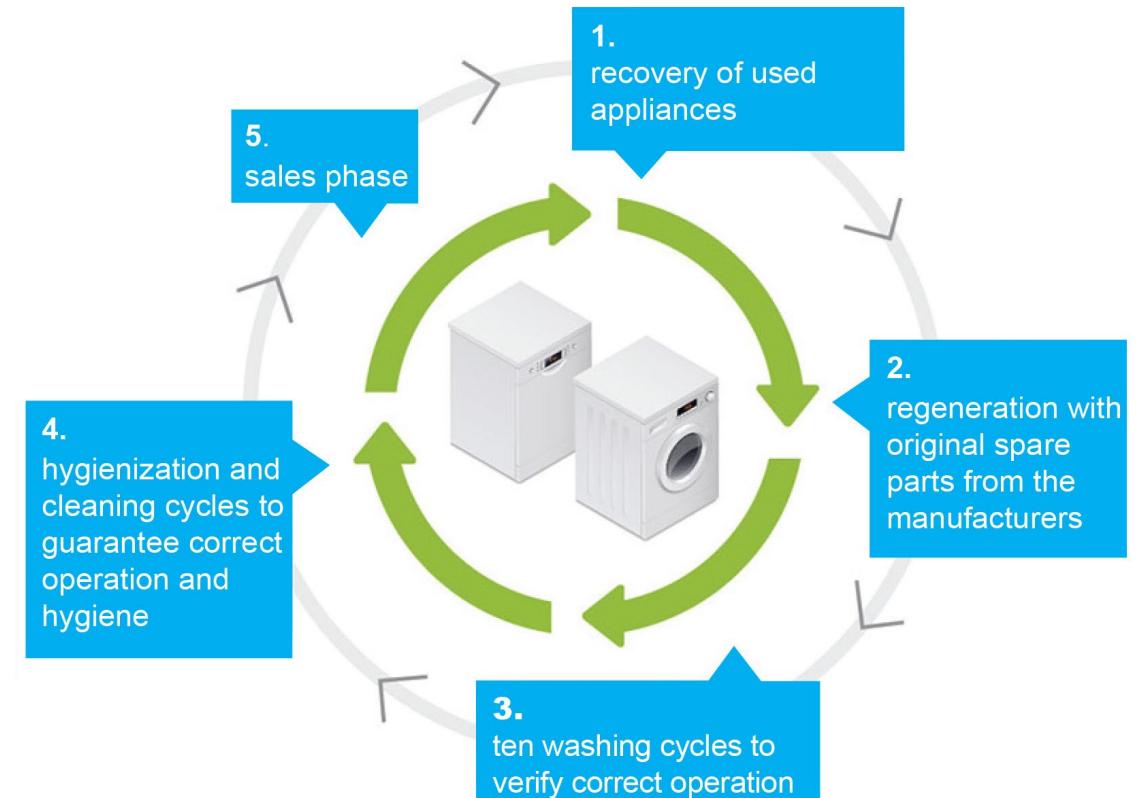
SERMIG
ARSENALE DELLA PACE

CONTEXT / Ri-Generation project

ASTELAV + SERMIG



**RECOVERY AND REGENERATION OF
ABANDONED WHITE GOODS AND
SIMULTANEOUSLY DEVELOPMENT OF
NEW SKILLS FOR PEOPLE IN
CONDITIONS OF SOCIAL MARGINALITY**



