

# THE BRA PROJECT

100% nylon, 100% sustainable

RadiciGroup: Specialty Chemicals, High Performance Polymers, Synthetic Fibres and Nonwovens

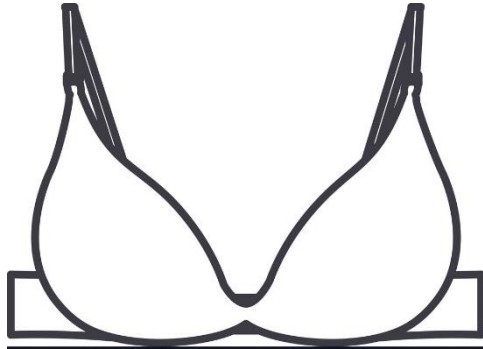


[www.radicigroup.com](http://www.radicigroup.com)

# WHY a «BRA PROJECT»?

The bra is one of the most widely used items in the world. Up to present, millions of used bras at the end of their lives are, in some cases, torn to pieces to create soundproof/thermal insulation panels or, more likely, sent to the incinerator / the landfill.

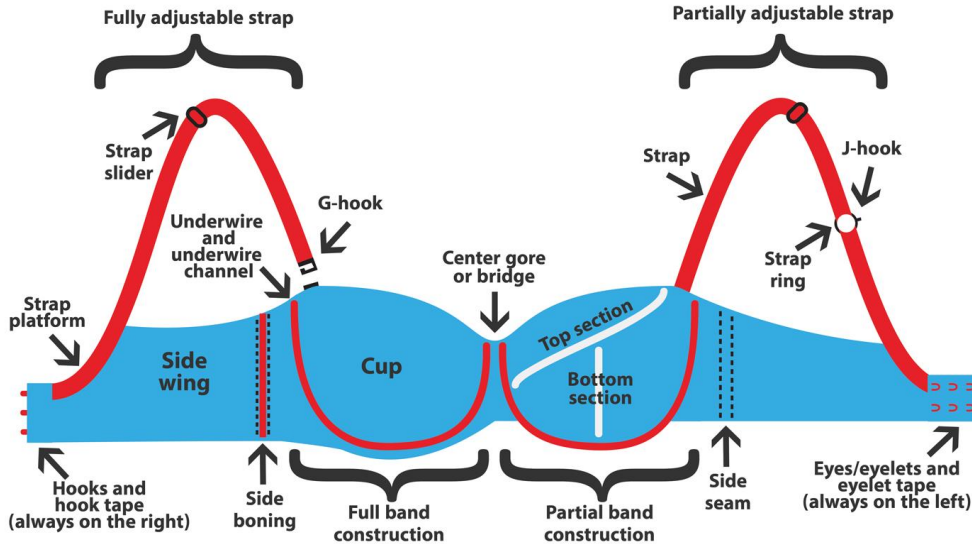
**Is it possible to do something different with a bra at the end of its life?**



Humana PeopletoPeople is an international organization dealing with large scale cloth collecting. For ethical reasons they neither sell nor recycle bras. They donated us 100 kg bras they collected to study new recycling possibilities.

# BRA CONSTRUCTING: a closer look

## Bra parts - a visual glossary by /u/noys for /r/ABraThatFits

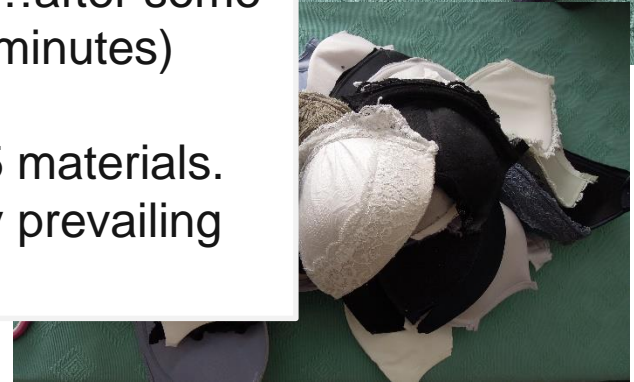


It takes:

Anatomical know-how  
Technical know-how  
Materials know-how  
Fashion know-how  
Marketing know-how  
to construct each single bra

WHAT IS IT NEEDED TO DECONSTRUCT IT GIVING VALUE TO THE DIFFERENT PARTS (and KNOW HOW)?

# BRA DECONSTRUCTING: a zen exercise



It takes  
A patient human being  
Scissors  
Pliers  
And at least 5 minutes for each bra...after some  
training (otherwise its takes 10 minutes)

Each bra contains a minimum of 5 materials.  
In 100 Kg bras nylon is the largely prevailing  
material.

