







### Pandemic Covid-19 is a testing time for circular economy...

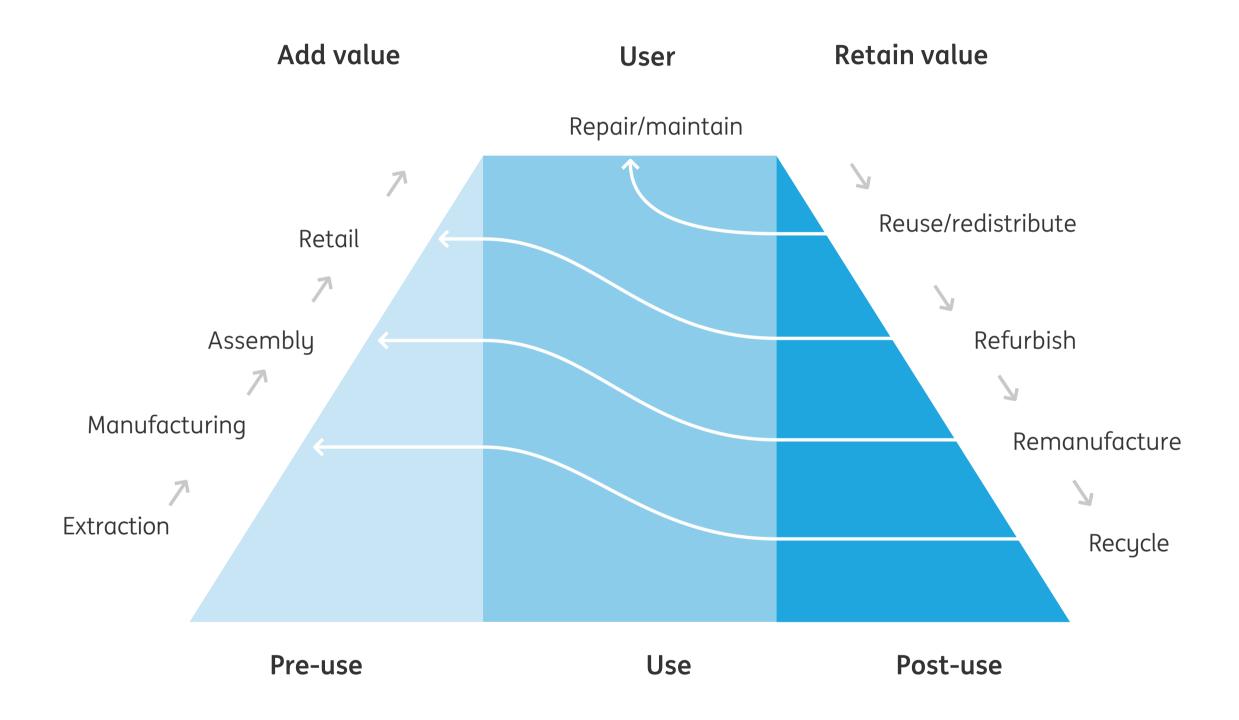
- Single-use plastics have become indispensable (face masks, gloves, protection sheets, etc).
- More urgent priorities than circular economy have emerged.
- Plunging oil prices (temporarily) changed relative prices of clean and dirty energy technologies.

## ... but remains a valid idea for economic recovery after the pandemic

- Problems being addressed by the CE excessive exploitation of natural resources, large waste generation in the environment will not disappear when the pandemic fades away.
- Societies have become more sensitive to environmental problems and will demand solutions.
- Economic recovery post pandemic will require large state intervention. It will choose between various kinds of public investments and measures to support a more sustainable economic model.
- Supporters of the CE (e.g. eco-design, selective waste collection, plastic recycling) will continue after the pandemic.

Eight myths on circular economy· Introduction

# What is the circular economy? "Reduce-reuse-recycle" instead of "Take-make-dispose"



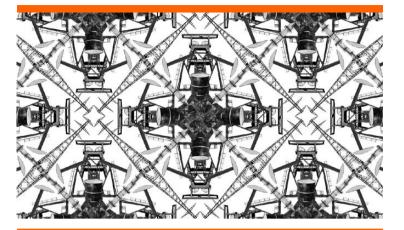
Source: Schoenmaker D., W. Schramade, Principles of Sustainable Finance (2018).