**WEEE
recovery**



**new
life cycle**



**aware
consumption**

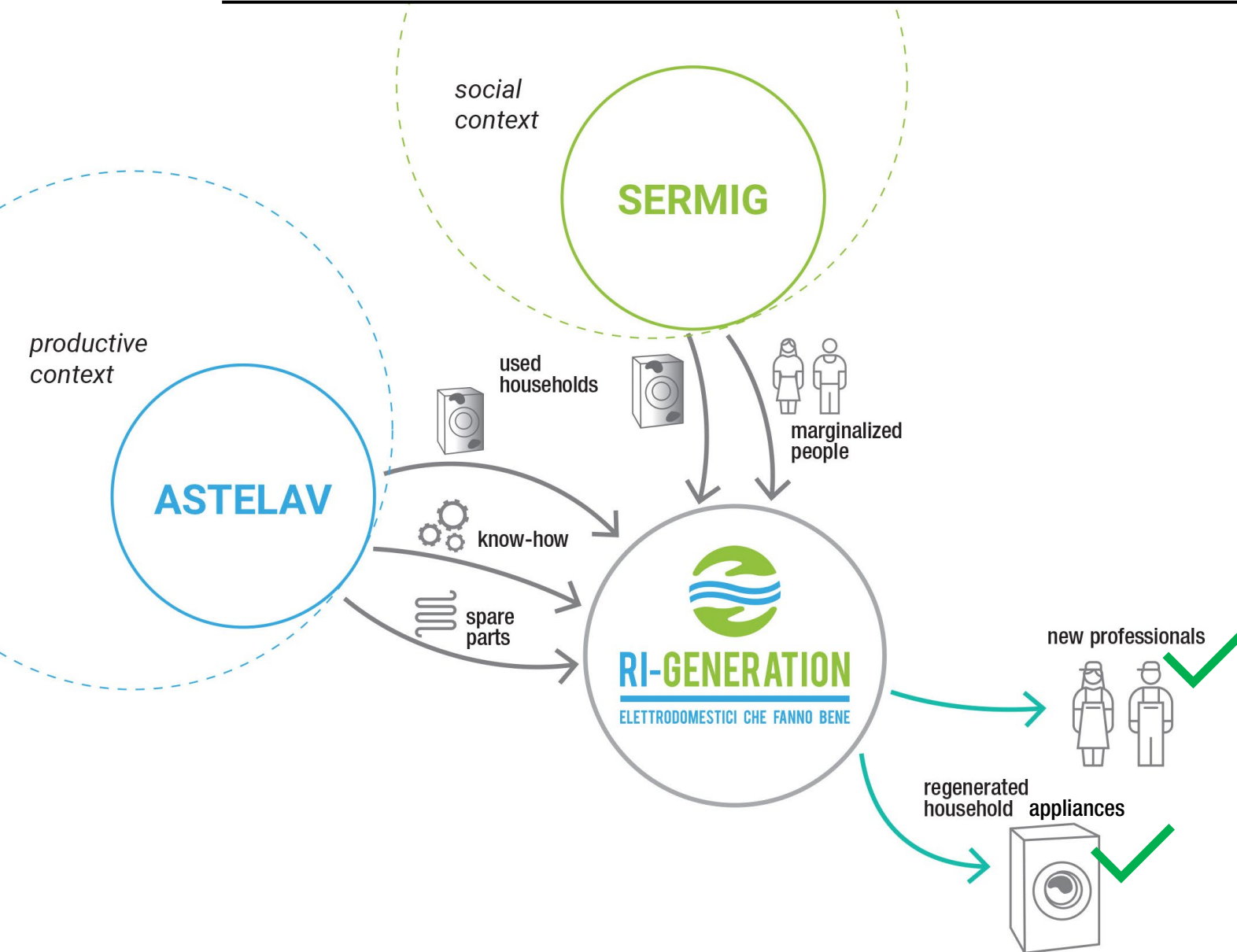


**new
economies**



**social
rehabilitation**

CONTEXT / Ri-Generation project



CONTEXT / WEEE collection and treatment in Italy

2015

249.253.916 kg (+13%)

Total collection

4,1 kg

per person

2016

283.075.012 kg (+4,7%)

Total collection

4,67 kg

per person

2017

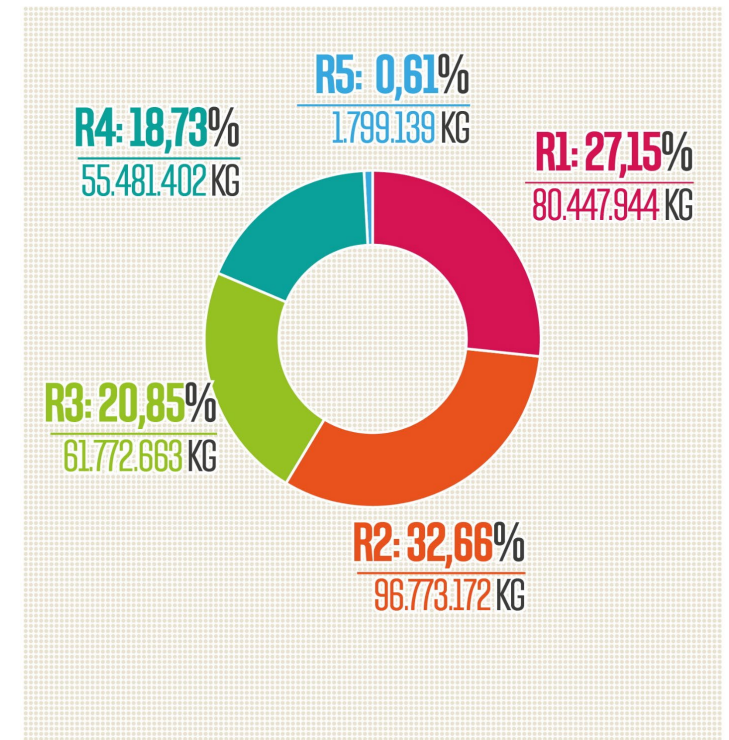
296.274.320 (+4,7%)

Total collection

4,9 kg

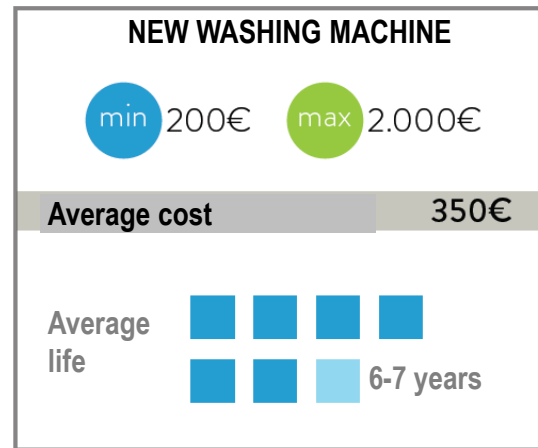
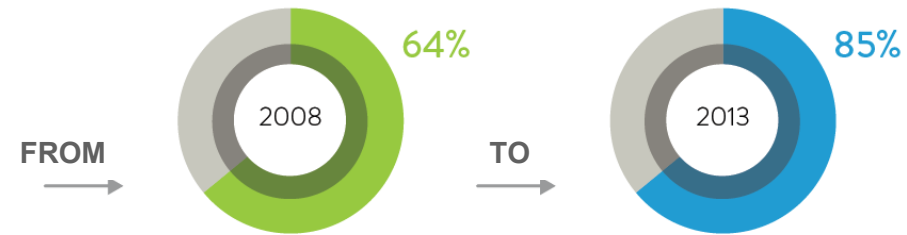
per person

Only **40% of the total number of used appliances is treated correctly**. The remaining 60% ends up in unauthorized landfills or is illegally exported to developing countries, both as working appliances and as a source of components and raw materials for recovery.



