



# Circular Valley

## Final 15 Start-ups

MAY 2021

Grow the economy –  
protect the environment



**Boston / San Francisco**  
Biotechnology

**Silicon Valley**  
Platform Economy

**London**  
FinTech

**Circular Valley**  
Circular Economy

**Berlin**  
E-Commerce



## **b.fab GMBH**

Cologne, Germany

### **CATEGORY: BIOCONVERSION**

CO<sub>2</sub> as a greenhouse gas leads to global warming, but at the same time is a valuable potential resource for the upcoming bioeconomy.

b.fab is specialized in C1 Bioeconomy. They utilize CO<sub>2</sub> and combine electro-chemistry with Synthetic Biology to produce proteins and chemicals.

[www.bfab.bio](http://www.bfab.bio)



## **CARBONAUTEN GMBH**

Giengen, Germany

### **CATEGORY: BIOCONVERSION**

The reduction of climate gases and the replacement of fossil-based materials is of high importance in achieving the Paris climate goals.

carbonauten produce biocarbons from biogenic and industrial waste materials through pyrolytic carbonisation.

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



## **OTTAN STUDIO**

Istanbul, Turkey

### **CATEGORY: BIOCONVERSION**

Over 1.3 billion tonnes of food annually is wasted, this equals to one third of total annual production.

Ottan is a green-tech start-up that develops and produces circular and durable bio-composite materials for designers by up-cycling green waste.

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



## WASTE TO RESOURCE UNIT

Bonn/Münster, Germany

### CATEGORY: BIOCONVERSION

The majority of food waste produced annually in Germany originates from private households, but also from restaurants and canteens. The recycling of food waste is largely limited to composting and fermentation and by that purely energetic recycling of biogas.

Waste-to-Resource Unit have developed a modular, fully automated container process for the bioconversion of food waste with heterotrophic microalgae to protein-rich biomass and simultaneous extraction of high-quality chemicals.



## CONCULAR We make circular construction happen

Berlin, Germany

### CATEGORY: BUILDINGS/INFRASTRUCTURE

The construction sector is the largest polluter in the world. The main reason is the grey energy needed for the production of materials. Nevertheless, every day buildings are getting demolished, the materials are landfilled and new buildings with new materials are put on the same spot.

Concular wants to change that by creating real reuse of the materials. Their solutions allow them to digitize materials in existing buildings and reintroduce these materials in new buildings before the demolition is happening.

[www.concular.de](http://www.concular.de)



## POLYCAR RESEARCH TECHNOLOGY GMBH & CO. KG

Suhl, Germany; UK; South-Africa



### CATEGORY: BUILDINGS/INFRASTRUCTURE

Billions of people worldwide lack affordable and sustainable housing. At the same time, the building sector already today is producing the largest waste stream of all sectors.



Polycare produces durable and reusable building elements with less material and less energy, enabling even non-professionals to construct (and de-construct) sustainable buildings themselves without heavy construction equipment.

[www.polycare.de](http://www.polycare.de)



## PIKA DIAPERS

Tel-Aviv, Israel

### **CATEGORY: CONSUMER GOODS/PACKAGING**

Each child in disposable diapers creates up to 1 tonne of trash. Reusable diapers are an eco-friendly alternative, but washing them is a hassle.

Pika have developed a compact machine that cleans reusable diapers in one step, allowing parents to throw the soiled diapers in the machine without prior cleaning, and have clean diapers ready within two hours.

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



## PLASTIC FISCHER GMBH

Cologne, Germany

### **CATEGORY: CONSUMER GOODS/PACKAGING**

Marine plastic pollution to a very large part stems from plastic discharged into rivers, particularly in parts of Asia.

Plastic Fischer collects plastic from rivers to prevent it from entering the oceans by using locally built and low-tech solutions.

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



## PROSERVATION

Stuttgart, Germany

### **CATEGORY: CONSUMER GOODS/PACKAGING**

Packaging materials from Expanded Polystyrol (EPS/Styrofoam/Styropor) are a major environmental challenge as they cannot be recycled and are very emission intensive in the production process (4,5 t CO<sub>2</sub> per ton of styropor)

Proservation has developed a shock-absorbing, insulating, form-fitted cushion packaging which is based on vegetable waste from the grain industry (the husks of the grain).



## RECO-E GMBH

München, Germany

### CATEGORY: ELECTRONICS

Electronic waste all over the world is increasing rapidly. Much is exported to developing nations where components are recovered in processes that are harming the environment and workers involved.

Reco-E recycles electronic waste lossless and produces conflict free metal powders. Ingoing weight equals outgoing weight.

[www.reco-e.de](http://www.reco-e.de)



## SOLAR MATERIALS GMBH I.G.

Braunschweig, Germany

### CATEGORY: ELECTRONICS

Solar module recycling needs increase exponentially but there is no economical and energy efficient method as of now.

SOLAR MATERIALS is a high-tech solution for raw material recovery from solar panels through a thermo-mechanical process.

[www.solar-materials.com](http://www.solar-materials.com)



## EcoFoodly

Nice, France; Sydney, Australia



### CATEGORY: FOOD/NUTRITION

Food waste is one of the biggest contributors to GHG emissions. Producing uneaten food wastes a lot of resources.

EcoFoodly aims to reduce food waste in supermarkets by connecting consumers via App to reduced priced food. They facilitate the transfer of information and create a more efficient supply chain.

[www.ecofoodly.org](http://www.ecofoodly.org)



## CIRCULAR ECONOMY INTERNET SOCIETY

The Netherlands; Denmark; Hong Kong; Canada

### CATEGORY: INFORMATION/DIGITAL

Today's value chains and their material streams are characterized by a lack of traceability. Existing digital systems are not interoperable.

Circular Economy Internet Society seek to digitalize the Circular Economy through an open software platform governed as a global public good where businesses realize digital circularity business models.

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



## FIX FIRST

Berlin, Germany

### CATEGORY: INFORMATION/DIGITAL

Unsuitable (service) processes for (large) appliances are a main barrier for circularity (costly, low convenience, skill shortage, lack of data, ...).

FixFirst enables the ecosystem of local repair services providers, manufacturers, retailers etc. by providing an instant error analysis and remote video consultations combined with booking options for inspections and repairs as well as recommendations for sustainable appliances

[www.fixfirst.de](http://www.fixfirst.de)



## CIRCULARITY GERMANY GMBH I.G.

Germany; The Netherlands



### CATEGORY: TEXTILES

Most of textile waste is incinerated or landfilled. Often waste is exported to developing countries.

Circularity collects used workwear and turns it into new yarn of which they produce T-shirts. All produced in a zero waste, closed loop production setup.

[www.circularitybv.nl](http://www.circularitybv.nl)