



FACTS AND TRUTHS- LCA PVC BANNERS

The Life Cycle Assessment
of the PVC banners

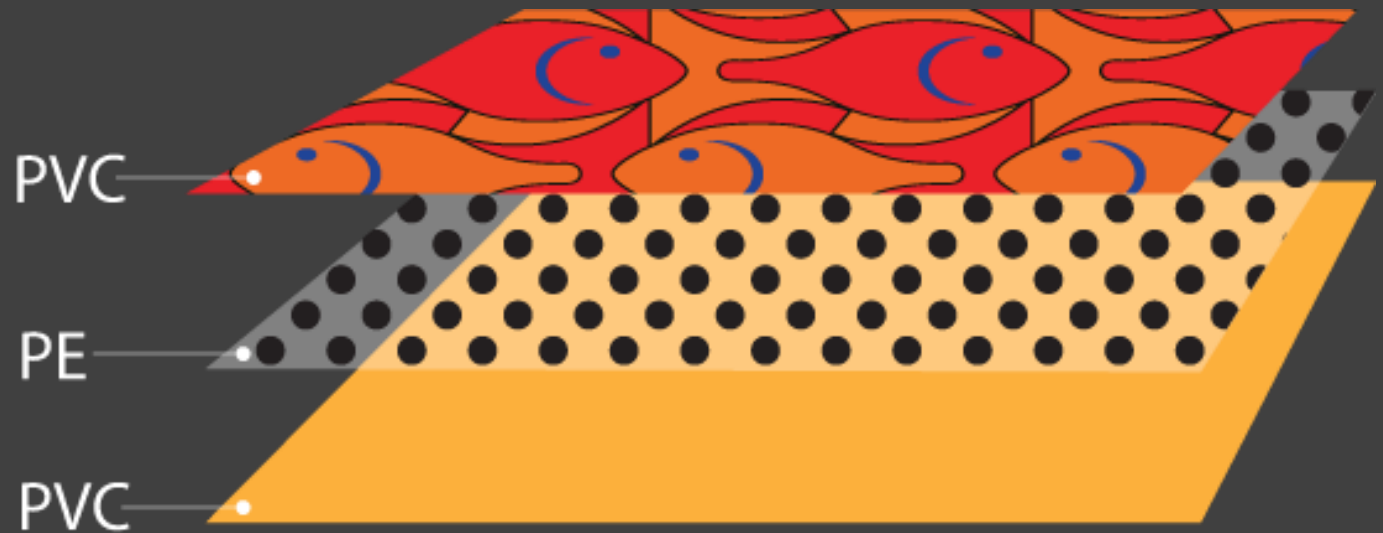
OVERVIEW

1. PVC banners
2. Life Cycle Assessment
3. Processing to recycle pvc banners
4. Recycling and Medence Csoport
5. Carbon footprint of recycled bag
6. Extension of life time
7. Conclusion

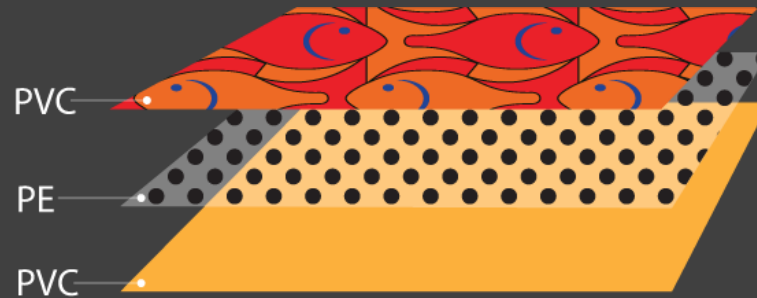
WHAT IS A PVC BANNER?

PVC BANNER=

looped polyester textile with PVC
coating on both sides



MANUFACTURING PROCESS



Coated materials

are manufactured by dipping the textile in a liquid PVC which coats the PVC onto the textile on both sides

OR

Laminated materials

are manufactured taking a layer of fabric and taking two layers of PVC film. These films are welded together with heat and pressure

WHY WE USE PVC FOR BANNERS? - CHARACTERISTICS



durability
easy to process
reasonably priced
highly UV resistant
printable
flame resistant



hardly recyclable
limited thermal
capability
toxic chemicals -
phthalates and
dioxins

LIFE CYCLE ASSESSMENT OF PVC BANNER



LCA =
is a standardised,
credible, science-based
method for measuring the
full environmental impact
of products and services

