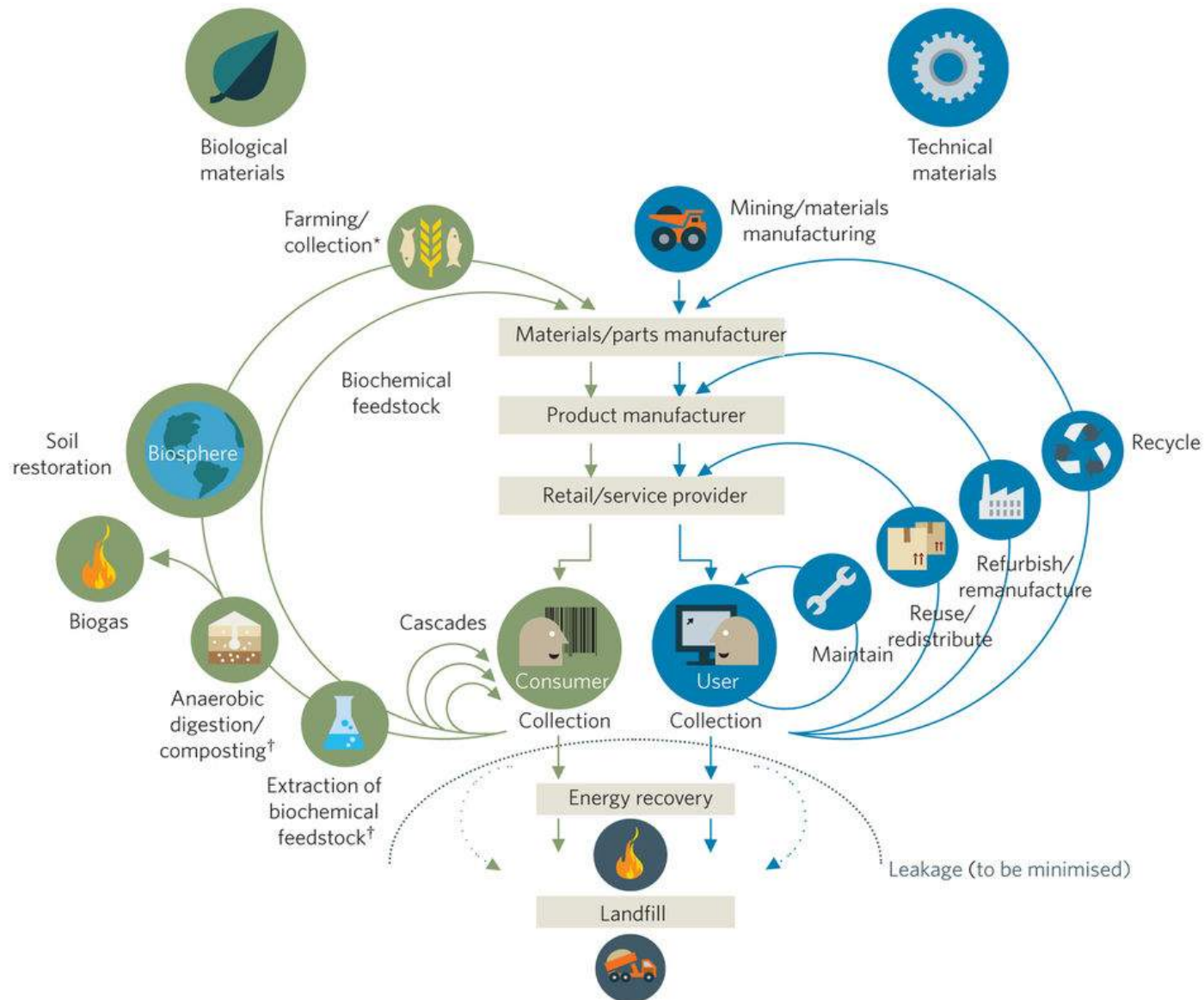




**Ilaria Marzoli**  
**AMIU Genova SpA**

**Genoa City Cluster**  
**Coordinator**

# Circular economy - concept



# FORCE Project

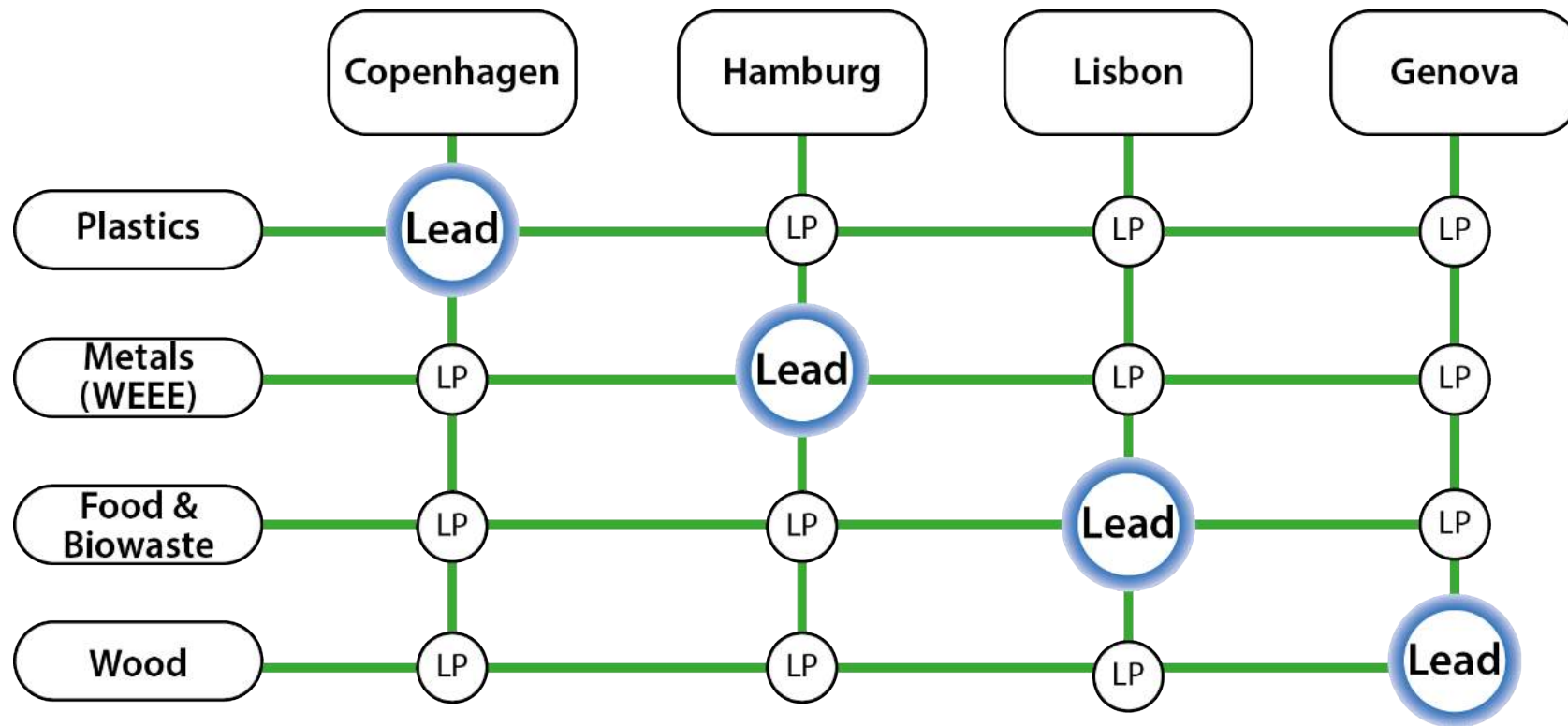
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- **Horizon 2020:** *A resource to recycle, re-use and recover raw materials*, **Waste 6a:** Promoting eco-innovative waste management and prevention as part of sustainable urban development - Eco-innovative solutions
- **4 year project** - start September 2016
- **23 partners:**
  - 4 cities: Copenhagen, Hamburg, Lisbon and Genoa
  - 3 universities and research institutes
  - 10 private companies
  - 3 publicly owned companies
  - 3 NGO and business associations
  - Project Coordinator: City of Copenhagen
- Budget: **9,72 million €**

# Partnerships: lead and local

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# Objective

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- Establish **16 Value Chain Based Partnerships**
  - 4 lead – “big”
  - 12 local – “small”
- Develop **10 viable end-markets** by demonstrating new applications
- Develop a **governance model** for cities based on value chain based partnerships
- Develop decision support tools and assess the actual impact by use of **Big Data**
- Ensure replication through the **FORCE Academy** aiming at enterprises, citizens and policy makers.