CONTEXT / appliances fixing and reuse

From 2008 to 2013, more and more users prefer to repair their own appliance rather than buy a new one - *increasing trend*



CUSTOMER COSTS

gancio di chiusura oblò	90
pompa di scarico	150
cerniera oblò	90
blocco apertura	130
resistenza	140

TARGET

Out of town young students

Young couples

Separated or divorced

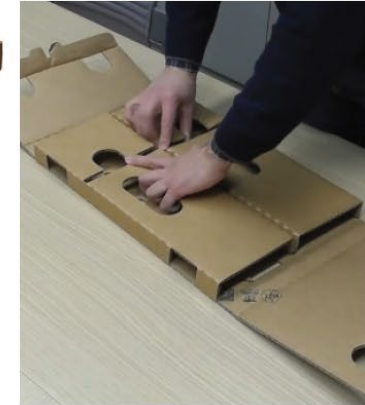
Subjects with low purchasing power

need to have a **functioning appliance**, interested in the **economic advantage**; interest in **environmental and social value**

CONTEXT / housold appliances packaging



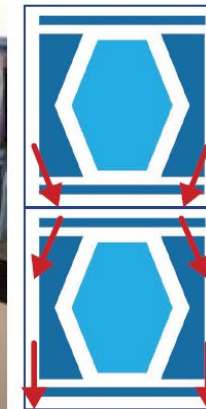
Main packaging system
EPS, cardbord, cellophane, straps
material redundancy / not recyclable



Andrea Bellucchi, Bandiago System
Cardbord
mono-material recyclable packaging

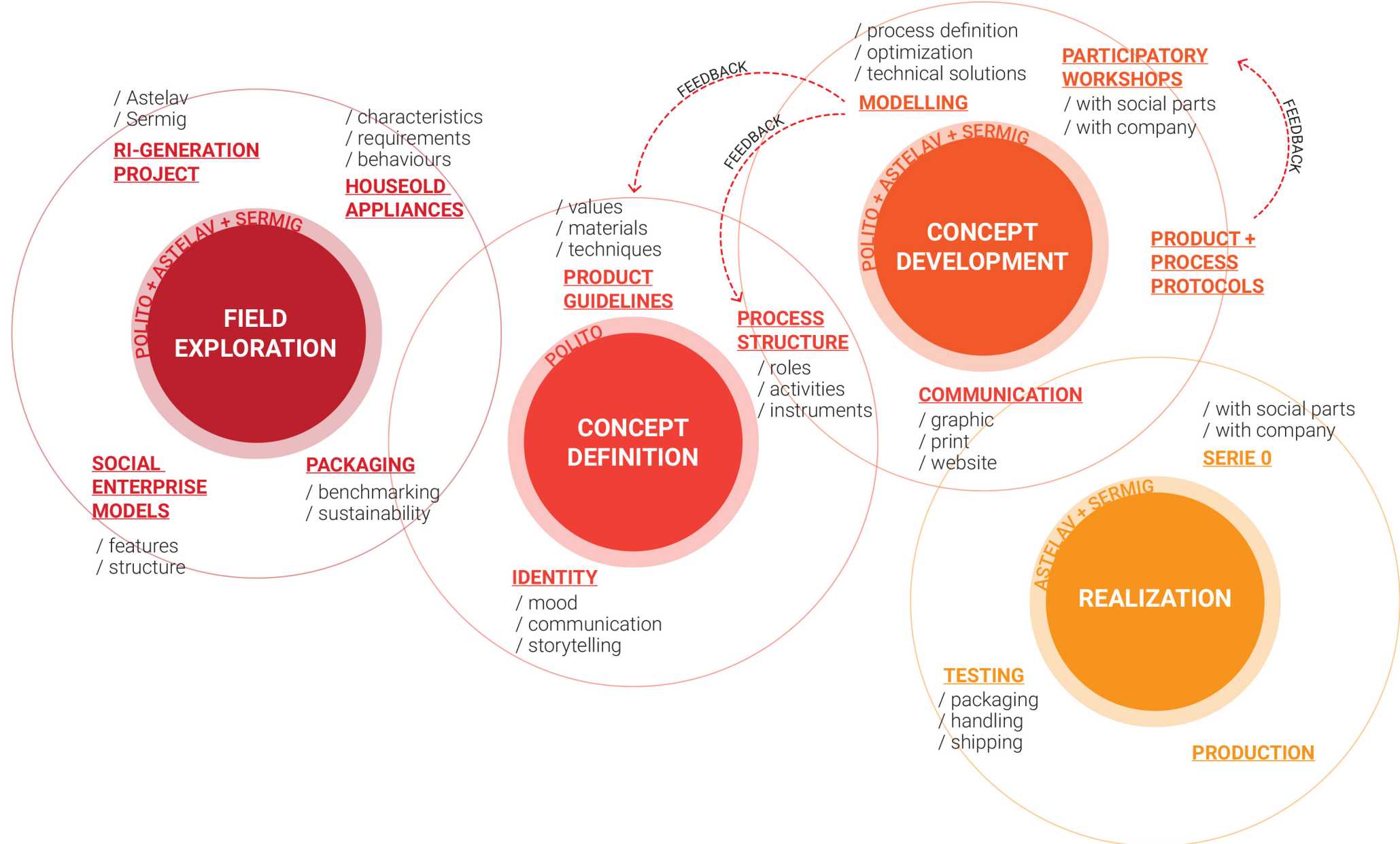


ICSS Packaging
EPP, wood, cardbord, cellophane, straps
material redundancy / partially reusable