#### Report's structure



Myth 1

Circular economy is a fad which will be over soon



Myth 2

Circular economy does not pay off



Myth 3

Circular economy is all about recycling



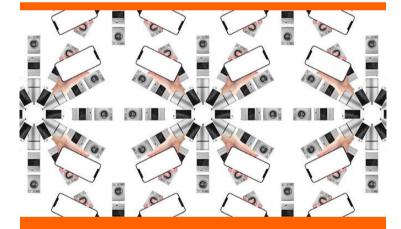
Myth 4

Supporters of circular economy postulate absolute elimination of plastics



#### Myth 5

Circular economy requires mainly a change of consumer behaviour



#### Myth 6

People will not change their habits, for example to repairing of equipment



#### Myth 7

Poland is lagging behind in circular economy implementation



Myth 8

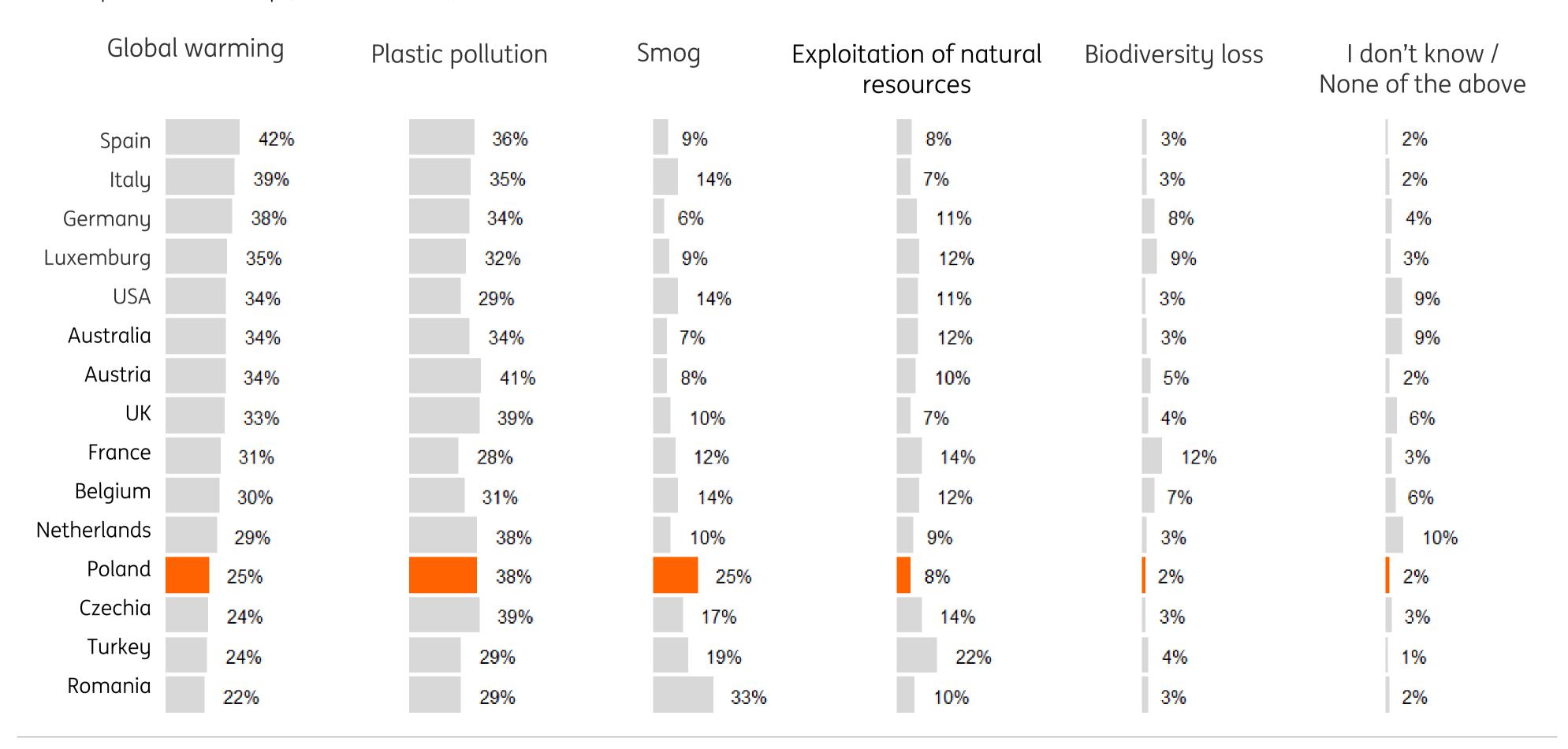
European Union is left alone globally in circular economy implementation

Eight myths on circular economy · Structure



## What do you see as the most pressing problem for the environment?

15 146 respondents from Europe, USA and Australia, of which 1015 from Poland



## Top priority in the EU's political agenda

Climate neutrality target 2050 and the European Green Deal



Further limiting sale of plastic products



Strengthening of extended producer responsibility



Increasing financial incentives to firms implementing CE innovations, and new category of financial instruments



