

UNLEASH THE  
POTENTIAL OF  
**SMALL-SCALE  
PLASTIC  
RECYCLING**

---

MACHINES  
MOULDS  
TRAINING  
IMPACT





# We provide technologies, services and products to...



explore & experience the recycling process

design & create new products

series manufacture product batches

enable new business & skill development opportunities



With its characteristics, plastic is a **perfect material for the circular economy.**

It is durable, light, easy to process, and energy efficient to recycle.





## **PLASTIC IS QUITE YOUNG – AND INTENDED FOR INDUSTRIAL PROCESSING**

In general, plastic is a relatively young material. Its development and processing picked up after the industrialization, middle of the 20th century, straight at an industrial level. The era of tradition and craftsmanship was left out, as demand rose

steadily. Only industrial players were able to invest in high output machinery and amortise their investments with large quantities. Similar to plastic production, plastic recycling technologies focused on large scale operational capacity early on.

---

## **PLASTIC RECYCLING IS EVEN YOUNGER**

# THE RECYCLING PROCESS IS SIMPLE

---

## ... AND ALSO POSSIBLE ON A **SMALL-SCALE**

Due to the lack of access to basic recycling technologies and know-how, plastic waste can barely realize its potential as a valuable raw material in manufacturing. Most often it gets incinerated or accumulates in landfills or the natural environment as waste.

The plastic recycling process can be divided into the following steps:



### COLLECTING & SORTING

Plastic waste gets collected and sorted according to the different plastic types.



### WASHING & DRYING

It gets washed and dried to prepare it for the further processing steps.



### SHREDDING

The sorted and cleaned plastic gets shredded into flakes of different sizes.



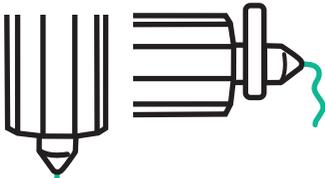
© kelag / Daniel Waschnig



© kelag / Daniel Waschnig

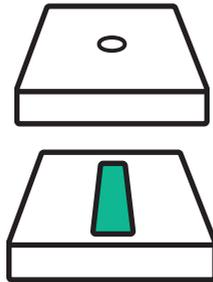


© kelag / Daniel Waschnig

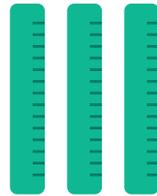


**EXTRUDING**

**INJECTING**



**MOULDS**



**PRODUCTS**

Under pressure and with heat the melted flakes are injected into moulds.

The aluminium or steel moulds are the negative forms of the new product.

Plastic waste can be turned into almost any desired high-quality object.

# MACHINES

Our machines and services make hands-on plastic recycling experiences accessible on a small scale.



## SHREDDER

Sorted and cleaned plastic waste is put into the motor-powered shredder and cut with the knife set into small flakes.

**Capacity:** around 15-30\* kg per hour

## INJECTION MACHINE

The flakes are filled into the injection machine and heated. A piston generates pressure and injects the material into a mould.

**Capacity:** around 1\*kg per hour

\*Reference: bottle lids (shredded)

# EUROPEAN SAFETY STANDARDS

CE certified



- pre-assembled & ready to use
- lightweight & moveable with casters
- easy to transport & ship
- easy to use
- high quality & constant improvement
- low maintenance & simple to repair
- only small space required
- designed for single-phase electricity
- fulfills all european safety & machinery standards

## EXTRUDER

The flakes are filled into the extruder machine and heated. An extruder screw generates pressure and extrudes the material.

**Capacity:** around 7\*-10.5 kg per hour



SHREDDER



MANUAL  
SHREDDER



AIR  
FILTER



# plasticpreneur®

INJECTION  
MACHINE



EXTRUDER



# MOULD DESIGN & TRAININGS

In our mould catalogue you can choose from over 30 moulds from our standard offer. We also offer educational trainings about circular economy and hands-on plastic recycling.



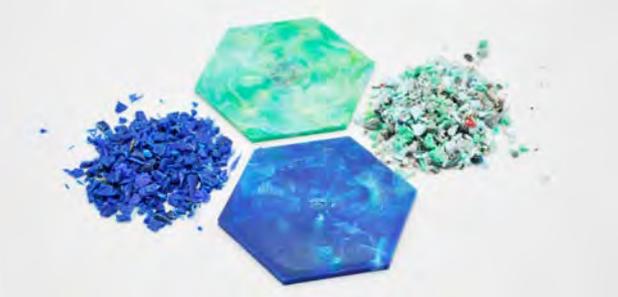
Our experts in product design create customized moulds based on your idea from scratch.