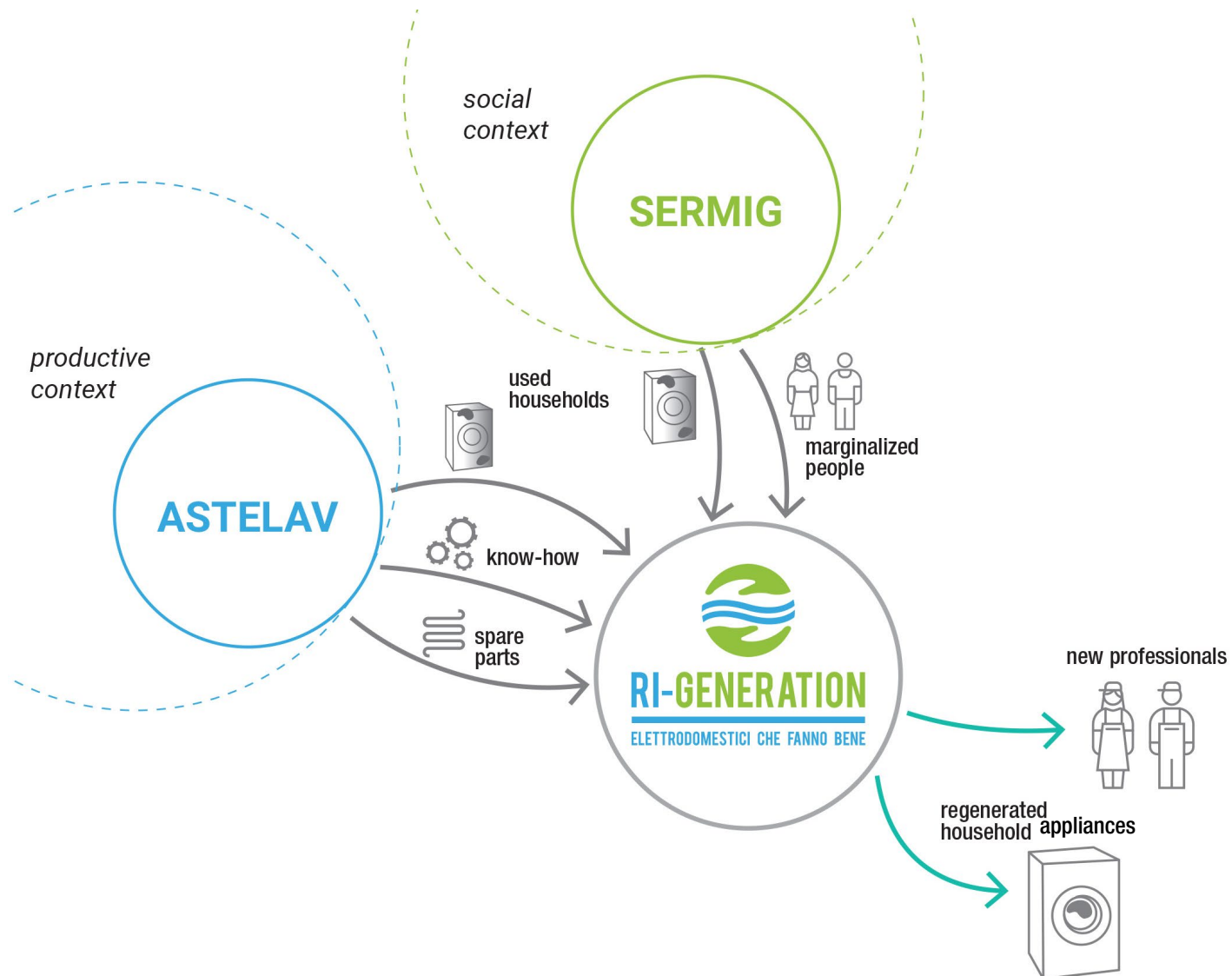


Free Pack Net
EPP, cellophane, straps
returnable packaging

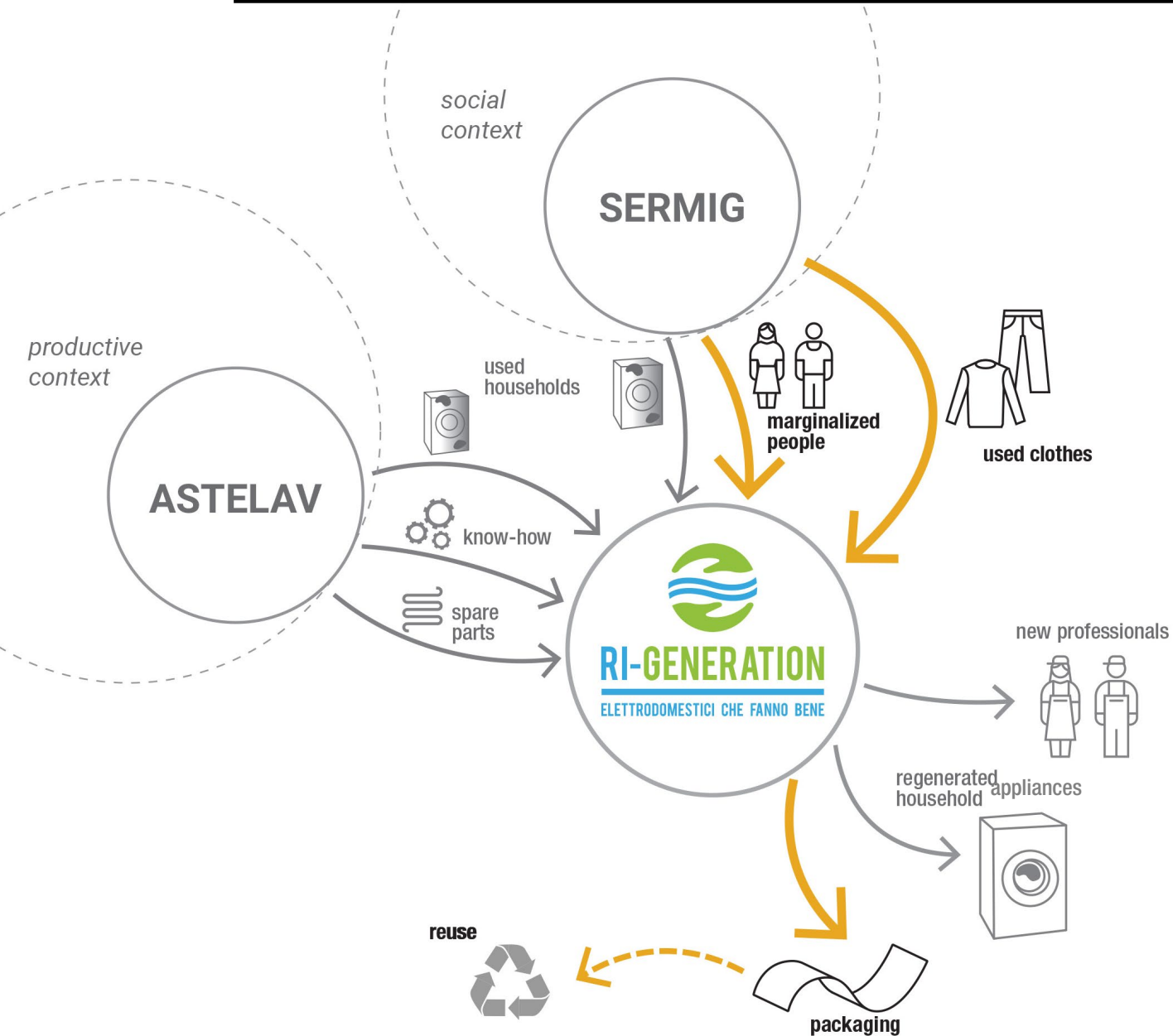
METHODOLOGICAL FRAMEWORK AND ROLES



CONCEPT AND GUIDELINES



CONCEPT AND GUIDELINES



- ✓ **Reuse of abandoned clothes**
Faulty clothes that Sermig receives daily in form of private donations
- ✓ **Create capability for disabled people**
Activation of didactic workshops among social co-operatives
- ✓ **Packaging reuse**
Exploring the possibilities of reusing the package
- ✓ **Expressive charge**
Narrative aesthetics telling the story of the recuperation of waste elements