Introducing the right to repair



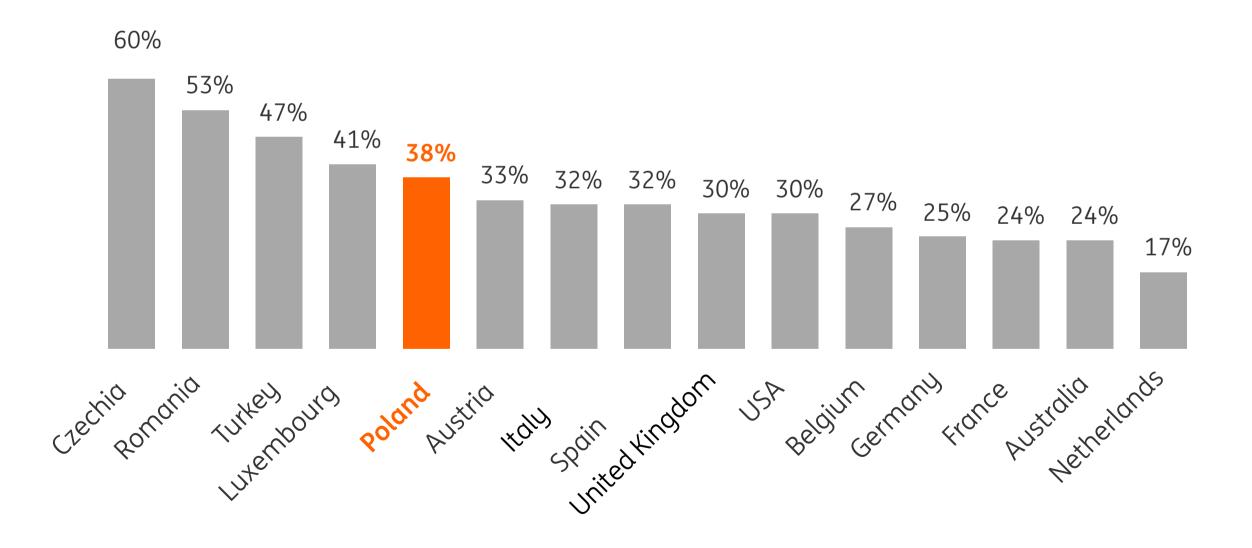
More stringent recycling requirements

#### **Economic benefits**

#### Changing firms' attitudes:

- Initiatives: Circular Plastics Alliance, Alliance to End Plastic Waste, New Plastics Economy, CE100).
- Influence of multinationals on their subcontractors and including them into "green initiatives" – investments of hundreds EUR billions annually
- 70 voluntary commitments of EU firms and increase of recycled plastics share by 60 percent to 2025

"I can think of a specific company that has changed how it operates so that now it repairs or reuses some of the products it sells"





### Potential benefits of circular economy

Increased product durability will make consumers more frequently repair their old equipment instead of buying new



**Increased availability of recycled materials** will reduce dependency from extraction and processing of primary resources and their imports



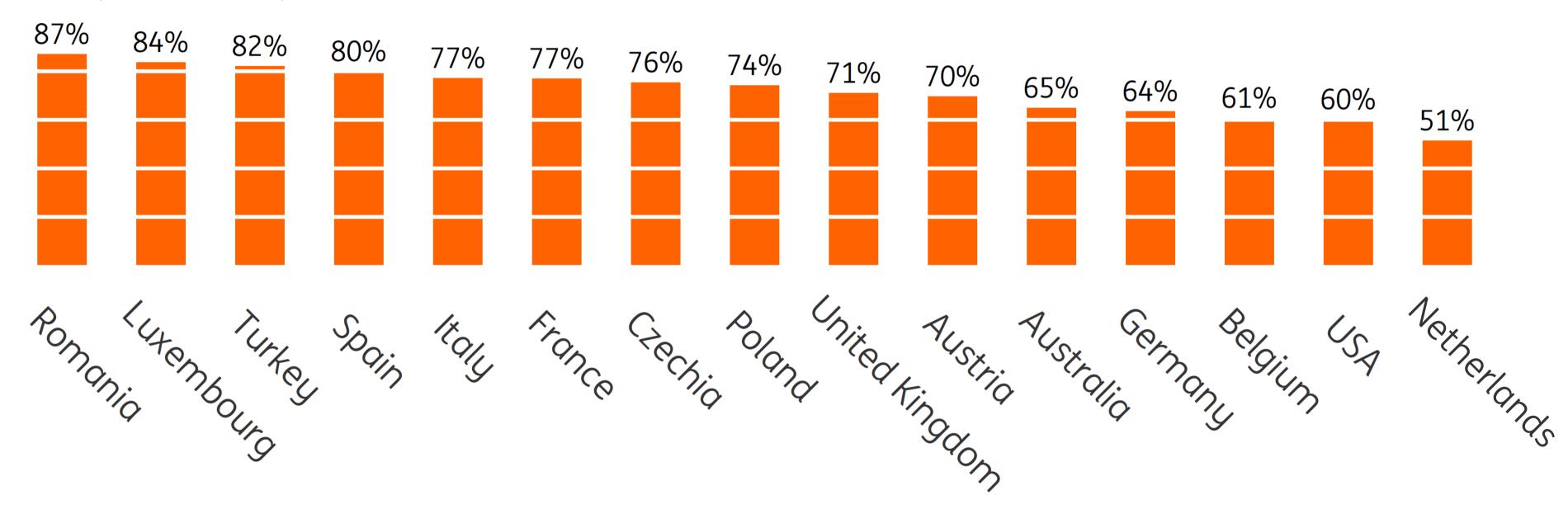
Increased material efficiency will increase profitability of industrial firms