We are offering services such as:

- product design
- technical training
- technical support
- educational programs



**TURNING WASTE  
INTO VALUE.  
ENDLESS  
POSSIBILITIES ...**



# OUR CUSTOMERS

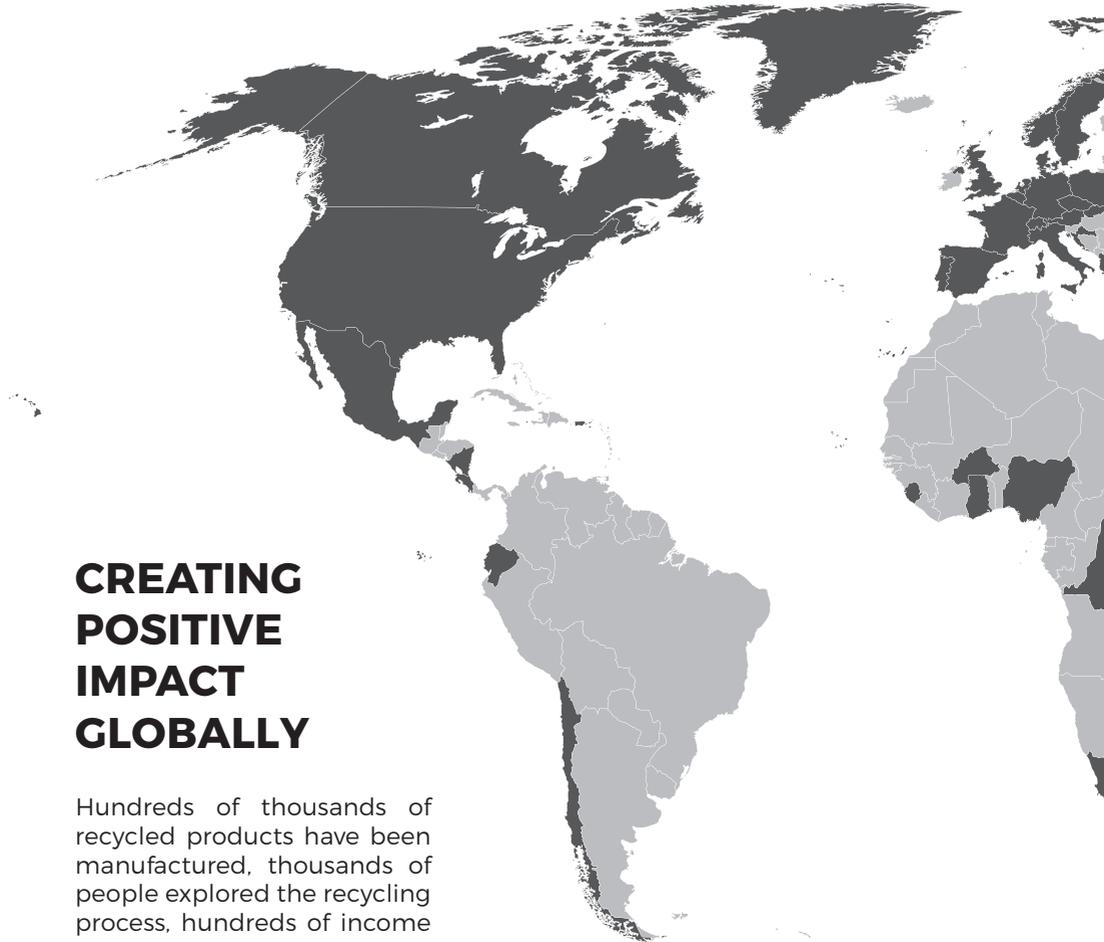
Due to the large variety of use cases our technologies, services and products are used by many different user groups such as universities & schools, science centres & museums, maker spaces & design studios, NGOs & public sector, private people & cooperates, etc.

## EXPLORER

raises awareness about circular economy and recycling in general

# CREATING POSITIVE IMPACT GLOBALLY

Hundreds of thousands of recycled products have been manufactured, thousands of people explored the recycling process, hundreds of income and skill development opportunities were created – and tons of plastic waste were brought back into the loop.