INDICATORS

energy

--- consumption of energy

water

---consumption of water taken from the environment

climate warming

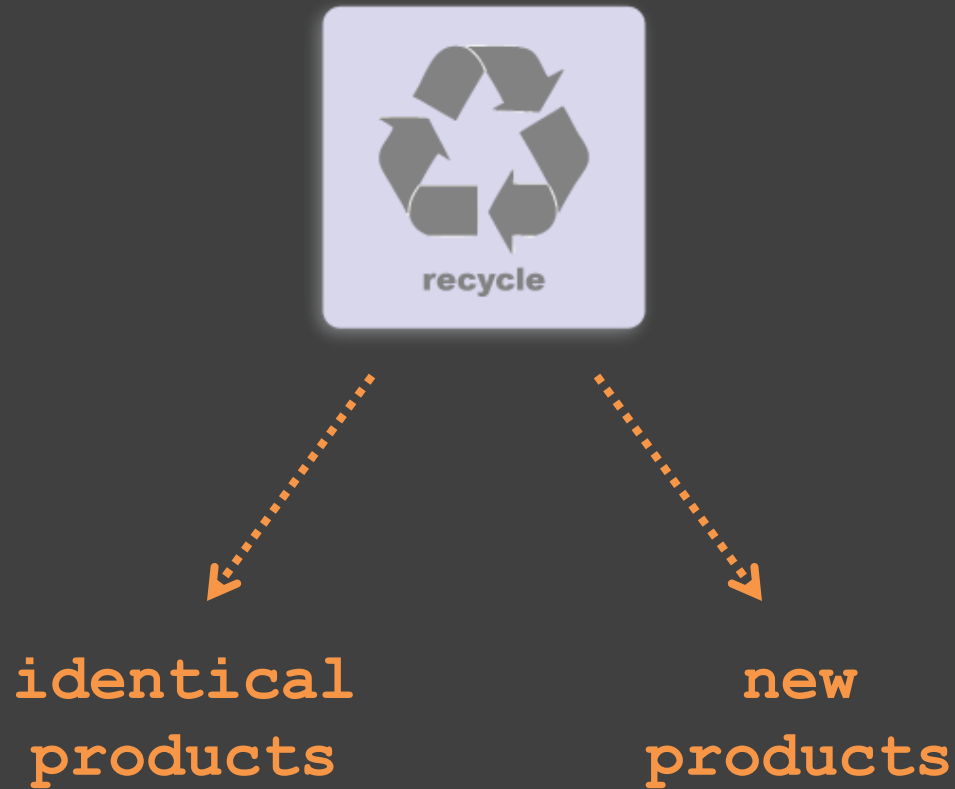
--- contribution of gas emission (mainly CO2)

And also

**human toxicity, common waste,
hazardous waste, land use, fossil fuel**

CRADLE-TO-CRADLE ASSESSMENT

end-of-life disposal step = recycling process



IDEAL CRADLE-TO-CRADLE PRODUCT

1. little/no **human health** risk
2. be recycled in a **closed loop design**
3. be created using solar or other **renewable energy**
4. have no impact on **local water sources**
5. be designed in a way that respects the **rights of the people** of our planet

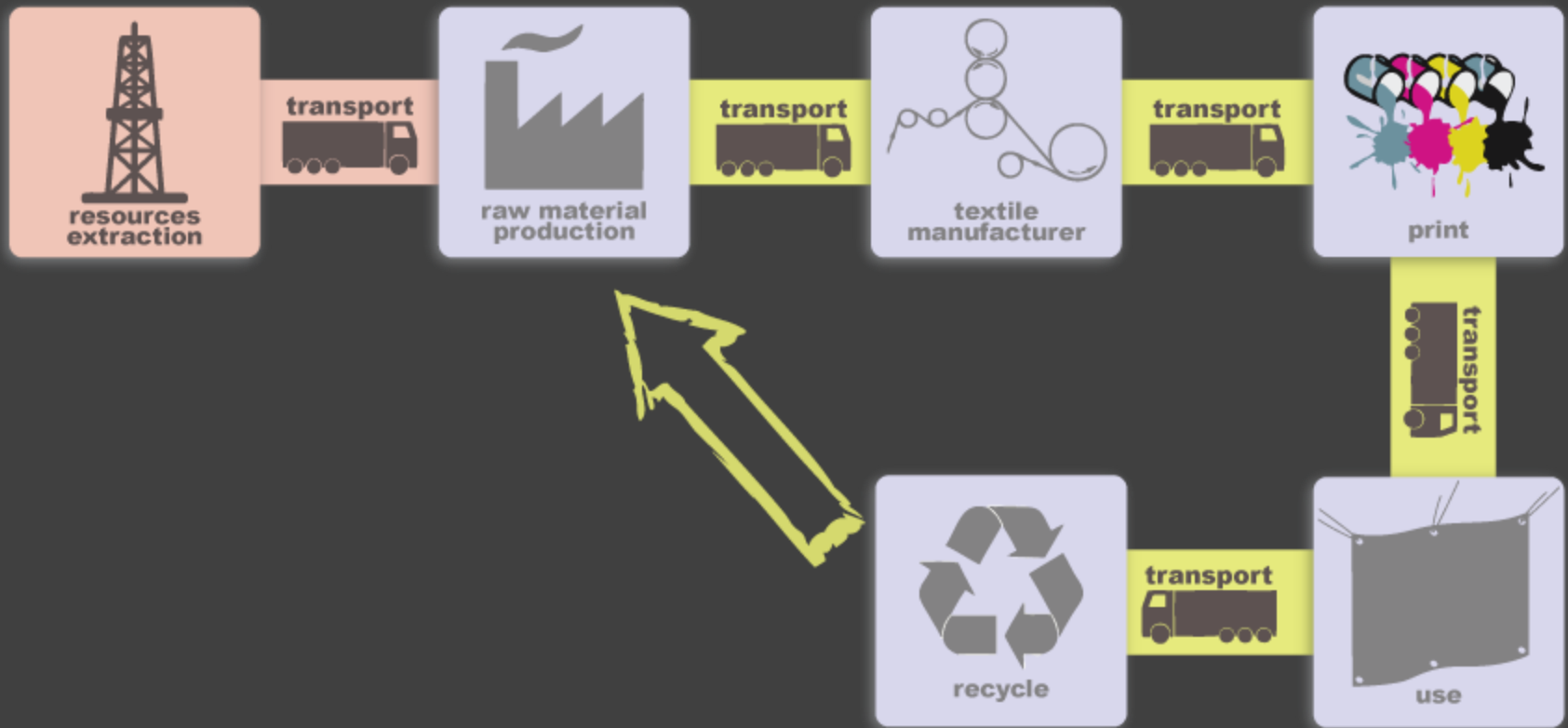
WHY RECYCLE?



