HOOP TRAINERS REPORT
Citizen science action for optimising the separate collection of the organic fraction of municipal solid waste (OFMSW) in Lazio region
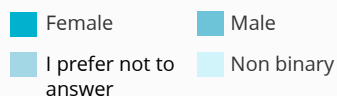
LAZIO

STUDY RESULTS

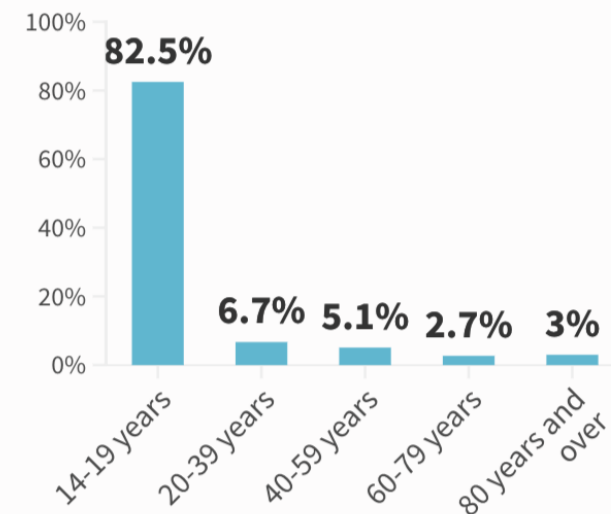## EDUCATIONAL GAME TO TACKLE THE COMPLEX CHALLENGES OF CIRCULARITY

By analyzing users' decisions throughout the HOOP Trainers game, we aim to gain a deeper understanding of the citizens' perspectives on biowaste separation, their acceptance of products derived from it, and their recommendations for constructing greener and more circular cities and regions.

PARTICIPANT PROFILE

By gender

- Female
- Male
- I prefer not to answer
- Non binary

- 7.4%
- 7.4%
- 24.2%
- 60.9%

By age

- 14-19 years: 82.5%
- 20-39 years: 6.7%
- 40-59 years: 5.1%
- 60-79 years: 2.7%
- 80 years and over: 3%

HOOP TRAINERS PLAYERS

296

PERIOD

23/03/2023

06/07/2023

Presented below are the results obtained in Murcia, which can be analyzed within the Biowaste Club of the region. These findings serve as a basis for transforming data into actionable improvement proposals, fostering collaborative efforts to co-create a more circular municipality.
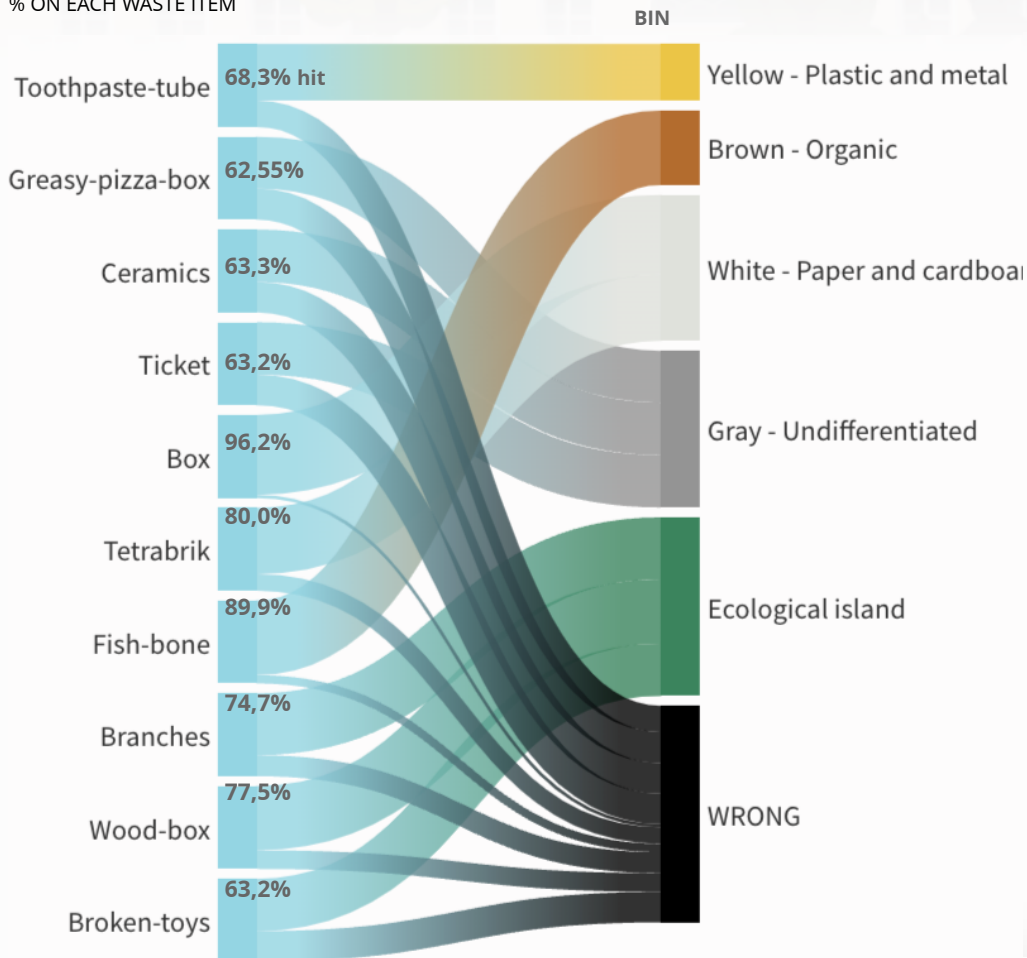
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Science for Change