PRODUCT DESIGN / Ri-Pack



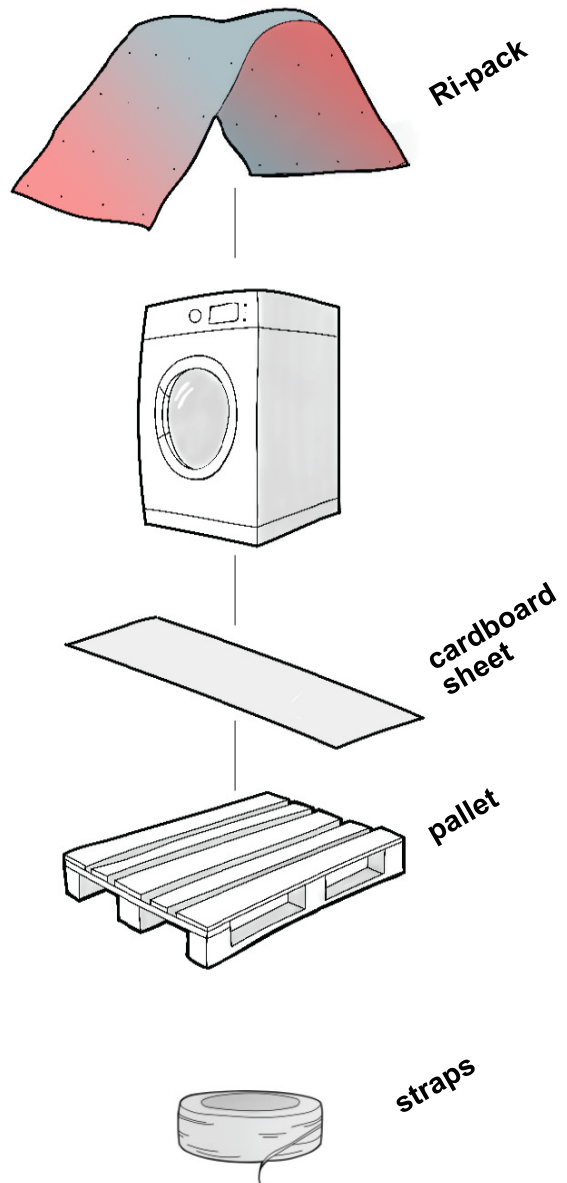
**polyethylene
tubular film**



Used clothes

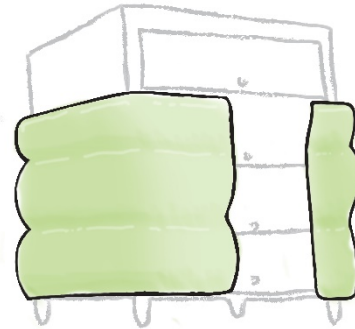


PRODUCT DESIGN / packing and use

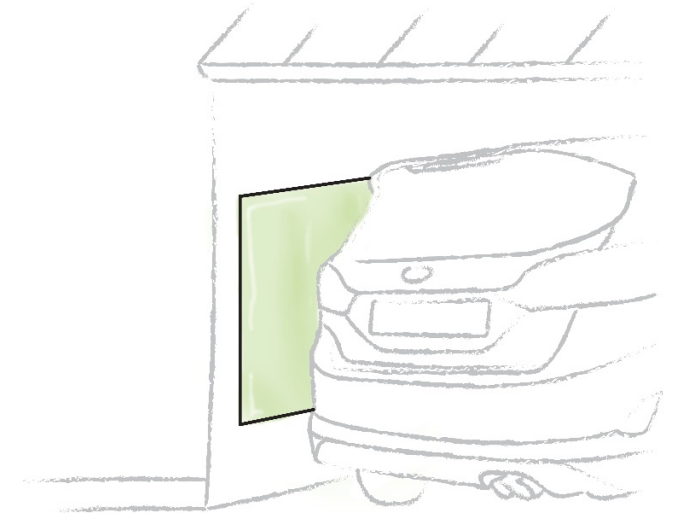


PRODUCT DESIGN / use and reuse

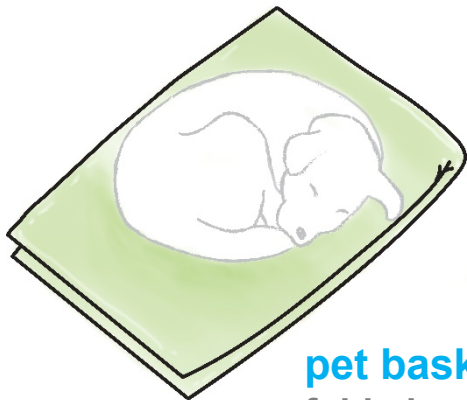
Ri-generation website and
a leaflet attached to the
washing machine
instructions suggest some
**possibilities
of reuse**



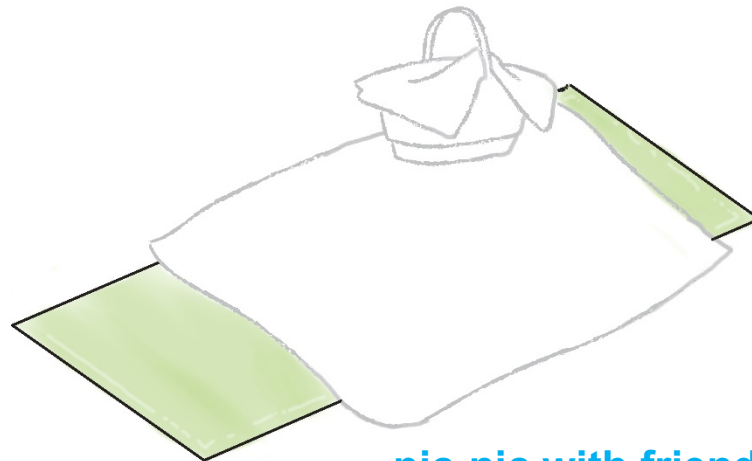
protection for furniture
during a move or while
stocking in the basement



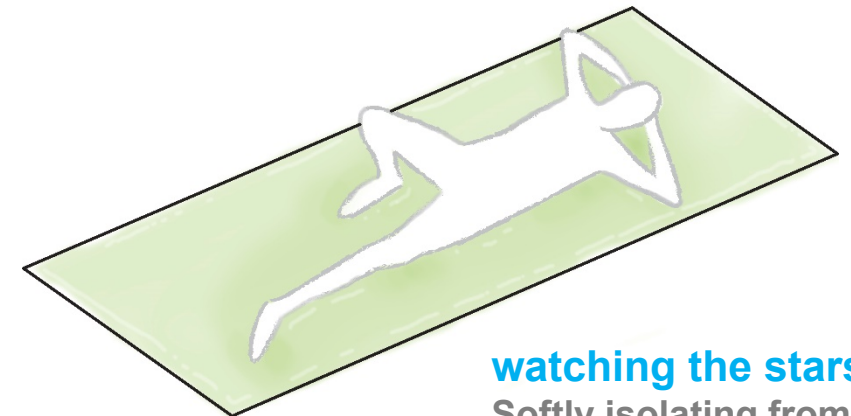
on the garage walls
scratchproof while
maneuvering the car