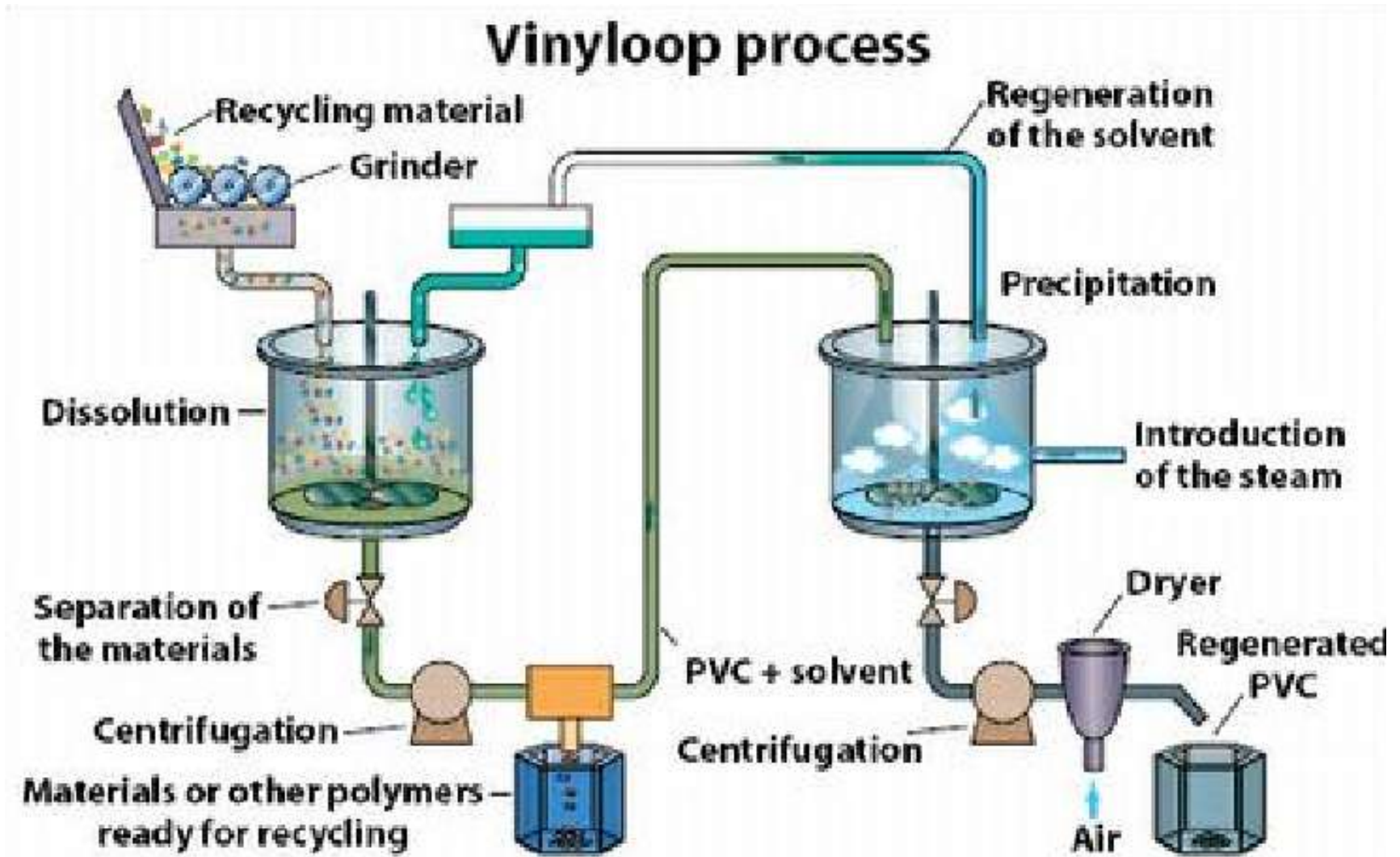
80%

20%

PVC BANNER FROM PVC BANNER

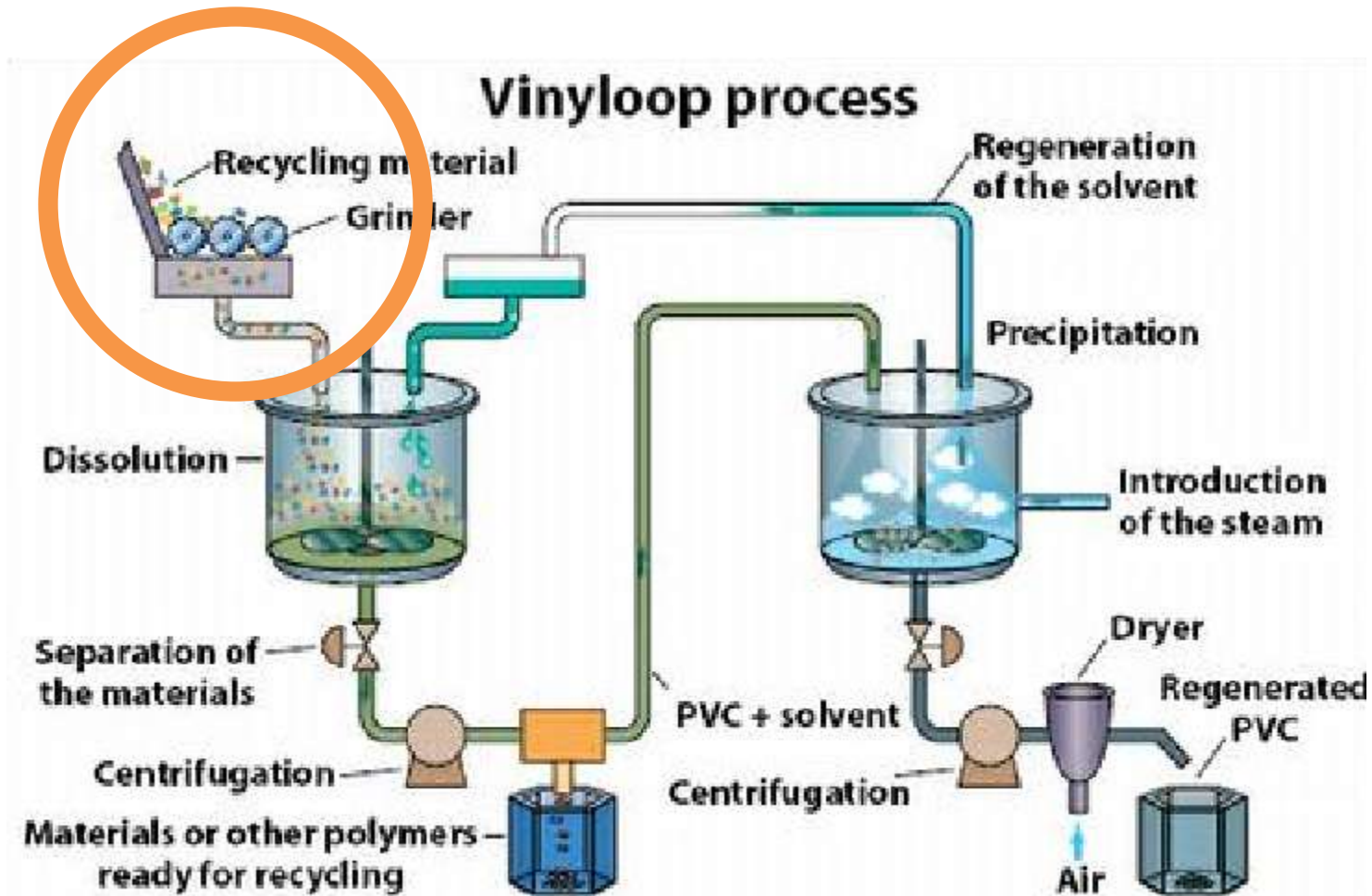


HOW CAN WE RECYCLE PVC BANNER?