MISSION 1

OBJECTIVE: Properly sort 10 waste items into their respective bins

Hits and misses by waste item

% ON EACH WASTE ITEM

BIN

Waste item	%	Bin
Toothpaste-tube	68,3% hit	Yellow - Plastic and metal
Greasy-pizza-box	62,55%	Brown - Organic
Ceramics	63,3%	White - Paper and cardboard
Ticket	63,2%	
Box	96,2%	Gray - Undifferentiated
Tetrabrik	80,0%	
Fish-bone	89,9%	Ecological island
Branches	74,7%	
Wood-box	77,5%	WRONG
Broken-toys	63,2%	

Waste items that raised the most doubts

RANKING BASED ON THE % OF ERRORS
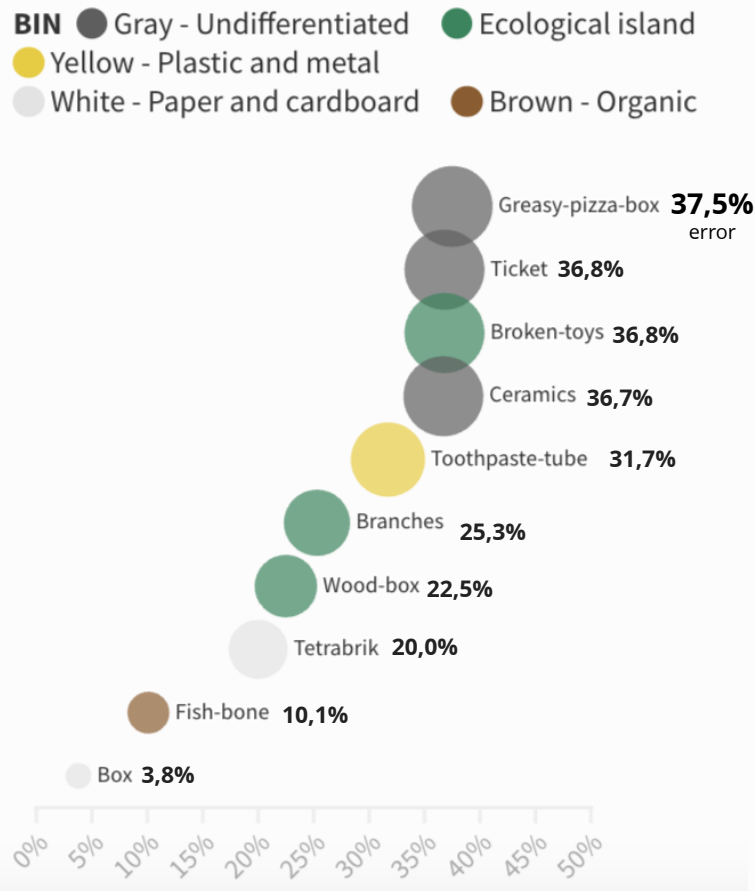
BIN ⬤ Gray - Undifferentiated 🟢 Ecological island
🟡 Yellow - Plastic and metal
⚪ White - Paper and cardboard 🟤 Brown - Organic

Item	% error
Greasy-pizza-box	**37,5%** error
Ticket	**36,8%**
Broken-toys	**36,8%**
Ceramics	**36,7%**
Toothpaste-tube	**31,7%**
Branches	**25,3%**
Wood-box	**22,5%**
Tetrabrik	**20,0%**
Fish-bone	**10,1%**
Box	**3,8%**

0% 5% 10% 15% 20% 25% 30% 35% 40% 45% 50%
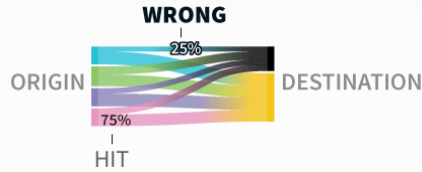
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Science for Change

MISSION 1

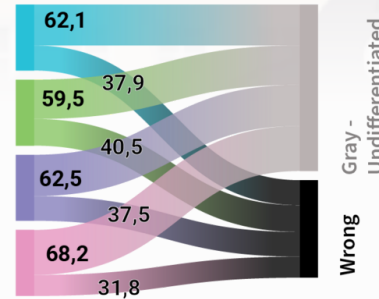**OBJECTIVE:** **Properly sort 10 waste items into their respective bins**

Hits and misses by waste item
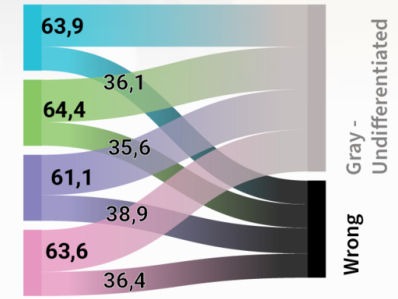
DATA IN % WITH RESPECT TO THE TOTAL OF THE SAME GENDER