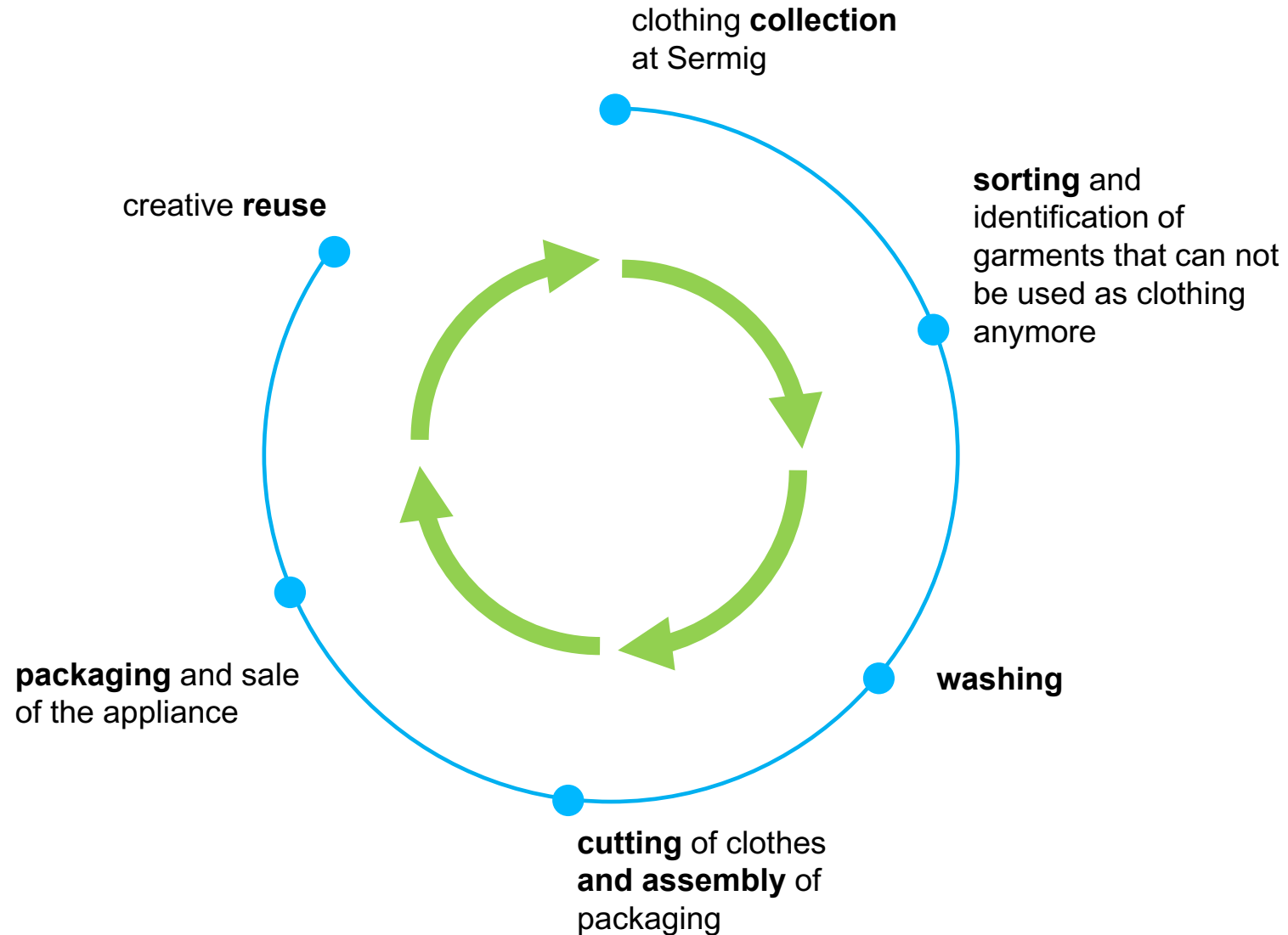
pet basket
folded and slipped
into a pillowcase



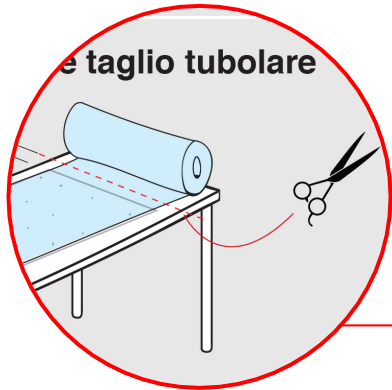
pic-nic with friends
Under the cloth



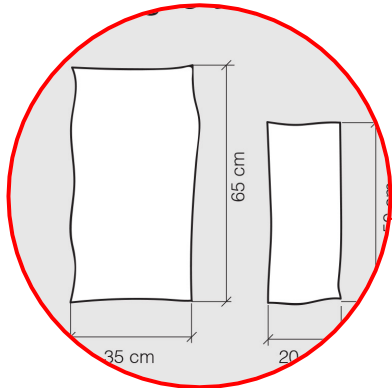
watching the stars
Softly isolating from
the ground



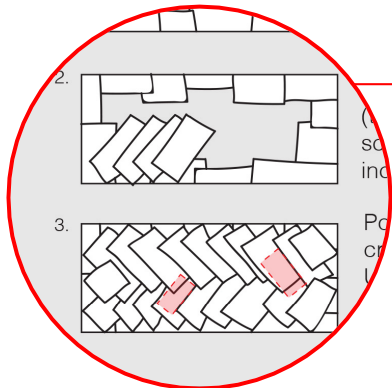
PROCESS DESIGN / packaging realization protocol



positioning and
cutting the plastic
film from the tube



cutting the
fabric scraps



positioning
the fabric scraps

RI-PACK: ISTRUZIONI PER L'ASSEMBLAGGIO

Utensili necessari

- Forbici
- Base in legno
- Scotch carta
- Pennarello indelebile
- Dime di taglio
- Colla a caldo + ricariche
- Metro
- Tubolare in polietilene
- Asta/bastone
- Macchina da cucire

Piano di lavoro

Dimensioni minime: 120 x 250 cm

Piano di lavoro

Sul tavolo saranno presenti dei segni di riscontro che indicano:

- L'effettivo ingombro del pack: 100x230 cm;
- Traccia linee di cuciture.

1. Posizionamento e taglio tubolare

tagliare il tubolare con 10 cm di abbondaggio rispetto alla lunghezza del riquadro segnato sul tavolo (5 cm per parte).

Segnare con il pennarello indelebile sul tubolare le linee lungo le quali andranno fatte le cuciture.

2. Posizionamento adesivi

3. Taglio degli scampoli di tessuto

I vestiti vanno tagliati in modo da formare dei rettangoli più o meno regolari. I rettangoli possono avere misure variabili, purché rientrino nel range tra la misura massima e quella minima.

Suggerimento di possibili tagli in base alla forma dei vestiti

NOTA BENE:

Gli indumenti utilizzati devono avere uno spessore elevato. I tessuti consigliati sono: pila, flanella, lana, sintetico spesso, felpa, velluto, cinghia, pelliccia, jeans.