Reduced waste flow will reduce their utilization costs and reduce pressure on natural environment

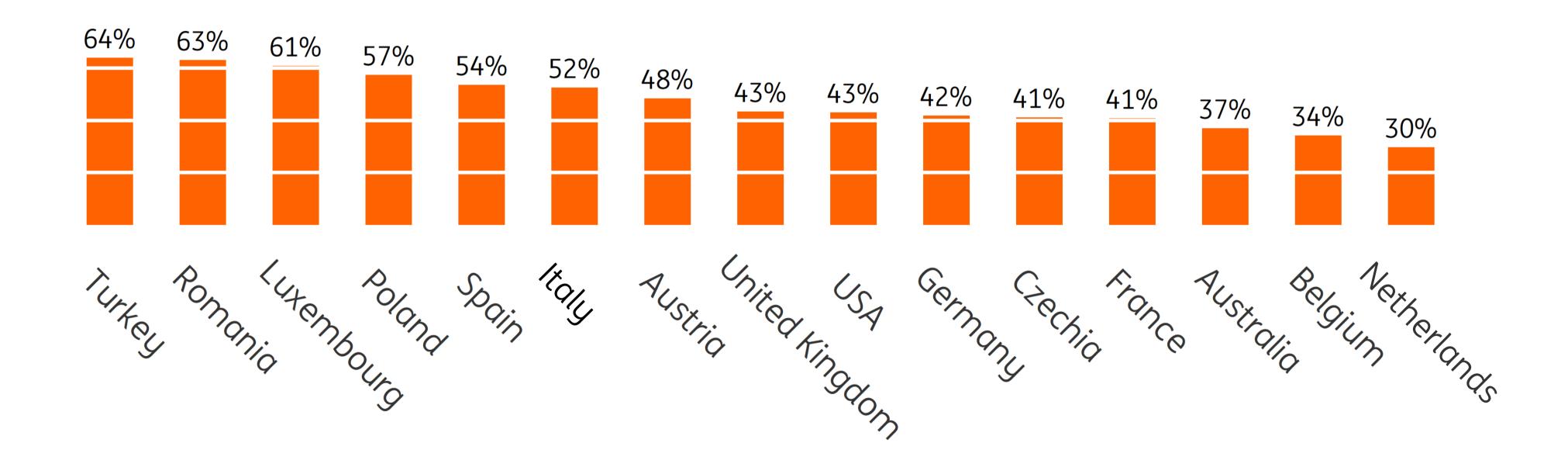
## The benefits are often nonmonetary. Natural environment has intrinsic value