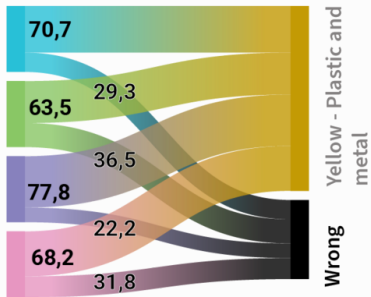Legend:
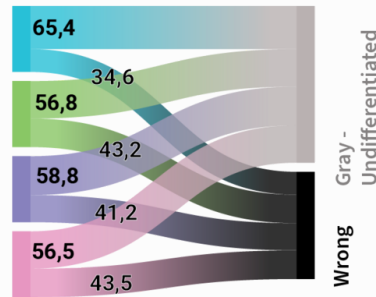- Female
- Male
- Non binary
- I prefer not to answer

WRONG 25%
ORIGIN — DESTINATION
75%
HIT

Ceramics
- 62,1
- 37,9
- 59,5
- 40,5
- 62,5
- 37,5
- 68,2
- 31,8

Gray - Undifferentiated / Wrong

Ticket
- 63,9
- 36,1
- 64,4
- 35,6
- 61,1
- 38,9
- 63,6
- 36,4

Gray - Undifferentiated / Wrong

Toothpaste-tube
- 70,7
- 29,3
- 63,5
- 36,5
- 77,8
- 22,2
- 68,2
- 31,8

Yellow - Plastic and metal / Wrong

Greasy-pizza-box
- 65,4
- 34,6
- 56,8
- 43,2
- 58,8
- 41,2
- 56,5
- 43,5

Gray - Undifferentiated / Wrong

Fish-bone
- 91,2
- 8,8
- 87,8
- 12,2
- 82,4
- 17,6
- 95,5
- 4,5

Brown - Organic / Wrong

Branches
- 74,5
- 25,5
- 78,1
- 21,9
- 64,7
- 35,3
- 65,2
- 34,8

Ecological island / Wrong

Box
- 97,8
- 2,2
- 93,2
- 6,8
- 94,4
- 5,6
- 90,5
- 9,5

White - Paper and cardboard / Wrong

Tetrabrik
- 79,1
- 20,9
- 83,6
- 16,4
- 75,0
- 25,0
- 65,2
- 34,8

White - Paper and cardboard / Wrong

Wood-box
- 79,4
- 20,6
- 75,7
- 24,3
- 82,4
- 17,6
- 63,6
- 36,4

Ecological island / Wrong

Broken-toys
- 68,0
- 32,0
- 57,5
- 42,5
- 64,7
- 35,3
- 50,0
- 50,0

Ecological island / Wrong

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Science for Change

MISSION 1

OBJECTIVE: Properly sort 10 waste items into their respective bins

Wrong answer based on gender

DATA IN % WITH RESPECT TO THE TOTAL OF THE SAME GENDER

- 🔵 Female
- 🟢 Male
- 🟣 Non binary
- 🔴 I prefer not to answer

The median age based on the provided responses

Item	Median age
Toothpaste-tube	29 years
Greasy-pizza-box	28 years
Ceramics	26 years
Ticket	27 years
Box	28 years
Tetrabrik	21 years
Fish-bone	36 years
Branches	37 years
Wood-box	21 years
Broken-toys	27 years

ANCI LAZIO

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Science for Change

MISSION 2

LAZIO
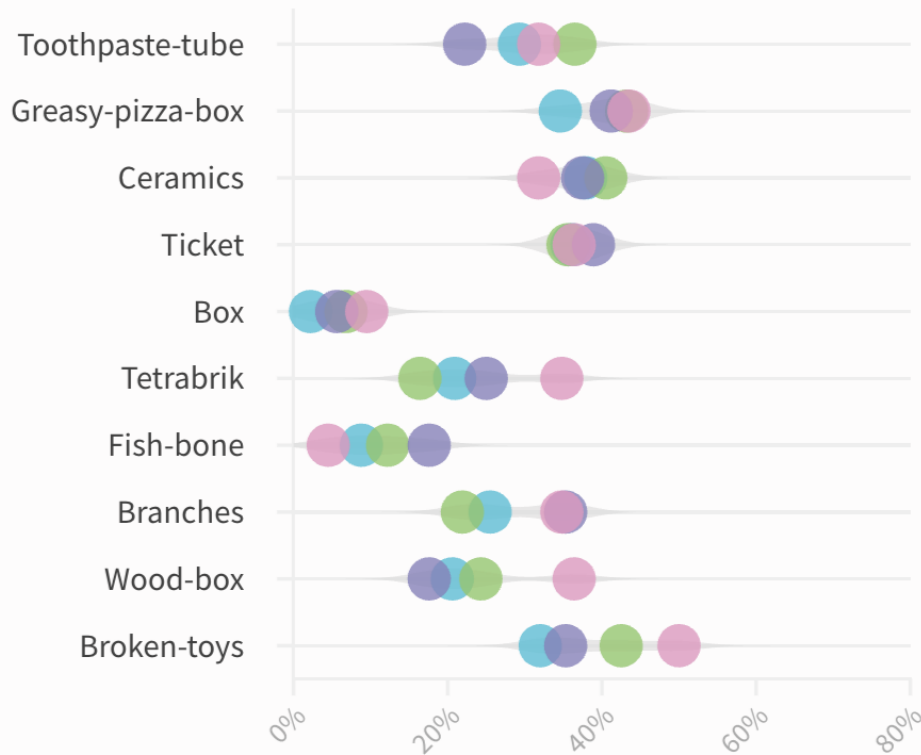
189
PARTICIPANTS

OBJECTIVE: Opinions on 4 questions regarding domestic waste separation

1 Key motivations behind separate waste collection

- **Reduce the environmental impact of waste**
- Turn waste into useful products
- Pay less taxes
- Keep our city beautiful
- None, I'm not motivated enough to recycle