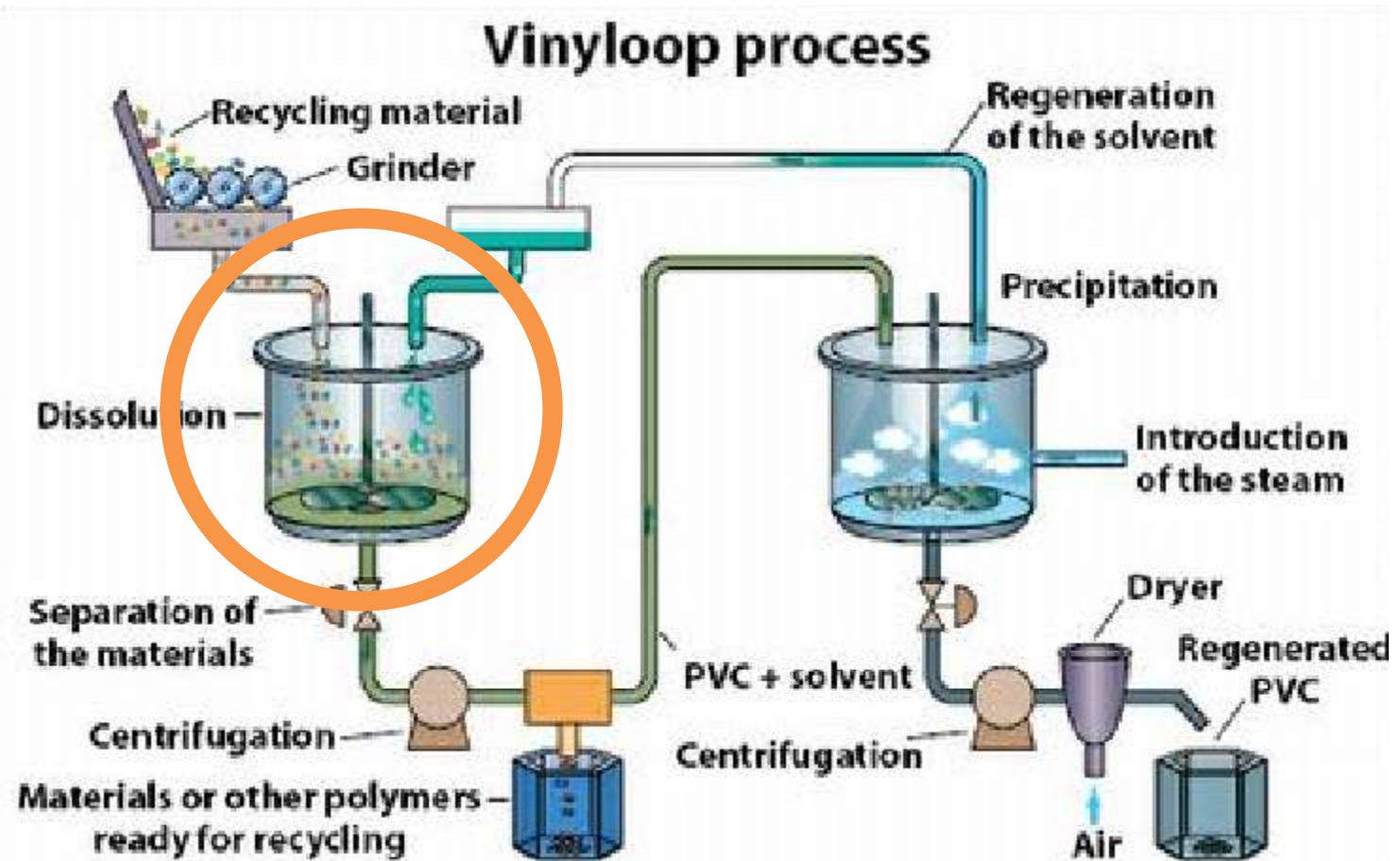
HOW CAN WE RECYCLE PVC BANNER?

1. Breaking the PVC chain + Physical processes



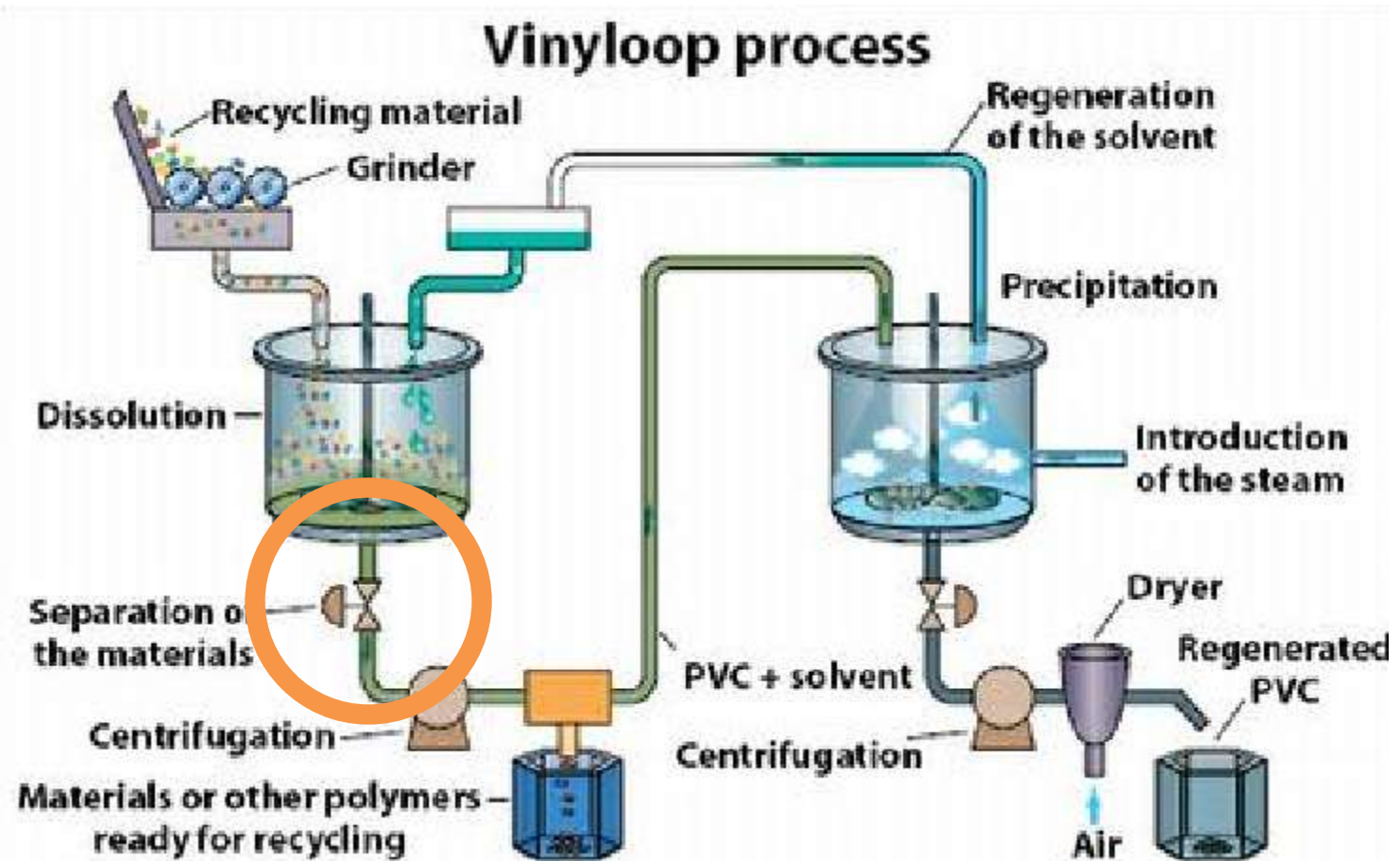
HOW CAN WE RECYCLE PVC BANNER?

