



HEI-TRAIN. HEI Transformation for  
Entrepreneurship and AI-Driven Innovation



Funded by the European Union –  
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# LeftoverX

A mobile platform that lets workshops identify, list, sell, give away, and exchange leftover materials.



# LeftoverX

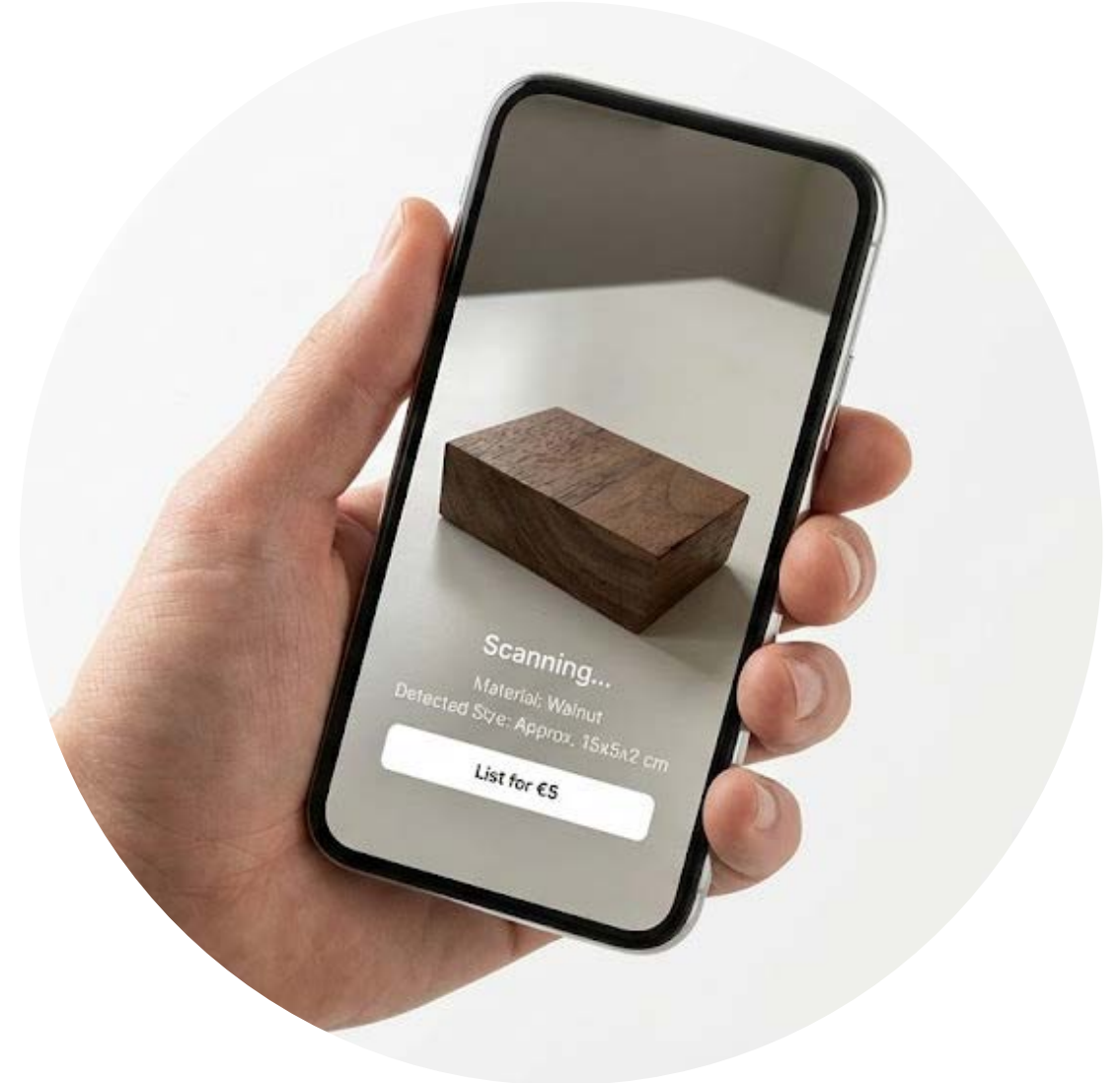
## *Turning Workshop Leftovers into Local Resources*

### **Problem**

Workshops generate valuable leftover materials but lack tools to manage or reuse them. Small pieces are hard to catalogue, sell, or exchange → usually end up as waste.

### **Solution**

AI-powered mobile platform to identify, list, sell, give away, or exchange materials in seconds. Hyperlocal marketplace connecting workshops, creators, and students.