2.6%
46%
15.3%
22.2%
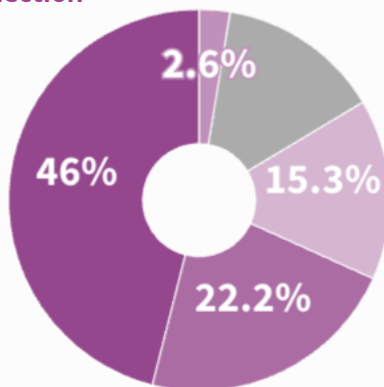
2 Primary obstacles to waste separate collection indicated by users

- **Lack of information**
- Lack of space at home
- Distrust, all the waste is mixed
- Lack of time
- None of the above

10.6%
28.6%
14.8%
21.2%
24.9%
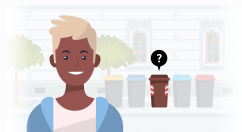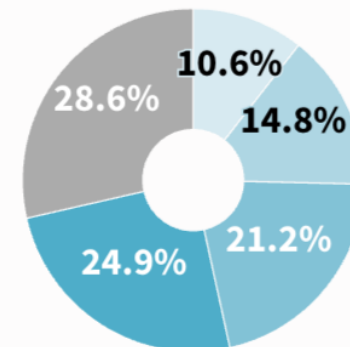
3 How the professionals could differentiate the organic fraction produced before cooking

- **New Municipal service with dual organic waste collection.**
- I recycle organic waste with a compost bin.
- I choose suppliers that help me reduce waste and dry refuse.
- I use a continuous bag system for selective waste collection.
- None of these options satisfies me
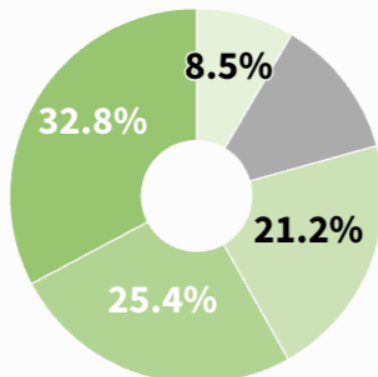
8.5%
32.8%
25.4%
21.2%

4 What actions should an entrepreneur focus on in order to improve the quality of urban organic waste collection?

- **Organize school activities (e.g., exhibitions, newsletters, etc.) to educate citizens on proper recycling.**
- Promote environmental education for raw material recovery.
- Information campaign to enhance organic waste collection in the restaurant sector.
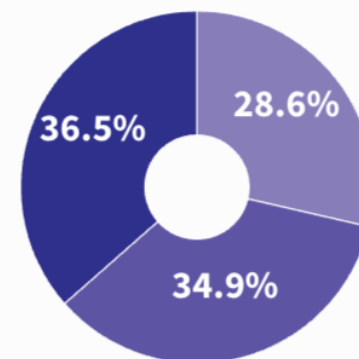
36.5%
28.6%
34.9%

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Science for Change

MISSION 2

OBJECTIVE: Opinions on 4 questions regarding domestic waste separation

1 **Key motivations behind separate waste collection**

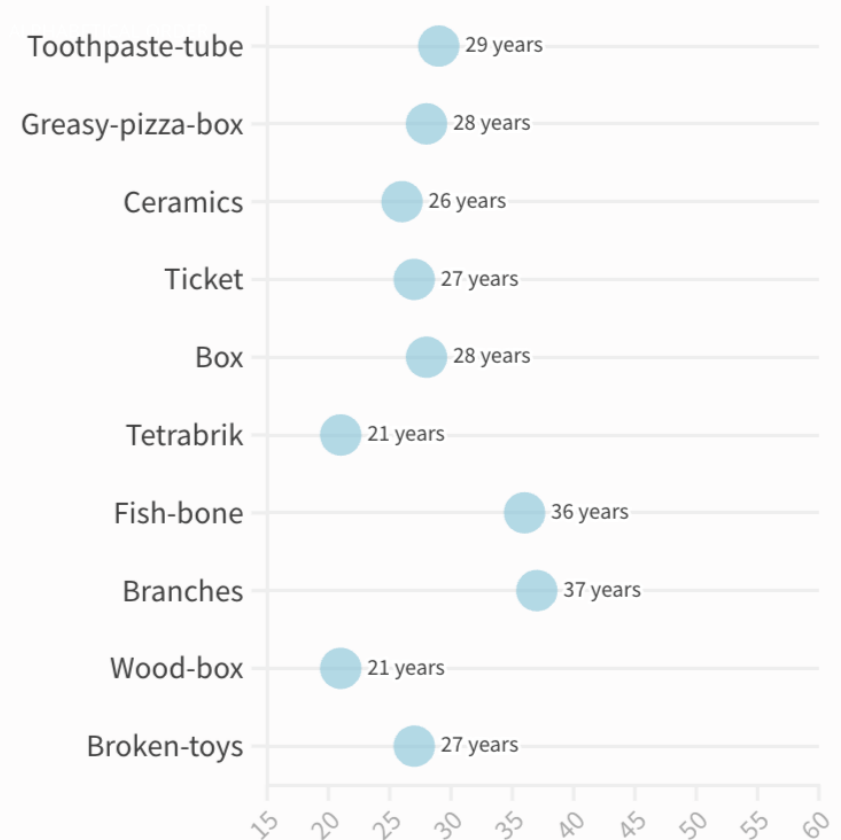## Answer preference based on gender
DATA IN % WITH RESPECT TO THE TOTAL OF THE SAME GENDER