# THE SAD FATE OF A BRA

Technical Design +

Fashion Look +

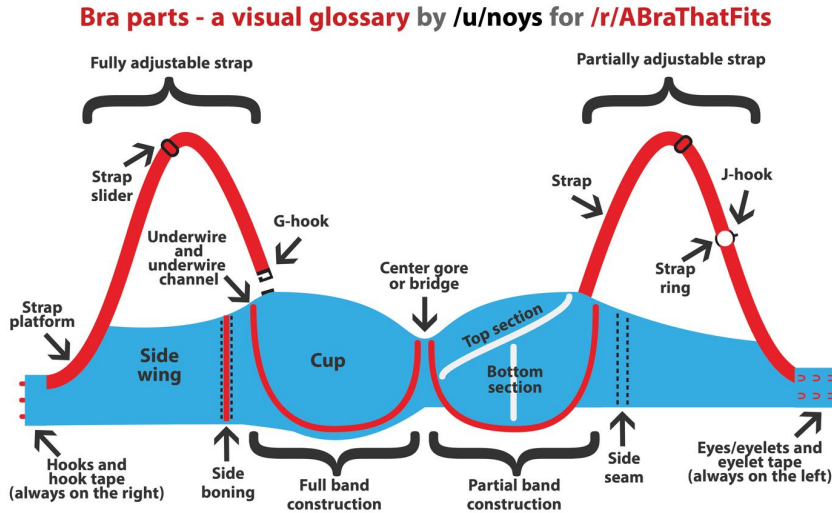
More than 15 parts +

At least 5 composition materials

+ at least 5 minutes

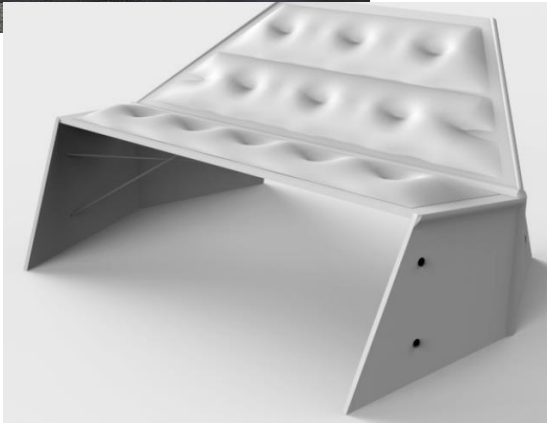
for disassembling

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**A HIGH VALUE BUT  
NO INDUSTRIAL UPCYCLING...  
UP TO PRESENT**

# RADICIGROUP CHALLENGE: FROM A BRA TO .... DESIGN OBJECTS



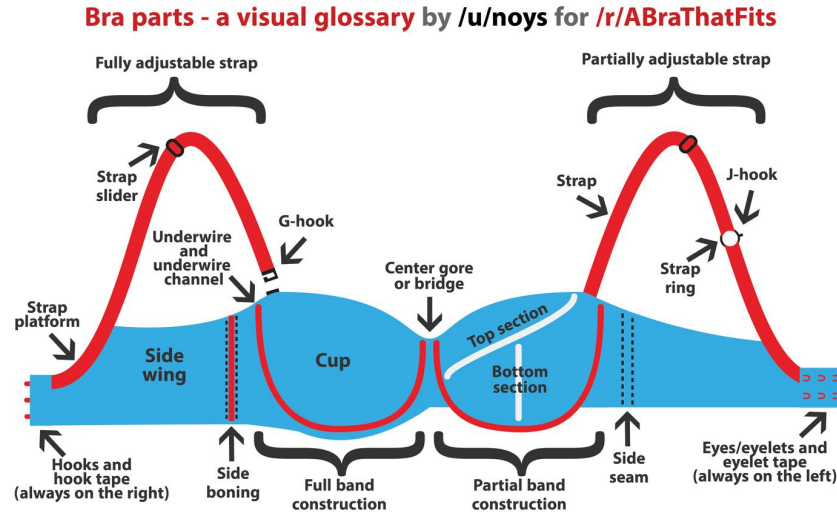
RadiciGroup challenge:  
An eco-designed single-  
material (nylon) bra that can be  
easily recycled  
to become an object of  
everyday life.

*Pictures taken from RadiciGroup 2017 «Nylon Dream»  
A 100% Nylon Design Project with the Politecnico of Milan*

# RADICIGROUP CHALLENGE: FROM A BRA TO .... DESIGN OBJECTS

## WE ARE LOOKING FOR PARTNERS

WE CAN OFFER OUR KNOW HOW IN POLYMERS, YARNS, MECHANICAL RECYCLING...and a successful case history





## ... A 100% NYLON JACKET

This monomaterial garment combines the style and comfort required by sportswear with the performance required both during its first and during its second life.

It was designed and made according to the ecodesign concept: at the end of its first life, it will be shredded, ground, thermomechanically extruded, and finally compounded to give life to a new plastic material.





# ... A 100% NYLON JACKET

Part Number	Part identification	Meting T (°C)	Cristallization T from melt (°C)	Note	Part Number	Part identification	Meting T (°C)	Cristallization T from melt (°C)	Note
1	FILLING	219	184	PA 6	13	STOPPER	216	185	PA 6
2	FLAG LABELS	221	142	PA 6 + altro che disturba la cristallizzazione	14	CARE LABELS	215	156	PA 6 / PA 6 copo
3	MAIN LABEL	169 - 218	175	PA 6 + altro	15	CARE LABELS	209	160	PA 6 copo
4	MAIN LABEL	219	148	PA 6 cristallizzazione rallentata	16	PATCH FLAG	225	177	PA 6
5	PLASTIC HOOK	219	182	PA 6	17	PATCH	222	173	PA 6
6	FABRIC	218	184	PA 6	18	ZIP	220	184	PA 6
7	FABRIC	221	175	PA 6	19	NEW LIGHT TYPE	218	181	PA 6
8	BEADS	217	184	PA 6	20	FABRIC	214	174	PA 6 + PUR
9	CORD	220	177	PA 6	21	LAMINATED FABRIC	220	176	PA 6
10	VELCRO	221	157	PA 6 modificato (lenta cristallizzazione)	22	LINING	223	179	PA 6
11	SEWING YARN	228	175	PA 6	23	MINISTOP	221	181	PA 6
12	PULLER+STRING BLACK	145	90	PP?					

RadiciGroup developed a **100% nylon jacket**, made with the collaboration of other companies in a **fully European** production chain. The jacket is currently worn by all RadiciGroup Ski Club athletes.

**A single material, nylon, for 23 jacket components**