## CREATOR

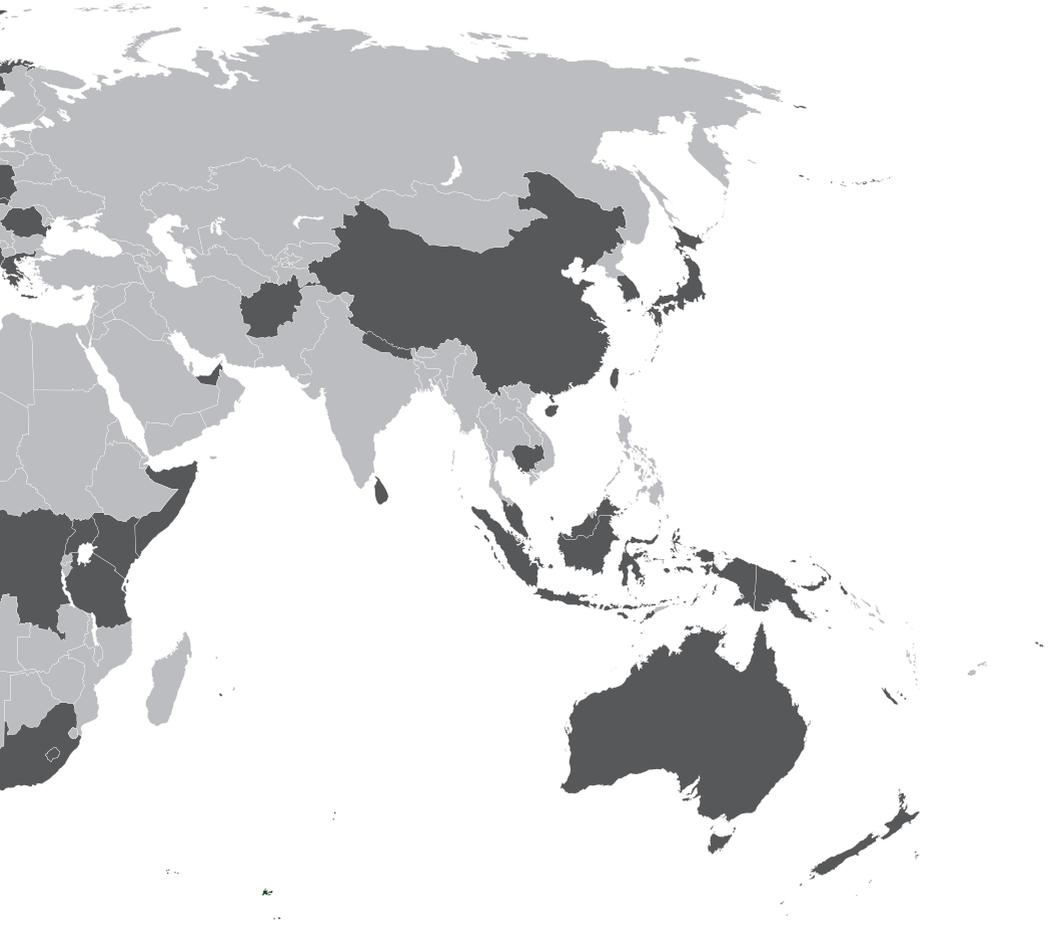
designs & prototypes innovations and performs material tests

## MANUFACTURER

series manufactures product batches locally, employing abundant materials and local workforce

## ENABLER

creates business opportunities and fosters personal growth



**70+ COUNTRIES**  
**6 CONTINENTS**

**350+ MACHINES**  
**800+ MOULDS**

## EXPLORER

educational institution  
awareness-raising  
Austria

The non-profit association PLIA aims to promote the circular economy through creating innovative learning experiences for children from 8-12, teenager and adults.



PLIA uses plasticpreneur machines and moulds to create a simple and hands-on recycling process - for everyone to understand. In innovative workshop settings participants of all ages learn to design products and create prototypes themselves.





# CREATOR

maker  
product development  
United Kingdom

With more than 220.000 subscribers on their youtube channel, Matt and Jonny, two Makers from the United Kingdom sweep along their online audiences with new tools, projects and technologies.



Selling their recycled products online and off-line Brothes Make are very dedicated to put sustainability at the core of their projects. As seen on the picture they extruded beams out of used personal protective equipment to build a bench.



# MANUFACTURER

social enterprises  
batch production  
globally

During COVID-19 one major challenge is the short pass and access to safety equipment. We designed face shields to quickly enable local mass production wherever needed.

**250.000+**  
**FACE SHIELDS**

**200+**  
**INCOME**  
**OPPORTUNITIES**

**15+**  
**COUNTRIES**



UNITED NATIONS  
INDUSTRIAL DEVELOPMENT ORGANIZATION



COVID-19  
RESPONSE

For this, we received a major global award as winners in the UNIDO Global Call for “Innovative Ideas and Technologies vs. COVID-19 and beyond” in the category “Resilient Industries and Infrastructure”.