- Female
- Male
- Non binary
- I prefer not to answer

Reduce the environmental impact of waste
- 46,5%
- 45,8%
- 38,5%
- 50%

Turn waste into useful products
- 26,3%
- 18,8%
- 15,4%
- 7,1%

Pay less taxes
- 10,5%
- 20,8%
- 23,1%
- 7,1%

Keep our city beautiful
- 15,8%
- 12,5%
- 15,4%
- 21,4%

None, I'm not motivated enough to recycle
- 0,9%
- 2,1%
- 7,7%
- 14,3%

The median age based on the provided responses

- Reduce the environmental impact of waste — 24 years
- Turn waste into useful products — 22 years
- Pay less taxes — 22 years
- Keep our city beautiful — 21 years
- None, I'm not motivated enough to recycle — 59 years

ANCI LAZIO

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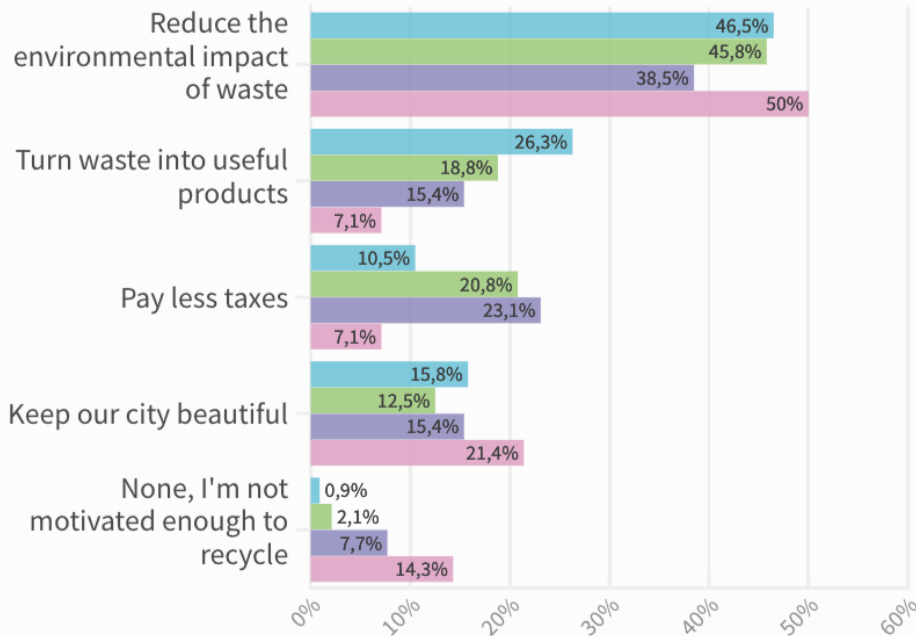
MISSION 2

OBJECTIVE: Opinions on 4 questions regarding domestic waste separation

2 **Primary obstacles to waste separate collection indicated by users**

Answer preference based on gender
DATA IN % WITH RESPECT TO THE TOTAL OF THE SAME GENDER

- Female
- Male
- Non binary
- I prefer not to answer

Lack of time
- 15.8%
- 10.4%
- 30.8%
- 7.1%

Lack of space at home
- 27.2%
- 22.9%
- 15.4%
- 21.4%

Distrust, all the waste is mixed
- 18.4%
- 20.8%
- 38.5%
- 28.6%

Lack of incentives
- 5.3%
- 22.9%
- 7.7%
- 14.3%

None of the above
- 33.3%
- 22.9%
- 7.7%
- 28.6%

0% 20% 40%

The median age based on the provided responses

- Lack of time — 25 years
- Lack of space at home — 23 years
- Distrust, all the waste is mixed — 22 years
- Lack of incentives — 56 years
- None of the above — 24 years

0 10 20 30 40 50 60 70

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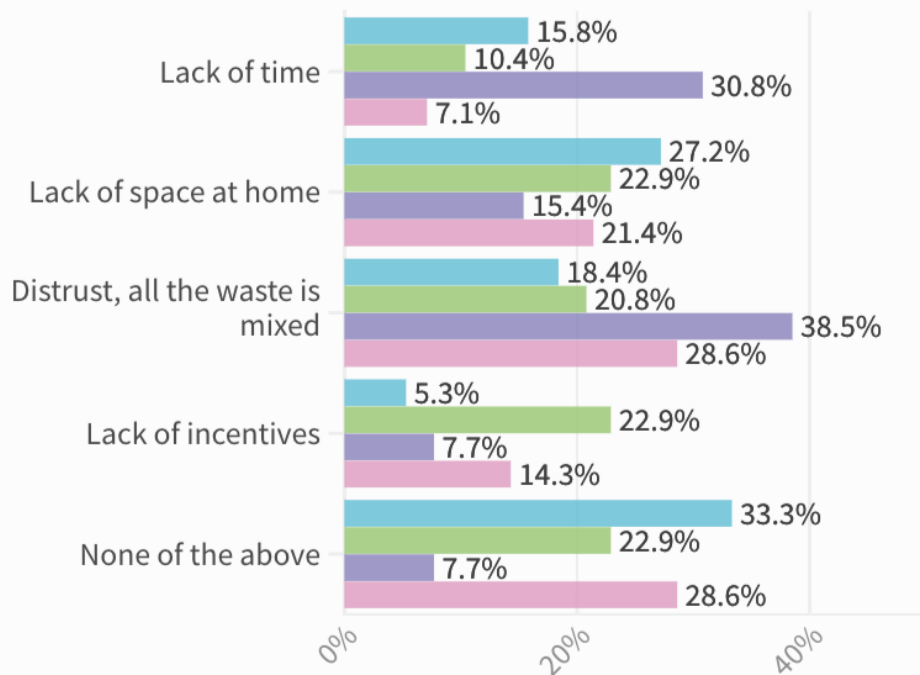
MISSION 2