## Protecting the environment should be given priority, even if it causes slower economic growth



# Consumers are willing to reward producers who pack their goods in a sustainable manner

#### I would pay more for goods in sustainable packaging

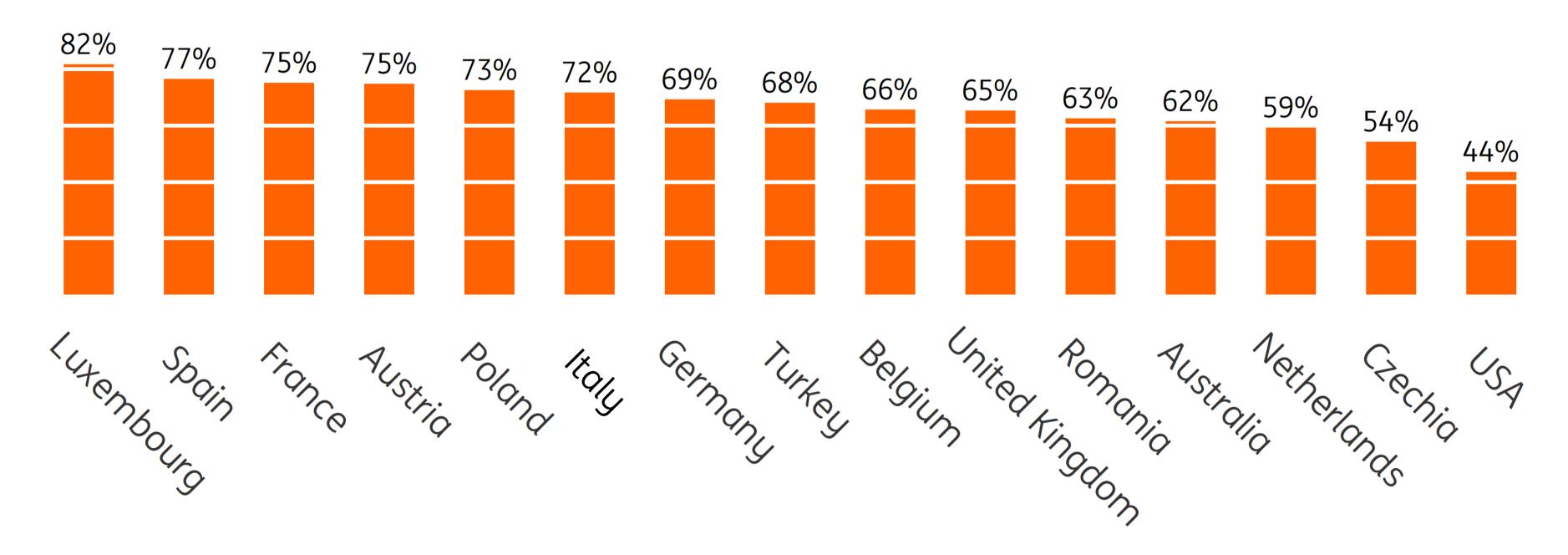




## Circular economy is a much broader concept than recycling

CE is also about re-use, reduction of packaging, repairing, and secondary market of durable goods

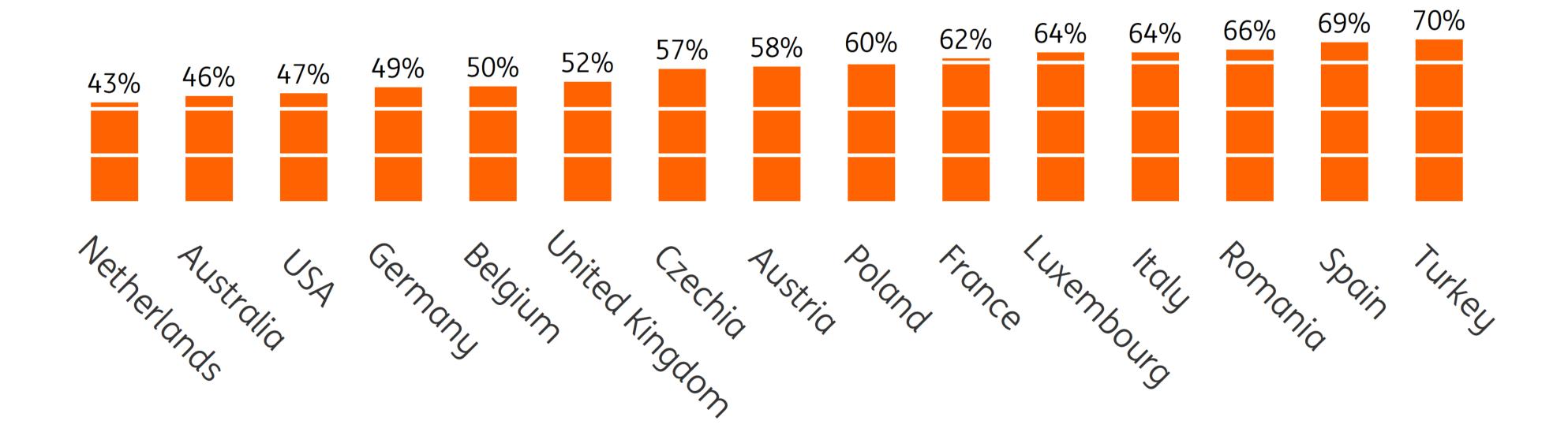
#### Supermarkets should not provide any single use plastic packaging or plastic bags



#### Circular economy is a much broader concept than recycling

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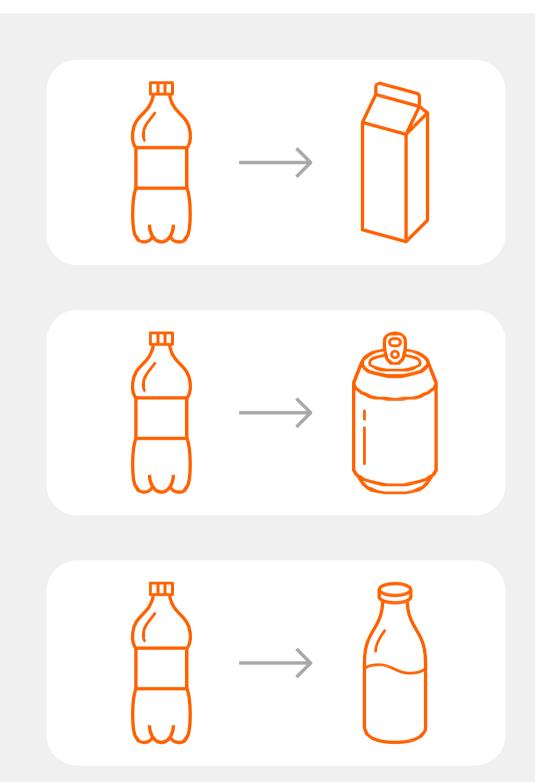
#### In the next three years I expect to be re-using products more by having them repaired if they break, instead of just throwing them away





### Plastics, including plastic packaging, offer many benefits

They are light, durable, waterproof and easy to keep clean, but they are derived from fossil fuels



- Cardboard production is drink water-intensive
- In form of tetra pack it is difficult to recycle

- Aluminium production is very energy-intensive
- It generates toxic waste (e.g. red slam).
- Glass is energy intensive in production (but much less than aluminium) and in transport (due to its weight).
- In addition, it is fragile.