2. Dissolution



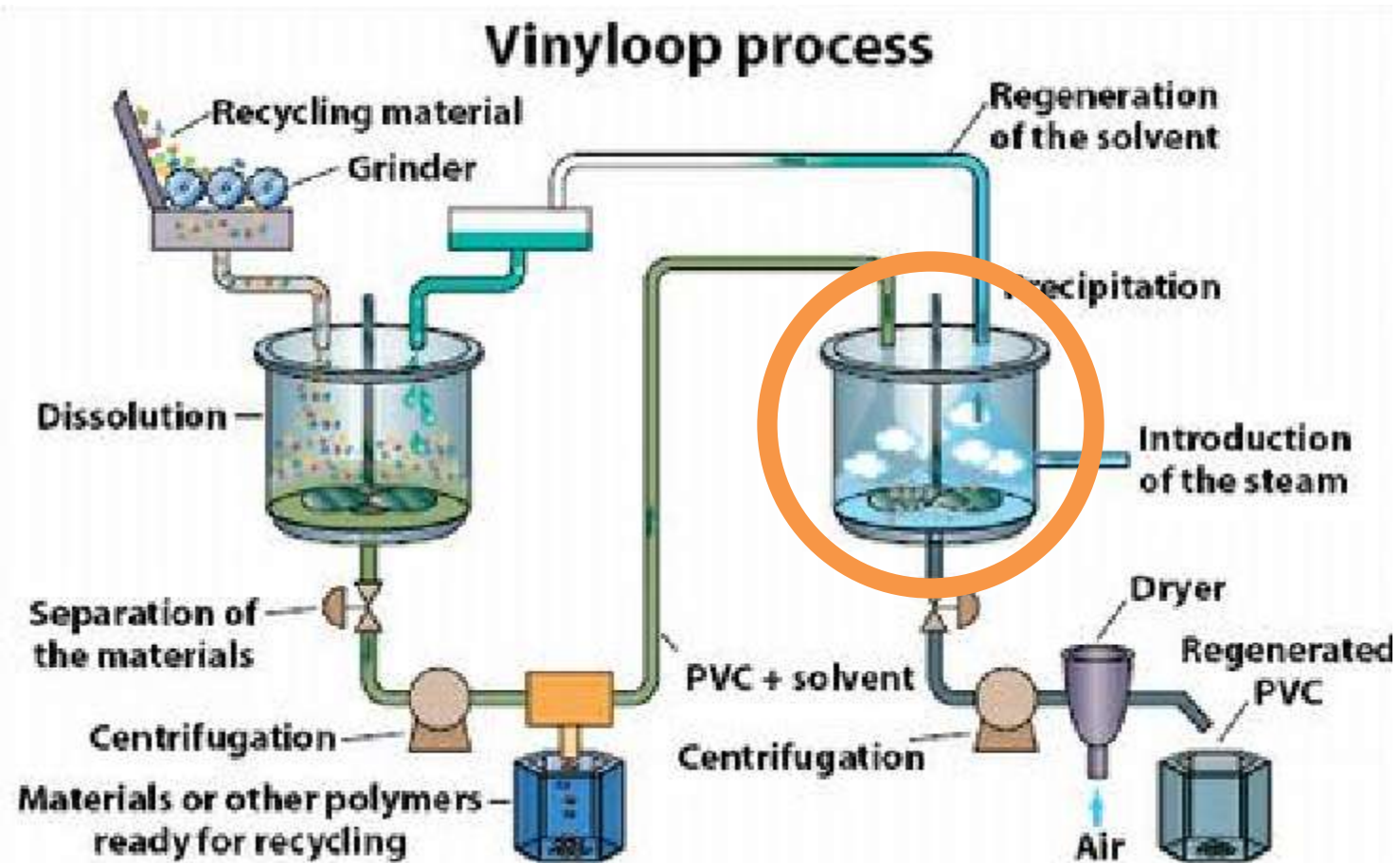
HOW CAN WE RECYCLE PVC BANNER?