OBJECTIVE: Opinions on 4 questions regarding domestic waste separation

3 **How could professionals differentiate the organic fraction produced before cooking?**

Answer preference based on gender
DATA IN % WITH RESPECT TO THE TOTAL OF THE SAME GENDER

- Female
- Male
- Non binary
- I prefer not to answer

New Municipal service with dual organic waste collection.
- Female: 33.3%
- Male: 31.3%
- Non binary: 38.5%
- I prefer not to answer: 28.6%

I choose suppliers that help me reduce waste and dry refuse.
- Female: 25.4%
- Male: 12.5%
- Non binary: 7.7%
- I prefer not to answer: 28.6%

I recycle organic waste with a compost bin.
- Female: 23.7%
- Male: 31.3%
- Non binary: 38.5%
- I prefer not to answer: 7.1%

I use a continuous bag system for selective waste collection.
- Female: 6.1%
- Male: 10.4%
- Non binary: 7.7%
- I prefer not to answer: 21.4%

None of these options satisfies me.
- Female: 11.4%
- Male: 14.6%
- Non binary: 7.7%
- I prefer not to answer: 14.3%

The median age based on the provided responses

- New Municipal service with dual organic waste collection. — 20 years
- I choose suppliers that help me reduce waste and dry refuse. — 45 years
- I recycle organic waste with a compost bin. — 26 years
- I use a continuous bag system for selective waste collection. — 26 years
- None of these options satisfies me. — 19 years