## ENABLER

refugee camp  
income generation  
Kenya

The Kakuma refugee camp is one of the largest refugee camps in the world although basic infrastructure is still lacking. We have set up a small plastic recycling center to establish income generating opportunities.



## MANUAL SHREDDER

In such decentralized areas our machines need to perform without compromise. Challenges such as the transport of the machines or spare parts, very limited access to electricity, language barriers due to a lot of different nationalities, poor educational standards and hot temperatures are faced – and overcome. The manual shredder for instance works without electricity – and is basically maintenance free to function for as long as possible.



## MANUFACTURER

social enterprise  
empowerment  
Uganda

Eco Brixs started as a community waste collection center in Uganda. Now, the social enterprise purchases plastic waste from individuals to produce and sell sustainable products from recycled waste.

Eco Brixs works with 7+ plasticpreneur machines to produce sustainable products from their collected plastic waste. Over the last years they were able to grow their team and create more than 20 jobs locally. One worker operates three plasticpreneur extruders at the same time to create sustainable fence posts. As a perfect replacement for timber the fence posts show high demand and are sold profitable to the local market. With those profits waste collectors are incentivised, which helps to create a closed-loop waste management system in Uganda.

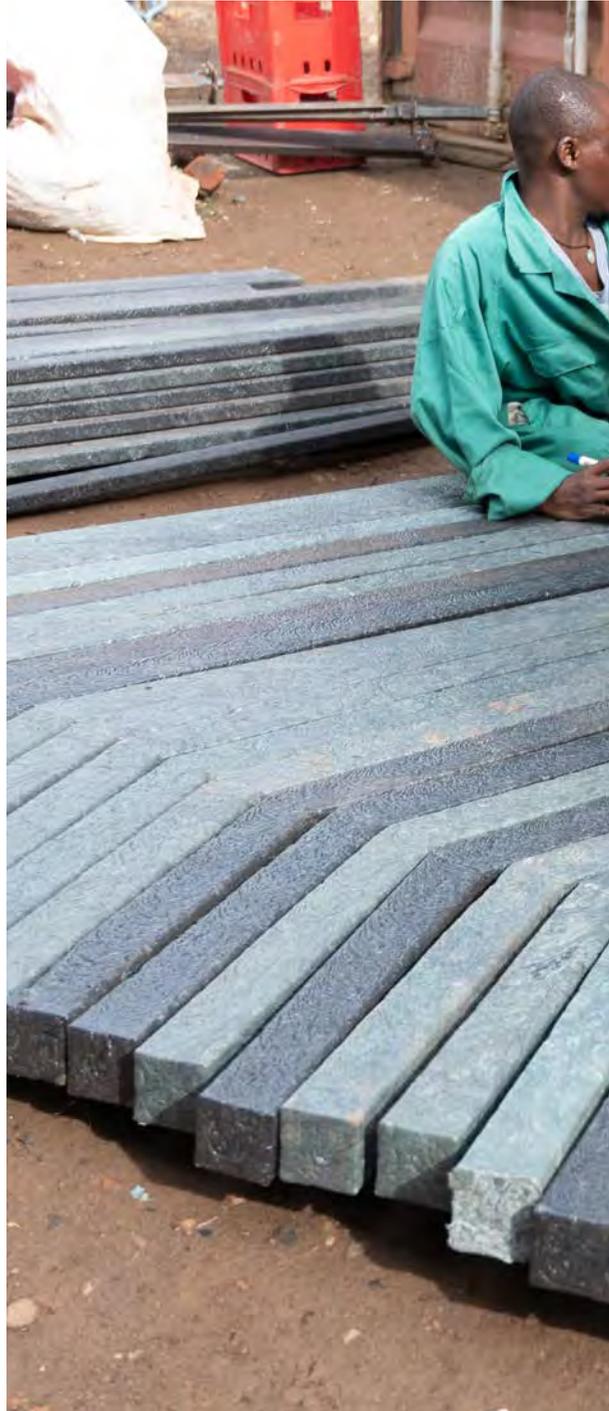


# THE WHOLE VALUE CHAIN

Our mission is to create affordable and access to small-scale plastic recycling experiences and show the utilisation potential of plastic waste. With our machines and services we equip creatives, makers and professionals for the design and series production of product batches from recycled plastic. Our product offer as well as our trainings cover all central steps of the recycling process, following an "all-in-one" approach.

From the interaction with customers in more than 70 countries we are collecting learnings and knowhow each day, which are included in our continuous product & service development and the implementation of projects and activities.

Fence posts produced by Eco Brixs with our Extruder in Uganda.