3. Separation



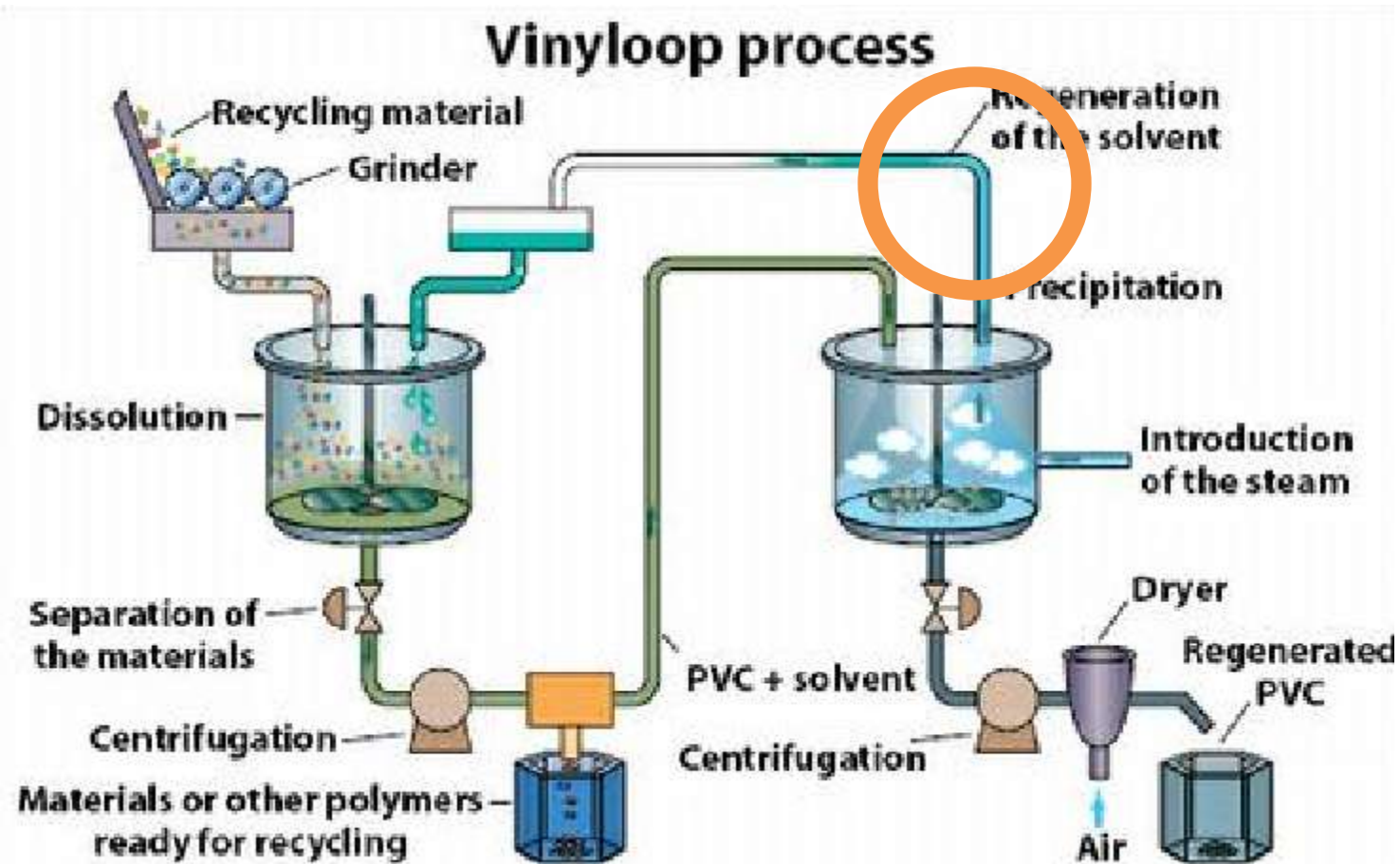
HOW CAN WE RECYCLE PVC BANNER?