# VCBP and Force Academy







**FORCE**  
Cities Cooperating  
For Circular Economy

## Lead partnership

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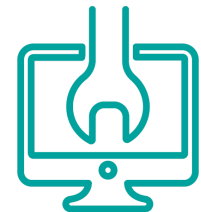
### Copenhagen

Testing 3 different collection schemes for **flexible plastics** to be processed into a marketable resource (10 innovative applications and viable end market potential for at least 3 products)



### Hamburg

Promote **WEEE re-use**, recycling and disposal introducing an innovative ICT system/App for the WEEE market. Testing second hand EEE shops and dismantling activities (**Big Data** and Business Model)



### Lisbon

Set up a broad value chain for food and biowaste and develop an **App** to manage the network and promote **food waste prevention**, D-t-D separation campaigns to implement composting in loco and green waste quality



## Local partnership

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### Plastic

**Hamburg** - cleaner plastic waste streams for higher market values and usage. New separate collection of plastic films at 5 recycling stations

**Lisbon** - “Call for Artists” for the creation of urban art pieces built with plastic waste

### WEEE

**Copenhagen** - evaluation of App as a guidance tool for Copenhagen citizens

**Lisbon** - promotion of two repair cafés

### Bio-waste

**Copenhagen** - survey sorting technologies and new bio-waste collection/recycling scheme for defined households, test production of high quality compost and adapt Lisbon App for awareness

**Hamburg** - distribute additional pre-sorting bins to defined households and develop awareness campaign



# Genoa - Lead and local partnership

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COMUNE DI GENOVA



## WP6 - Wood and wood waste

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Present wood recycling rate **73%**

Destination: **71%** particle board industry – **2%** composting plants



### Project goals

2 Re-engineered collection schemes:

- Post consumer wood
- Public parks and gardens

2 new collection schemes:

- Driftwood (beaches and rivers)
- Brushwood

# WP6 – The four collection schemes

## 1 – Post consumer



## 2 – Parks and gardens



## 3 – Driftwood (beaches and rivers)



## 4 – Brushwood



## WP6 – Assessment

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### VCBP development

- Stakeholders mapping per sector (companies, public bodies, associations, other)
- Involvement - over 40 interviews (group and single)/ 1 BW (2017)



### Outcomes

- An overview of the local situation
- Stakeholders needs, identification of possible business opportunities



## WP6 – Action Plan

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**Prevention** – to be implemented to increase wood items circularity

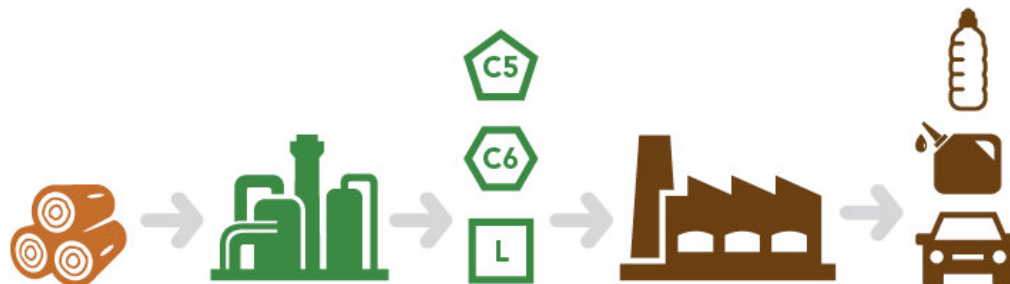
**Upcycling** – to generate new products of high quality and value and unlocking new potential businesses



A plan of activities in the **Urban Lab** which focused on



- **governance**
- **new end of waste procedures**
- **innovative technology and market applications – bioeconomy**



## Local partnership: Genoa

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Creation of a 3D printing start up company to produce customized products using secondary material for disseminating circular economy



Development of re-use practices and organisation of Repair Cafés to show citizens how to take care of no longer working EEEs



Prevention campaign targeted to schools and restaurant owners.

## Local partnerships

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### Copenhagen

Bulky waste – innovative collection methods to raise quality, promote reuse and identify alternative market options through repair shops and partnerships

### Hamburg

Collection and shredding of shrub and tree-cut for production of chimney wood

### Lisbon

Improve wood furniture recycling and reuse through a Reuse Center







# FORCE

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[www.ce-force](http://www.ce-force)