## But only 42 percent of plastic packaging in the EU and 35 percent in Poland is being recycled

The rest finds its way to incinerators (40%) or landfills, where it takes a long time to split into microelements. There is a need to change the way we deal with plastics by:



1. Lighter packaging



2. Improving recyclability by modifying the plastic packaging



3. More re-useable packaging and the use of recycled material

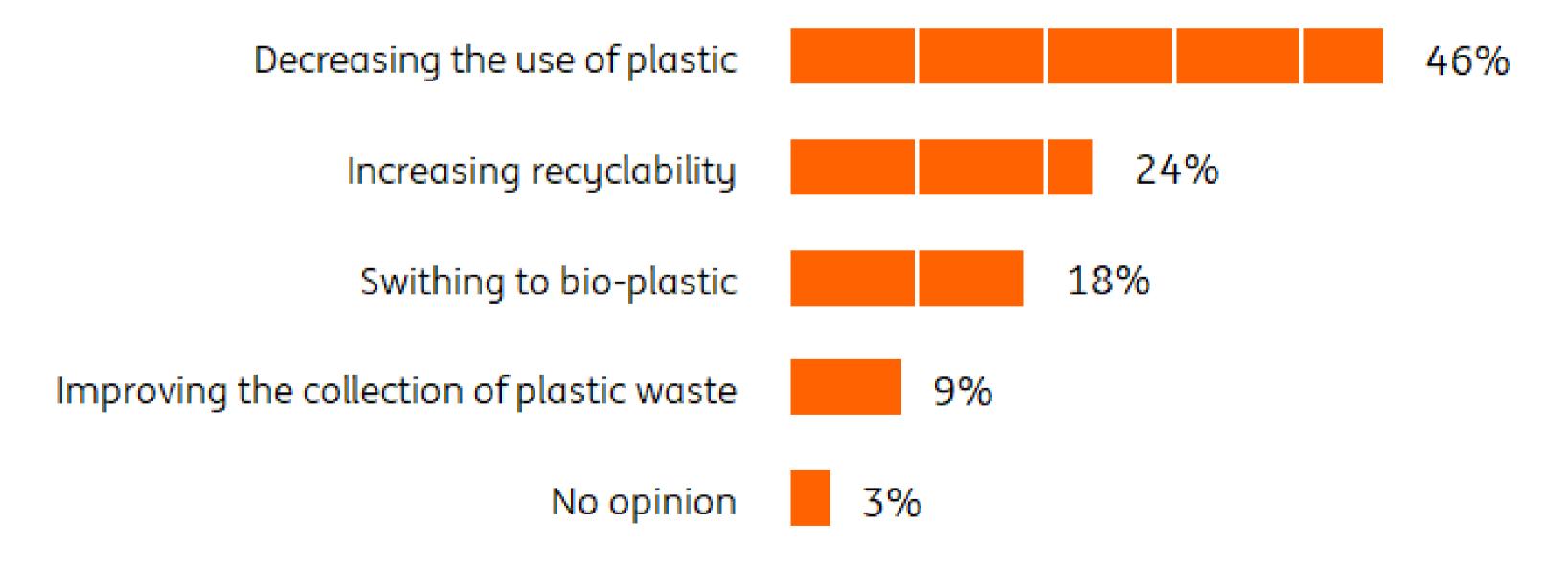


4. Use of bio-based and biodegradable plastic

### Nearly a half of Poles support lowering plastic use

This might be associated with a media buzz related to the ban of single-use plastics in the EU

# Concerning plastic packaging in the supermarket, what aspect do you think should be given the highest priority?





### Consumer habits and social pressure are important

But cooperation between firms and public institutions are key success factors

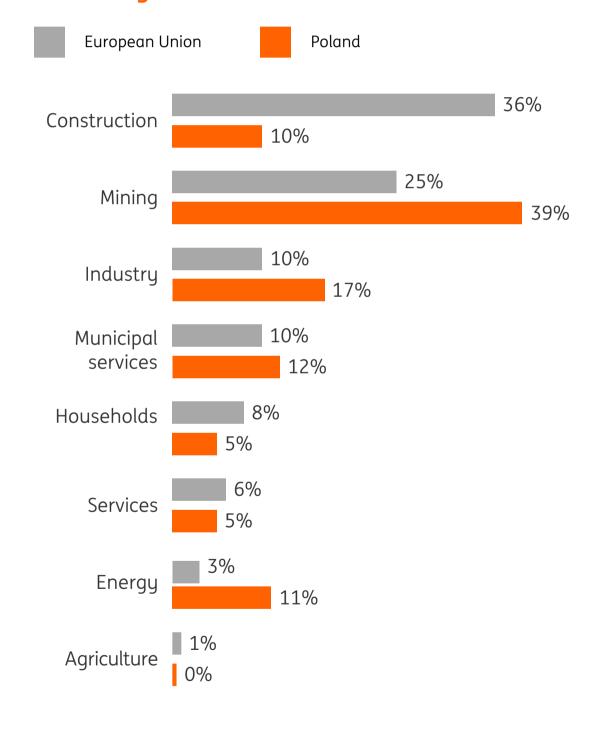
#### "Sustainable" infrastructure is needed:

- shops, in which you can buy on weight
- easy access to homewares' servicing
- installations for secondary materials processing
- bottle machines for PET bottle returns.