4. Precipitation

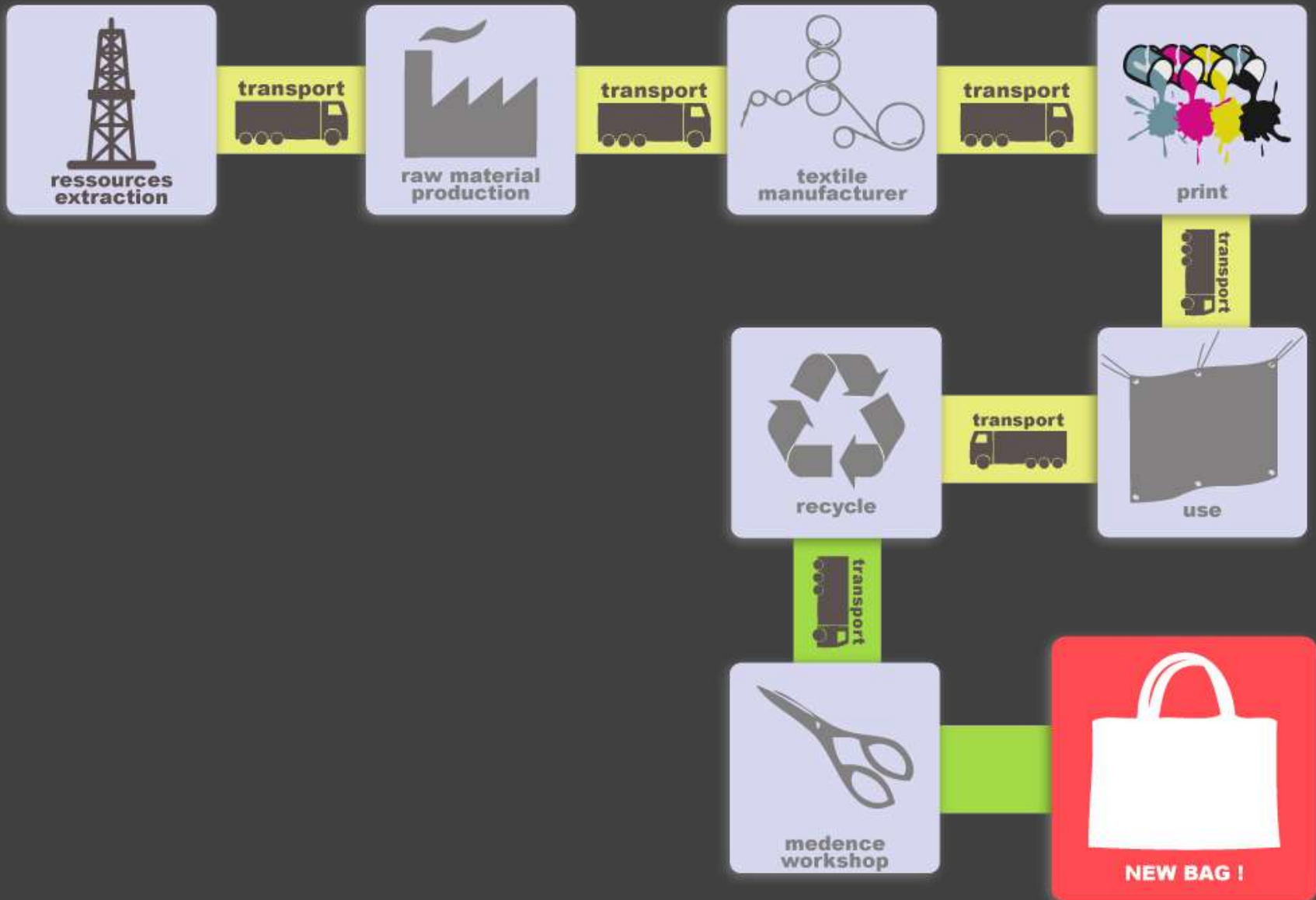


HOW CAN WE RECYCLE PVC BANNER?

5. Solvents



NEW BAG FROM PVC BANNER



WHAT IS THE CARBON FOOTPRINT OF 1 RECYCLED BAG?



100 m² of PVC
banner



~ 100 new bags

WHAT IS THE CARBON FOOTPRINT OF 1 RECYCLED BAG?

100 m² of PVC banner \approx 150 kg of CO₂



source :
LCA of Batyline®Textile by Ferrari
and LCA of EVERGreen Textile

+ 10% of environmental impact
due to transport, cleaning, etc

1 bag \approx **1.6 kg of CO₂**

HOW MUCH IS 1.6 kg of CO2?

1.6 kg of CO2 \approx **10 km by car**

to compare...



THE PRODUCT LIFETIME



Σ 150
kg of co2



3 months



150
kg of co2

+



+10%

Σ 165
kg of co2



28 months

THE PRODUCT LIFETIME



Σ 150
kg of co2



3 months

1 hour of PVC
banner use =
70 g of CO2



150
kg of co2



+10%

Σ 165
kg of co2



28 months

1 hour of PVC
banner use =
8 g of CO2

HOW MUCH IS 8 g of CO₂?

to compare...



**1 hour of computer use =
200 g of CO₂**



**1 hour of recycled bag use =
8 g of CO₂**

CONCLUSION

CRITICISM

tiny projects can not change the world

good example of sustainability for big
companies

Thank you for your
attention