## Why It's Innovative

- AI auto-recognizes materials through the phone camera
- Dimensions and condition estimated in seconds
- Listing time reduced from 10 minutes → under 30 seconds
- Hyperlocal matching minimizes transport and cost



# Multiple Industries, One Circular Flow

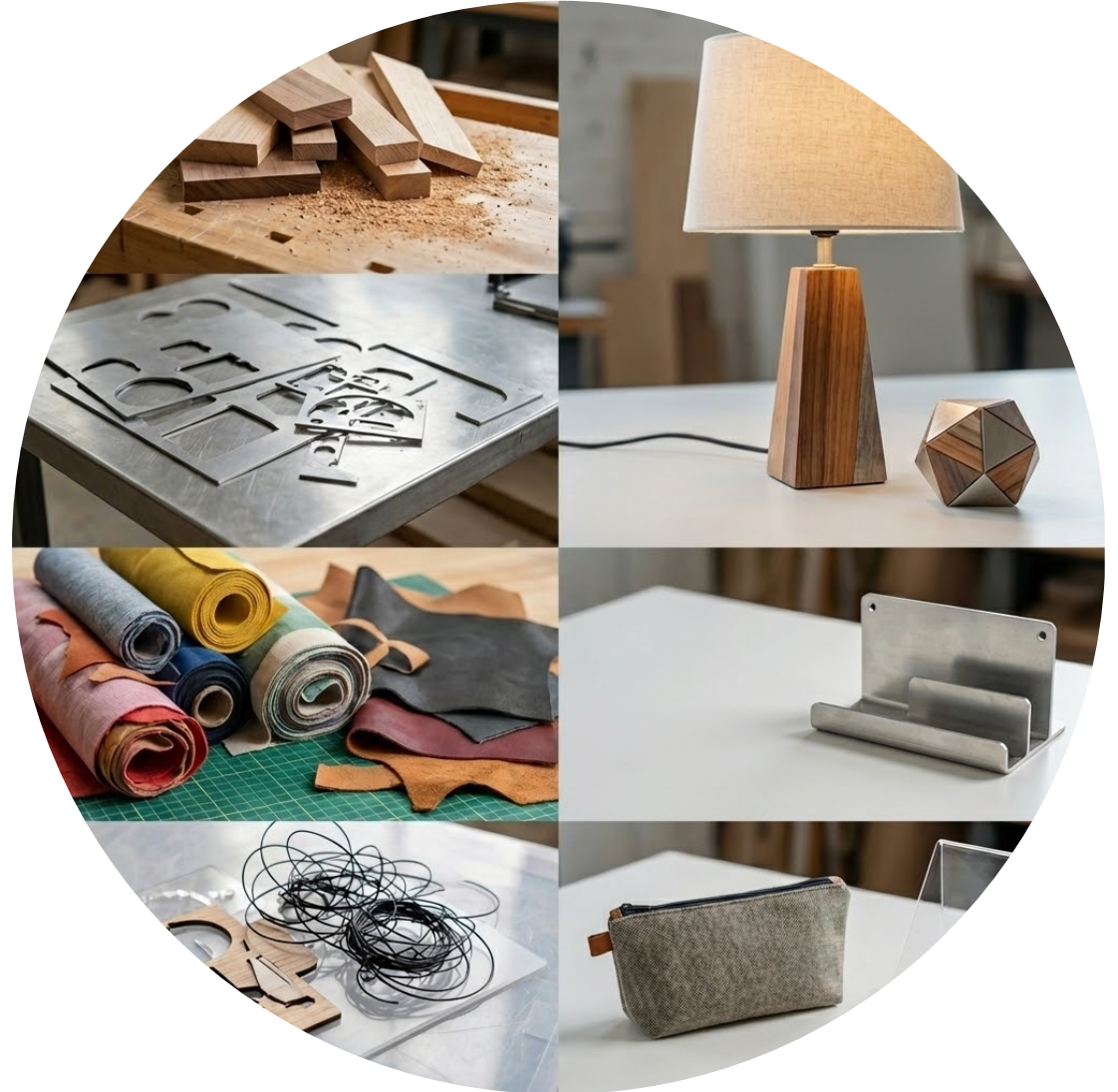
**Woodworking** → hardwood offcuts become small furniture & accessories

**Textiles** → fabric remnants reused in upholstery, bags, décor

**Metalworking** → sheet-metal leftovers turned into brackets, lamps, art

**Plastics & composites** → prototyping materials for makers & schools

**Cross-industry reuse** → mixing materials to create new hybrid products





# Who Benefits from LeftoverX

## **Workshops & Small Manufacturers**

Reduce waste, clear space, turn leftovers into revenue.