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MISSION 2

OBJECTIVE: Opinions on 4 questions regarding domestic waste separation

4 **What actions should an entrepreneur focus on in order to improve the quality of urban organic waste collection?**
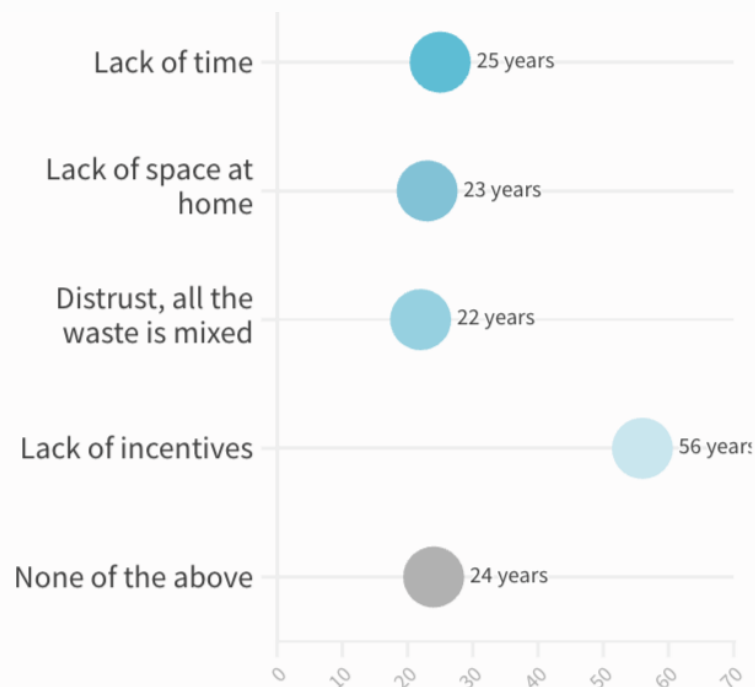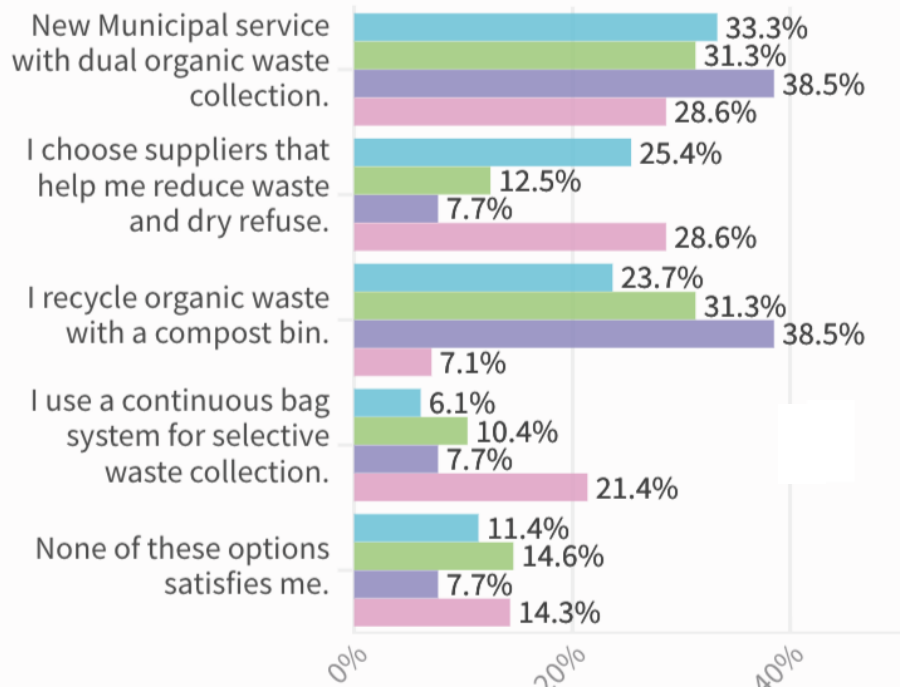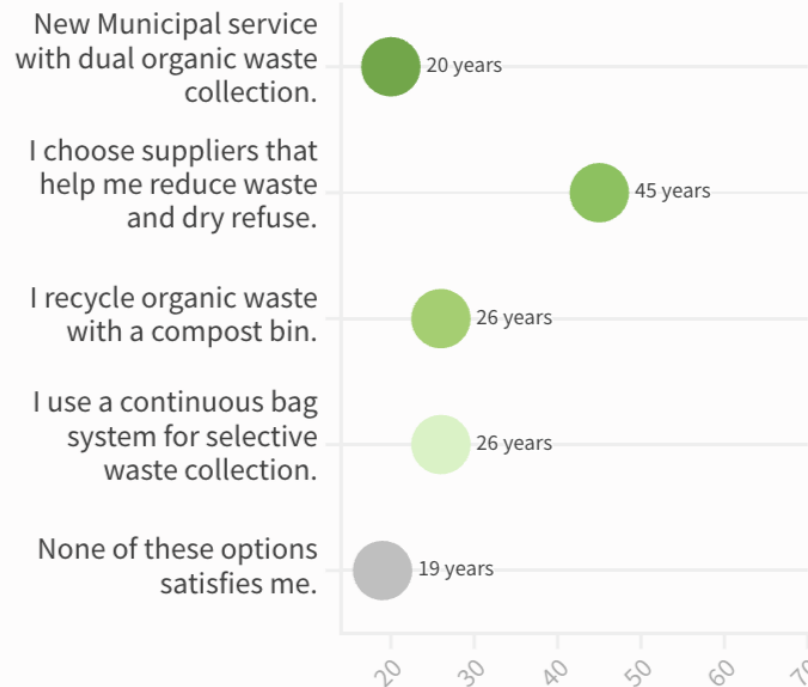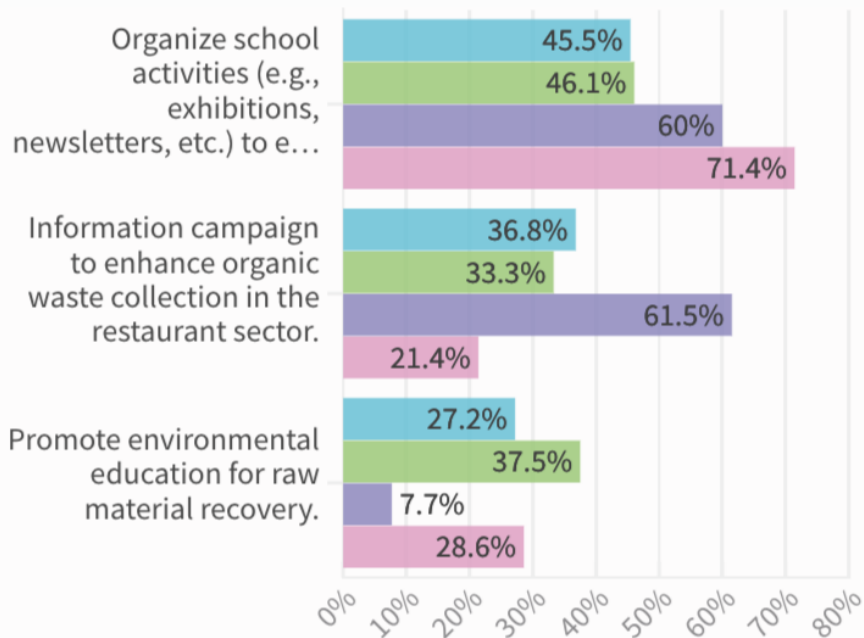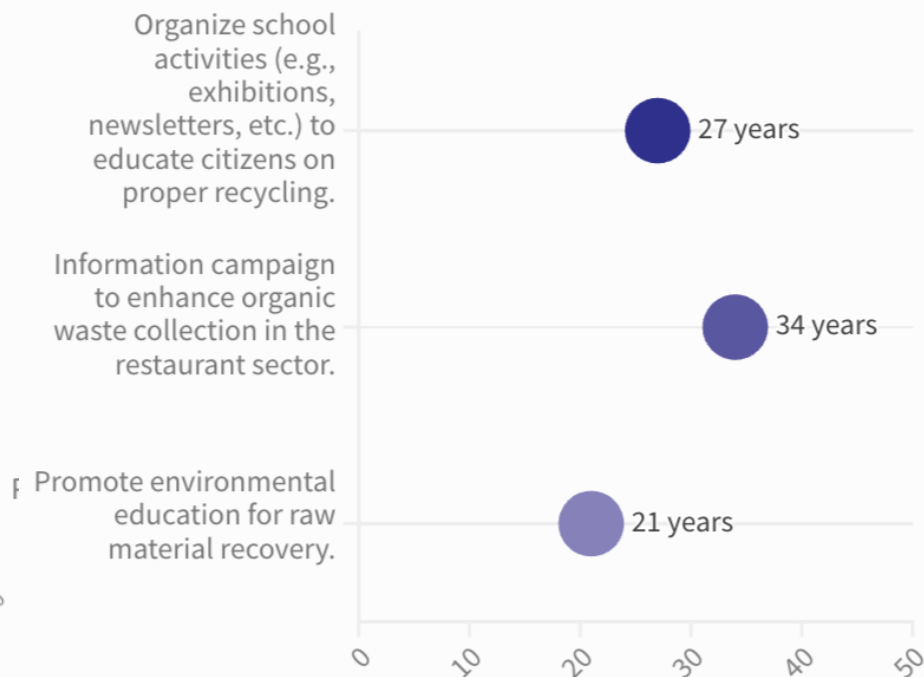
Answer preference based on gender
DATA IN % WITH RESPECT TO THE TOTAL OF THE SAME GENDER

