

# zirkulierBAR

Intermunicipal acceptance  
for sustainable value added  
from separately collected  
sanitary streams



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**REGION.**  
innovativ

## Our project

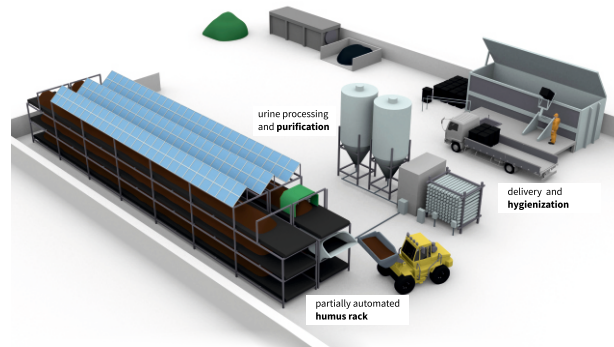
zirkulierBAR is an interdisciplinary and transdisciplinary research project which is funded for three years by the German Federal Ministry of Education and Research (BMBWF) within the funding measure REGION.innovativ. Under zirkulierBAR, municipalities and forward-thinking companies, together with universities and research institutes, are creating a “living lab” for a sustainable regional circular economy.

In the city of Eberswalde, located in the region of Barnim, zirkulierBAR builds an innovative and scalable research plant for recycling-oriented treatments of contents from dry toilets. The final products are nutrient-rich and low-pollutant recycling fertilizers for horticulture and agriculture. Municipalities can thereby plan and implement water and resource efficient alternatives to linear water-based sewer systems.

## Our vision

We want to recover nutrients from consumed food and recycle them to agriculture – in form of a regional, sustainable circular economy.

### Our living laboratory for the production of QUALITY-ASSURED RECYCLING FERTILIZERS



## Our key topics

1

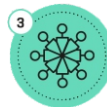
### **TECHNICAL REQUIREMENTS** for broader innovation applications

In the zirkulierBAR living lab we develop the technical processing system for fertilizer production including logistics, hygienization at 70 degrees, humus rack and urine treatment plant. The processes are scientifically accompanied and methods for quality assurance of the recycled fertilizers are developed and standardized.

2

### **AGRICULTURAL AND RESOURCE-ECONOMIC REQUIREMENTS** for innovation applications

Planting experiments and environmental models are used to develop concepts for applications in horticulture and agriculture. Our research plant will be analyzed in terms of environmental and macroeconomic effects considering different scales. Blueprints for realization of production, distribution and financing of recycling fertilizers will be created.



3

### **REQUIREMENTS FOR ACCEPTANCE AND COLLABORATION** in our innovation ecosystem

We analyze and promote legal, cultural and municipal acceptance for the use of recycling fertilizers. We talk to relevant stakeholders along the fertilizer process chain. Our concept should make it easier for other municipalities to decide in favor of a sustainable nutrition transition.

4

### **TRANSFER ACTIVITIES** to public target groups

zirkulierBAR develops legal and political recommendations for municipal and national decision makers. We develop and test materials for university and vocational education in order to make the subject comprehensible in a both playful and scientific way and to consciously challenge conventional thinking.



Consortium members in the joint research project zirkulierBAR are:



**Project coordination:**  
**The Leibniz Institute of Vegetable and Ornamental Crops (IGZ) in Großbeeren.**  
 info@zirkulierbar.de  
 presse@zirkulierbar.de

**zirkulierBAR.de**