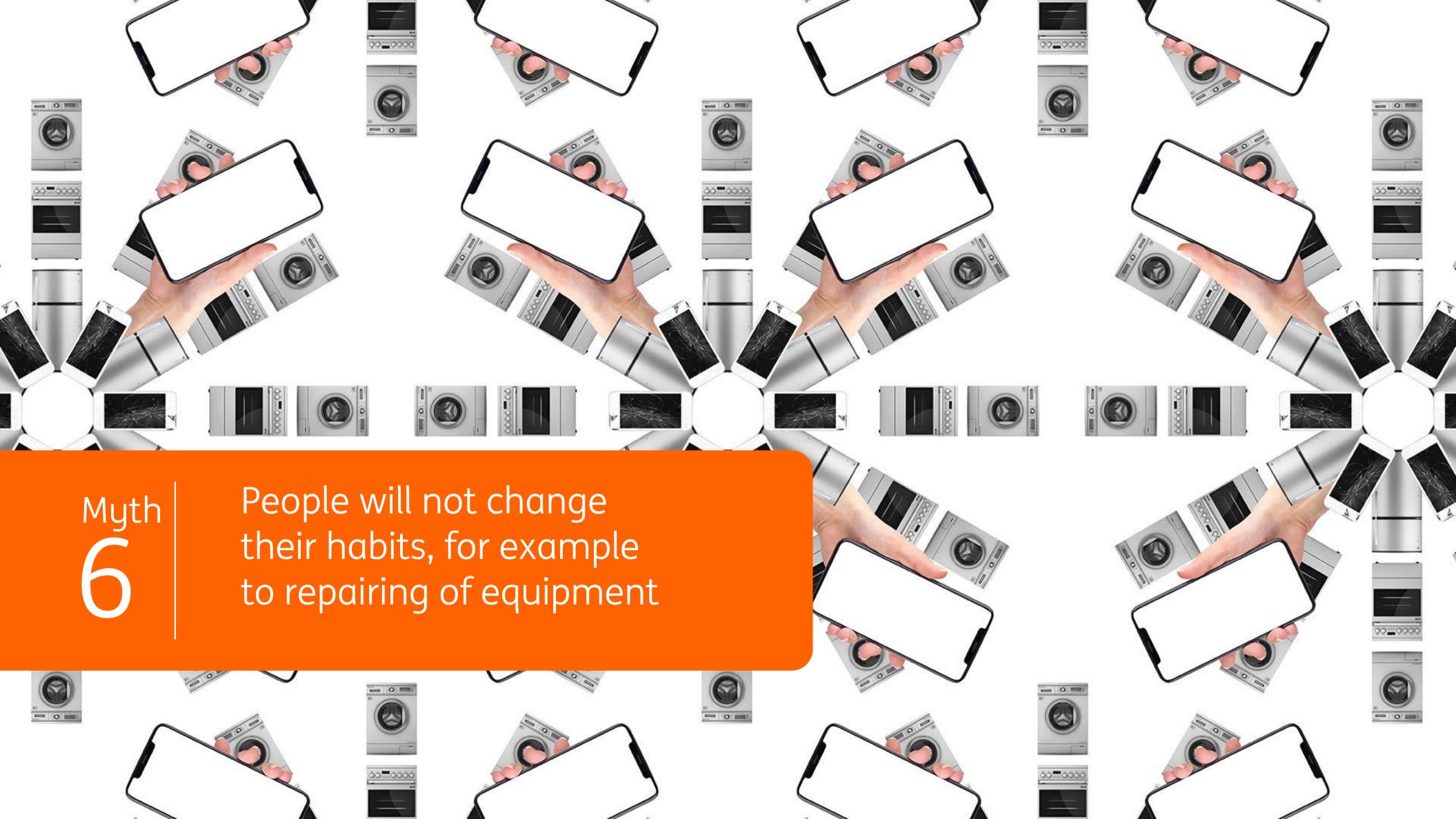
#### and good regulations:

- PET bottle return system
- packaging standardization.