- Female
- Male
- Non binary
- I prefer not to answer

Organize school activities (e.g., exhibitions, newsletters, etc.) to e...
- 45.5%
- 46.1%
- 60%
- 71.4%

Information campaign to enhance organic waste collection in the restaurant sector.
- 36.8%
- 33.3%
- 61.5%
- 21.4%

Promote environmental education for raw material recovery.
- 27.2%
- 37.5%
- 7.7%
- 28.6%

The median age based on the provided responses

Organize school activities (e.g., exhibitions, newsletters, etc.) to educate citizens on proper recycling. — 27 years

Information campaign to enhance organic waste collection in the restaurant sector. — 34 years

Promote environmental education for raw material recovery. — 21 years

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MISSION 3

OBJECTIVE: Select one bioproduct type from four proposed options

LAZIO

176
PARTICIPANTS

- Fertilisers
- Nutrients
- Bioplastics
- Green chemical products

Fertilisers
32%

Bioplastics
23%

Nutrients
32%

Green chemical products
13%

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Science for Change

MISSION 3

OBJECTIVE: Select one bioproduct type from four proposed options

Answer preference based on gender
DATA IN % WITH RESPECT TO THE TOTAL OF THE SAME GENDER

- Female
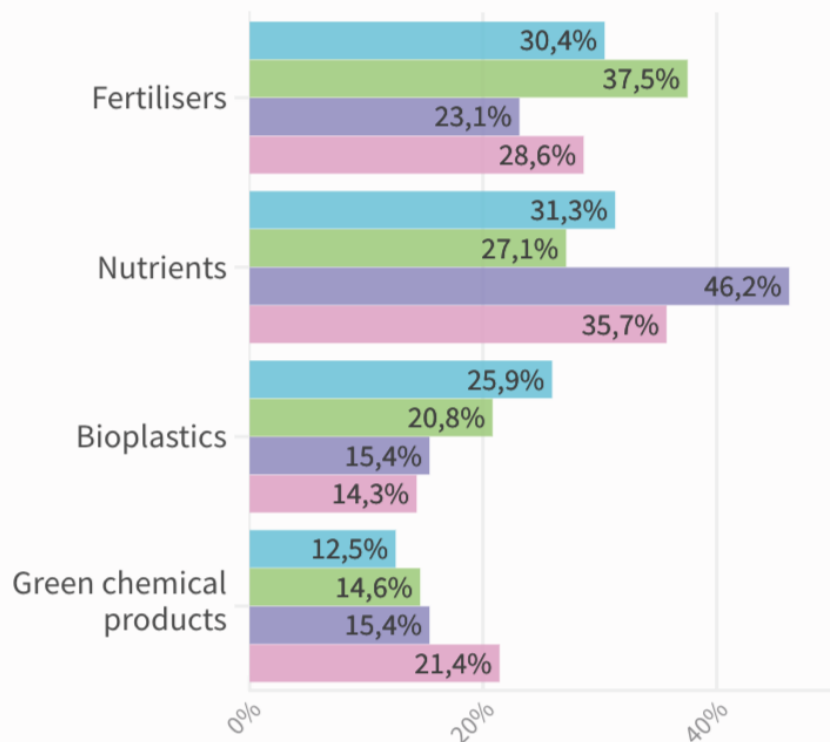- Male
- Non binary
- I prefer not to answer

Fertilisers
- 30,4%
- 37,5%
- 23,1%
- 28,6%

Nutrients
- 31,3%
- 27,1%
- 46,2%
- 35,7%

Bioplastics
- 25,9%
- 20,8%
- 15,4%
- 14,3%

Green chemical products
- 12,5%
- 14,6%
- 15,4%
- 21,4%

The median age based on the provided responses

- Fertilisers — 30 years
- Nutrients — 25 years
- Bioplastics — 28 years
- Green chemical products — 23 years

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