Evitare indumenti con tessuti molto sottili quali camicie, t-shirt.

Rimuovere qualsiasi elemento che possa rovinare il pack: bottoni, cerniere, borchie, strass molto grossi.

4. Posizionamento degli scampoli

1. Disporre gli scampoli lungo la cornice del riquadro sovrapponendoli leggermente (5-10 cm).

2. Posizionare il secondo strato di scampoli in direzione obliqua (tipo liscia di pesce) lungo il lato inferiore, sovrapponendo ogni scampolo sull'altro per almeno la metà della sua superficie, ed incollandoli man mano che si appoggiano (vedi punto 6).

3. Posizionare lo strato successivo inclinato nel senso opposto creando sovrapposizioni nella zona centrale. Una volta posizionati gli scampoli, verificare lo spessore ed eventualmente aggiungere scampoli laddove lo spessore sia troppo sottile, mantenendo la stessa inclinazione.

5. Riempimento del tubolare

Gli scampoli vanno incollati uno con l'altro con l'utilizzo di colla a caldo man mano che vengono appoggiati nel riquadro.

Esempio della disposizione dei punti di colla

Il "materassino" creato va poi inserito all'interno del tubolare.

6. Cucitura

Fase 1

Effettuare le cuciture verticali in modo da fissare il materiale dell'imbottitura al tubolare plastico.

Fase 2

Iniziare a fare le cuciture orizzontali partendo da quelle più interne verso le più esterne. Per svolgere le cuciture più interne è necessario arroccare il materassino nell'intercapedine della macchina da cucire e man mano srotolarlo quando si avvanza verso l'esterno.

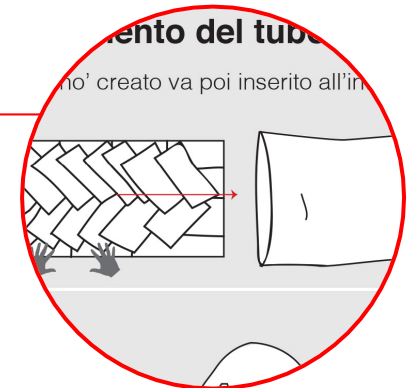
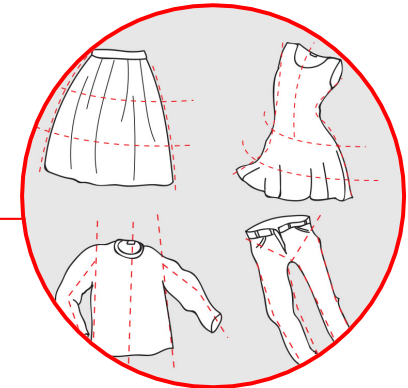
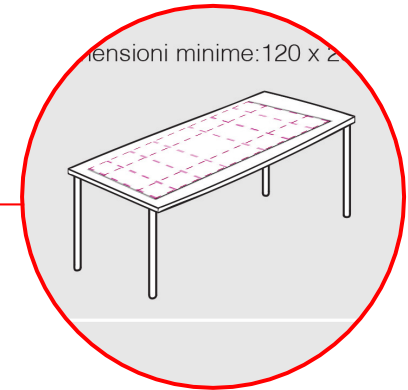
necessary tools
and features of the
work station

tracing the
sewing lines

cutting the
fabric scraps

filling the
plastic tube

sewing



PRODUCT DEVELOPMENT / participatory workshops

WS SERIES 1

n. 2 participatory workshops with Sermig coordinators and Astelav staff

Sharing the realization process in order to identify the most suitable facilities for the realization.



WS SERIES 2

n. 2 participatory workshops with responsables and regulars of the volunteer center "Come noi" Sermig

Implementation tests in order to optimize tools and processes based on resources



WS SERIES 3

n. 2 participatory workshops with responsables and guests of the "La Bottega" social cooperative, which activates growth paths for disabled people

Implementation test in order to organize the process and explain the working methods



PRODUCT DEVELOPMENT / participatory workshops



PRODUCT DEVELOPMENT / participatory workshops



COMMUNICATION

STICKERS ON THE PACKAGE



Direct messages declaring the reusability of the pack

LEAFLET

A leaflet sold together with the product, explains the Ri-Generation project and illustrates the possible reuse of the packaging



WEBSITE

The Ri-Generation website will contain a specific section dedicated to packaging. The meaning and some suggestions for its re-use will be illustrated



Future developments and possible actions

The **packaging system** defined, regardless of its specific application in the context of the sale of reconditioned household appliances, can be considered, to all intents and purposes, **as a new semi-finished product** which, when suitably remodelled, **can also be used in other product sectors**.

First of all, within the scope of donation of goods by **Sermig** (recuperated electronic products, educational materials for the schooling of children, medicines, technological systems, etc..), which are shipped daily to the Third World and developing countries.



Future developments and possible actions

Participation in conferences and seminars:

dissemination of experience at national and international conferences organised in the areas of eco-design, packaging design and circular economy.

Realisation of scientific publications: production of papers and scientific articles aimed at describing the operation and promoting the content.

Editorial project per single publication/story:

a sustainable packaging case history could be the focus of a story told by a lively, abridged publication that could be distributed at particular events aimed at disseminating the initiative and promoting the Ri-Generation activity.

Curation and layout design for possible exhibitions:

definition of possible layout design concepts for participation in exhibitions, trade fairs on the subject of sustainable packaging or for the creation of a specific ad hoc event dedicated to the Ri-Generation case history.



RSD7 - RELATING SYSTEMS THINKING AND DESIGN 7

Turin, 24-26 October 2018

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Thanks!

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