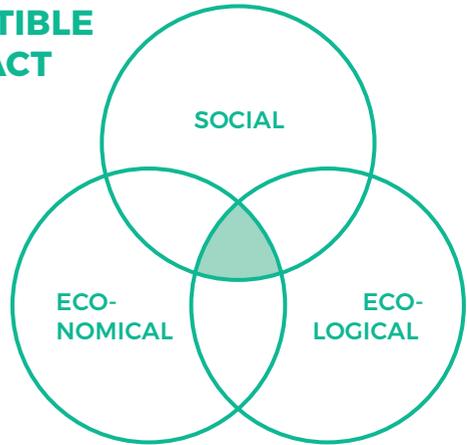


# TAKING ON RESPONSIBILITY

We see ourselves as purpose- and impact-oriented for profit social business. It's not only about what we do but much more about why and how we do it. It ranges from working together in team collaborations, interacting with partners, customers and suppliers to selecting the material we use in our manufacturing process. In short, we aim to integrate our social, ecological and ethical responsibilities. We believe that this is the foundation for a sustainable business model.

We are an interdisciplinary, fast growing team which shares the same vision and has all required strengths, skills and experiences. Whenever possible we collaborate with experts for all the necessary know-how and have won multiple national as well as international awards and recognition.

## OUR MULTIPLE IMPACT



## R&D

We constantly develop new – as well as update our current – products and services. We have set up formal and informal platforms and channels to gather all necessary feedback, needs and information from our partners and customers. This enables us to quickly adapt and change - and therefore improve our quality, performances and customer experience. In our activities, we have committed ourselves to the Human-centered, Circular, Frugal, Inclusive and Sustainable Design approaches.

## MADE IN AUSTRIA

We manufacture all machines in our assembly line in the south of Austria, in Klagenfurt. Moreover, we are committed to procure our key components and material parts from local sources.



Austrian companies have a rich history in machine manufacturing and belong to the world's leading plastic recycling and processing machine manufacturers. With their know-how and quality standards they are setting the benchmarks in this field. We are proud to step into these footsteps and partner with some of them.

Since May 2022 we are a proud part of the erema group, which holds 19.8 % of the shares of plasticpreneur gmbh.



## SAFETY & FAQ

Our machines comply to all relevant safety and certification requirements.

---

### SAFETY

Even though the process of transforming plastic into new objects is quite simple with the use of our machines and moulds - there are still mechanical processes and heat in place. Creating a safe working environment with all necessary safety equipment and standards is therefore our highest priority. Our machines fulfill all required European safety certifications and machinery standards.

---

### MATERIAL

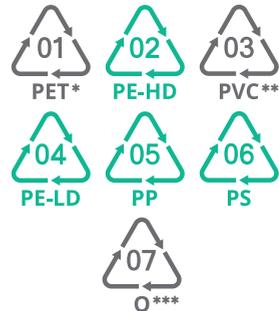
There are all kinds of different plastic types out there. We designed our machines to work with **HDPE, PP, PS, LDPE, PLA, ABS and TPU**. They are quite common, easy to recycle and safe to use. Different plastic types should never be mixed as this will result in a significant decrease in quality standards and make it very difficult to recycle them in the future.

---

### SHIPPING

Our machines are shipped in smallest containers possible, reducing unnessecary emissions and costs. Within minutes they are ready to use after 2-3 assembly steps.

They can easily be transported or stored, as they are lightweight and have casters.



\*Possible to shred with the Granulator and Manual Shredder. Injection and extrusion moulding process in research.

\*\*Due to healthcare issues not possible to process.

\*\*\*Materials such as PLA, AB, TPU, etc. are possible to process.

# #makeplasticcircular



## plasticpreneur®

plasticpreneur gmbh

Viktor Kaplan-Straße 2  
2700 Wiener Neustadt  
AUSTRIA

Adi-Dassler-Gasse 4  
9073 Klagenfurt-Viktring  
AUSTRIA

Registry court: LG Wiener Neustadt  
FN 525888s, VAT no. ATU75108214  
State Ceremony: Austria

hello@plasticpreneur.com  
www.plasticpreneur.com

All rights reserved. All photo materials and textual information in this brochure are based on our own material, on the materials offered by kelag / Daniel Waschnig, by our customers or Adobe Stock. Changes, errors as well as literal and phrase mistakes reserved.

© 2022 plasticpreneur gmbh  
Printed in Austria (druck.at)

recycleable  recycled



[plasticpreneur.com](https://plasticpreneur.com)  
[hello@plasticpreneur.com](mailto:hello@plasticpreneur.com)