## **Makers, Designers & Hobbyists**

Access affordable, high-quality materials in small quantities.

## **Schools & FabLabs**

Reliable low-cost supply for education, prototyping, and STEM programs.

## **Local Communities & Repair Cafés**

Strengthen circular practices and local collaboration.

## **Sustainable Brands & Craft Studios**

Source reclaimed materials and demonstrate real circularity.

## **Cities & Eco-Initiatives**

Lower landfill load; support hyperlocal circular economies.



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# Cost Structure

## Product Development:

Mobile app, backend, AI material-recognition pipeline.

## AI & Infrastructure:

Cloud inference, image storage, scalable compute costs.

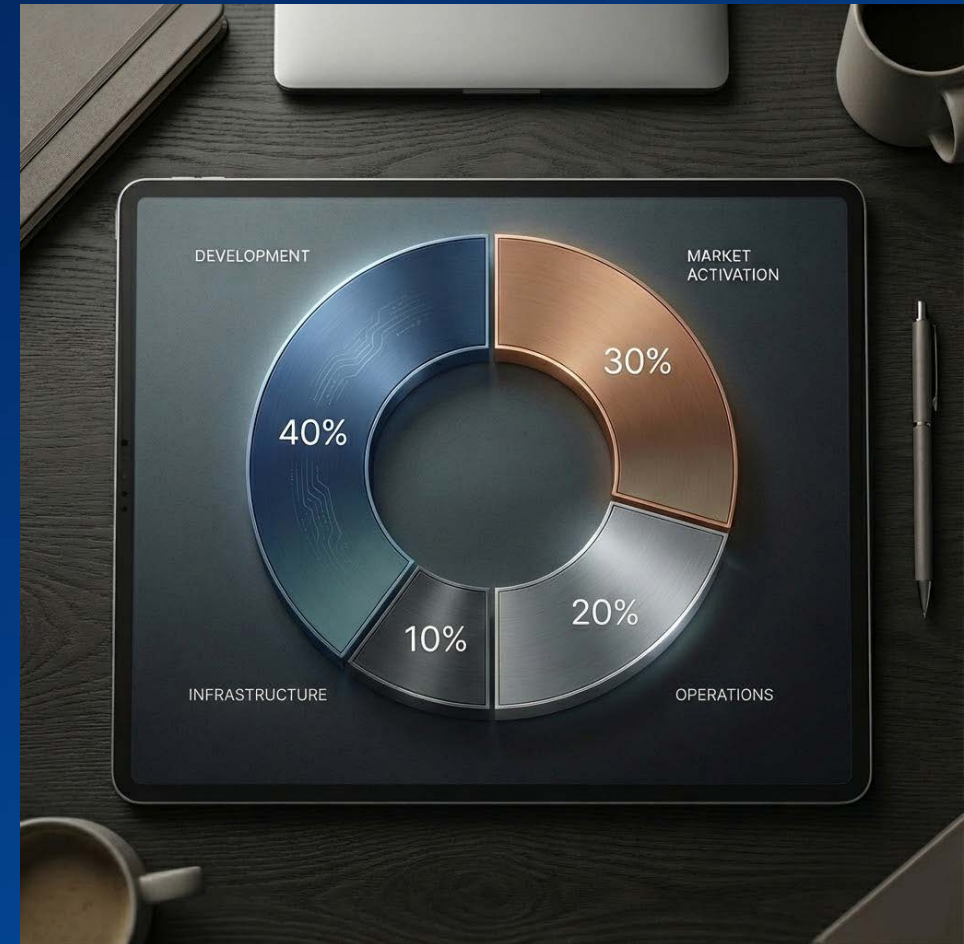
## Market Activation:

City-by-city onboarding, outreach to workshops, maker hubs.

**Operations:** Support, content moderation, compliance,  
transaction handling.

## Unit Cost Insight:

*AI inference per scan  $\approx$  €0.01–0.03 (fully optimized)*



# Revenue Model



## MARKETPLACE COMMISSIONS

- 12–15% per transaction
- Average basket: €20–€30
- Recurring flows from active maker communities



