



GEES RECYCLING methodology for waste transformation

A project success story

Gees Recycling Srl –Giorgio Betteto R&D

Retracking : an integrated digital platform for CFR –
Composites Fibro-reinforced and Multipolymer waste

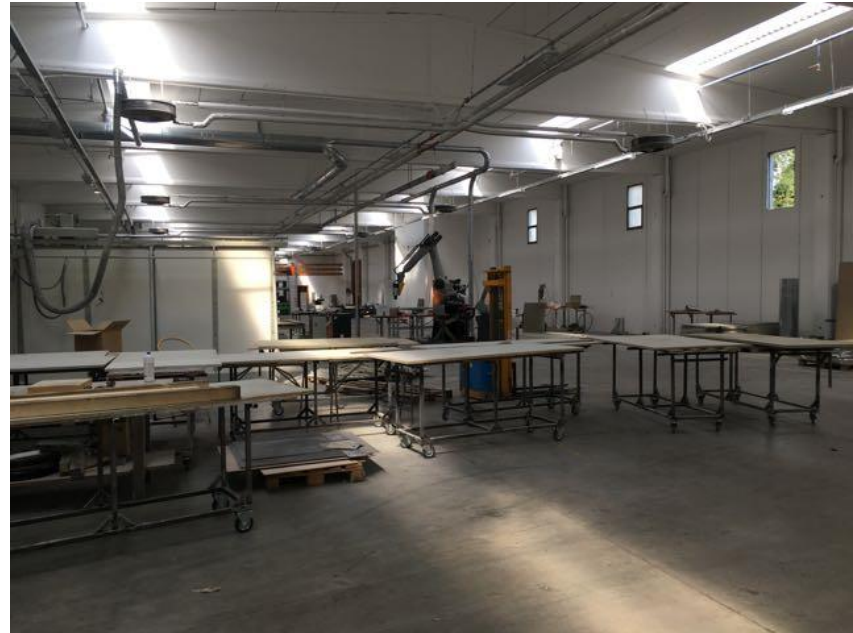
Tracking, recycling and converting to circular economy

Now, arriving at end of the project , what are the results?

At start : GEES RECYCLING in 2017

Small scale production
Low-compression moulded
Products with lower properties

High variability in production
Difficult to mantain standards



Panels are rough ,
conceived only for a
post-production coating
and an artesanal hand
made production



Waste processed is near only fiberglass
from laminates

This simplify everyday work but limit
applications and range of products

Standard final product :
“Basic 1100” panel



Results : GEES RECYCLING IV Period 2019

Production :

- Controls on waste entry
- Identification
- Load in RETRACKING
- Every waste bigbag tracked
- Test on Humidity etc.



Results: GEES RECYCLING IV Period 2019

Production :

- High pressure moulding press
- Computer controlled
- RETRACKING Feeding and mixing line

Higher production , better quality
Better reproducibility



Results: GEES RECYCLING IV Period 2019

Waste Entry : passed from 1 kind of CFR to **14** different kind of Composites and **6** other plastics not traditionally recyclable

Automotive SMC, BMC & LWRT

Carbon fibre

Sandwich panels from freezer



Automotive
SMC waste



Carbon Fiber



Fiberglass +
Rigid PU Foam
from
Refrigerators

Results: GEES RECYCLING IV Period 2019

Waste Entry : passed from 1 kind of CFR to **14** different kind of Composites and **6** other plastics not traditionally recyclable

Multipolymer film used in furniture, roofing , wallcoverings

Toner Cartridges

Roofing sheets



Results: GEES RECYCLING IV Period 2019

Products: passed from 1 kind to **14**
different kind of panels in **8** different
densities

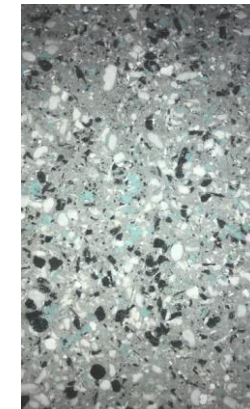
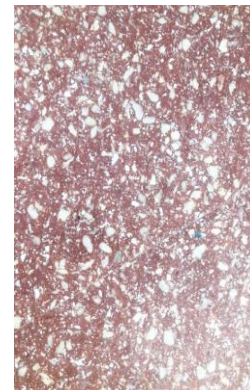
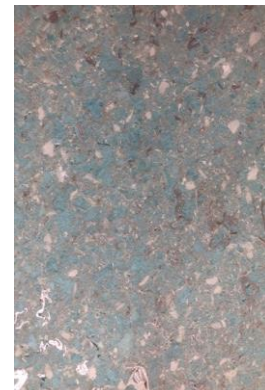
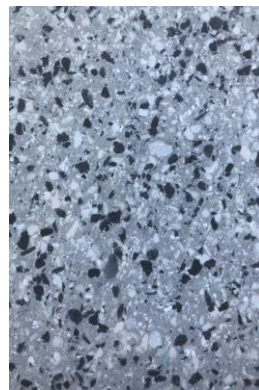
D'Eco 1100 – Mass colored material

Water resistant

Optimal screw retention force

Aspect could be tuned :

- Mass color
- Granules color
- Granules size and dispersion
-



Results: GEES RECYCLING IV Period 2019

Outstanding flexibility!
D'Eco 1100 with gelcoat coating

RECOMPLAX 400 with
laminare covers



Results: GEES RECYCLING IV Period 2019

D'Eco 1100

Mass colored material

also SHOCKPROOF !



Results: GEES RECYCLING IV Period 2019

Very good commercial results , both for design and industrial applications

- Giorgio Armani flagship store
 - Sanremo Mall
 - Hong Kong Mall



Results: GEES RECYCLING IV Period 2019

Very good commercial results , both for design and industrial applications

- Crippaconcept new luxury glamping home “Queenslander” , with integral bathroom in D’eco RFM



Results: GEES RECYCLING IV Period 2019

Very good commercial results , both for design and industrial applications

- Infiniti Design
 - Table and benches for outside
 - Table may have NFC tags for communications
- and



Results: GEES RECYCLING IV Period 2019

and

TABLE AND BENCHES MAY SOUND AS
A LOUDSPEAKER ...

With a small actuator that could
be embedded



With RETRACKING platform A complex paperwork made simple, traceable and data-generator .



These results may have taken years of development without RETRACKING

Polo and GZS not only organised and took care of project , but also taught us how to work in a coordinated way



Polo Tecnologico di Pordenone (IT)



Gospodarska zbornica Slovenije (SLO)

ZAG technical support was extremely useful also in practical way



Zavod za gradbeništvo Slovenije (SLO)

Infordata made RETRACKING platform possible , opening new opportunities for both enterprises



Infordata Sistemi Srl (IT)



Interreg



ITALIA-SLOVENIJA



RETRACKING

Progetto standard su finanziato dal Fondo europeo di sviluppo regionale
Standardi progetti attraverso Europa 2020 (a regione comune)



GEES
RECYCLING

...about Retracking Platform
Infodata will talk right now

THANKS FOR ATTENTION

Gees Recycling Srl –Giorgio Betteto R&D