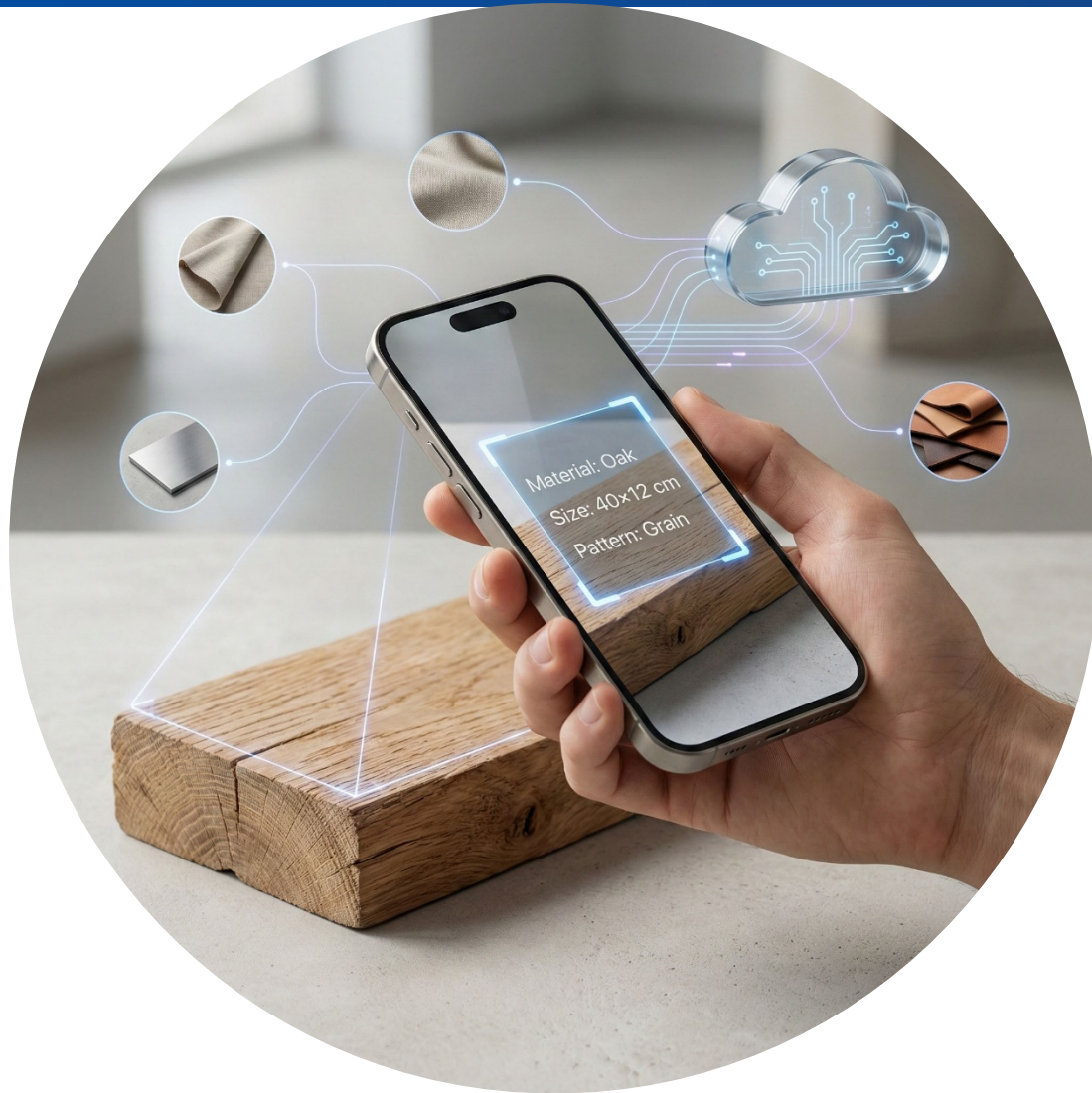
## PRO WORKSHOP SUBSCRIPTION

- €29 / month
- Bulk uploads, ESG reporting, analytics
- Target: SME workshops & medium manufacturers



## ADDITIONAL MICRO FEES

- Optional pickup fee for free items
- Priority listing boosts
- Future: aggregated data insights



# AI as the Core Enabler

## How it Works

- Computer Vision auto-identifies materials & textures
- AR-assisted dimension estimation
- Automated tagging & listing in under 30 seconds
- User corrections train the model → data flywheel
- Hyperlocal matching powered by AI routing

## Core Tech Stack

- Mobile-first scanning & edge processing
- Cloud-based inference for high accuracy
- Proprietary dataset of real workshop leftovers
- Continuous model improvement with every scan



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# Real Sustainability Impact

- SDG 12 — Responsible Production:** Reduced waste, increased reuse, measurable diversion metrics
- SDG 9 — Industry & Innovation:** Digitizing traditional workshops, enabling circular micro-economies
- SDG 13 — Climate Action:** Lower emissions through avoided virgin material production

*Each reused kilo equals avoided extraction, avoided emissions, and reduced waste.*





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# Let's build a cleaner, smarter material ecosystem!

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