## Share of economic sectors in generated waste [kg] in 2016



Source: Eurostat, table: env\_wasmun



### Consumers need sound incentives to change their habits

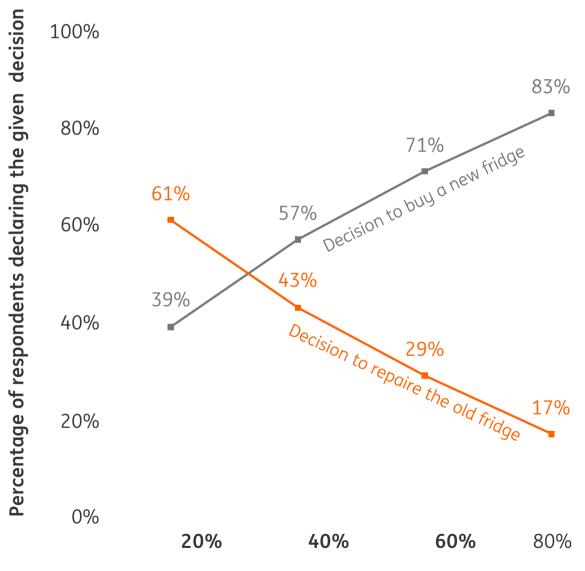
Repairing of TV or homewares need to be cheaper and easier (eco-design, availability of spare parts, access to servicing)

#### Experiment:

Imagine that 4 years ago, you bought a fridge for 2,000 Zloty. It worked well but has recently become defective. You tried to fix it on your own but failed. You must now decide what to do. Assume that repairing the one you have now or buying a new one both require the same time and effort. They only differ in price. Given these prices, what would you decide?"

## Experiment results: Propensity to repairing of homewares depends on servicing cost.



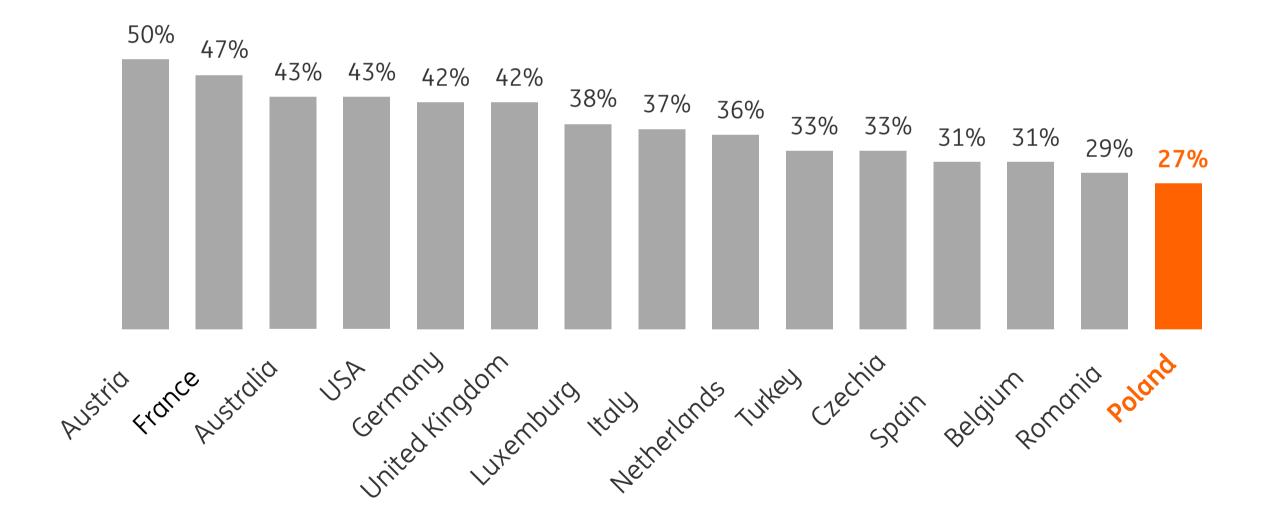


Repairing costs as % of new fridge price

# Consumers are willing to repair things if it does not cost more than 30% of the new equipment

repairing costs should be lower (right to repair is a good step, circular design is needed)

#### Average percentage of people declaring willingness to repair homewares, by country

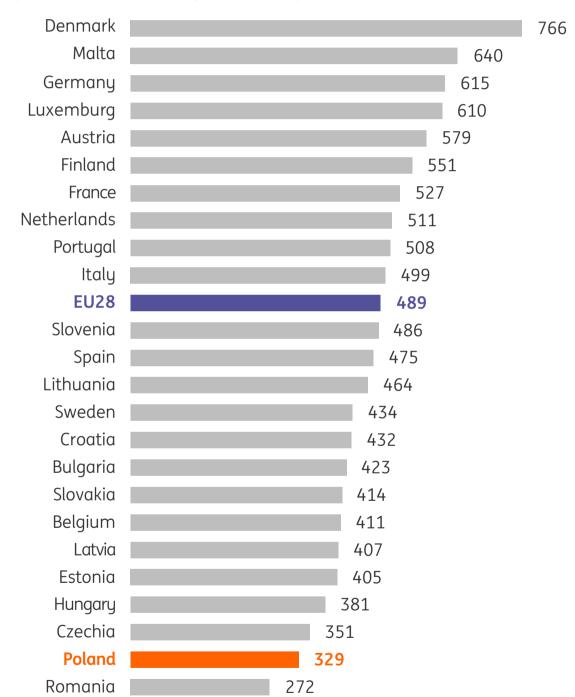




## Transition to circular economy in Poland will be easier than energy transition

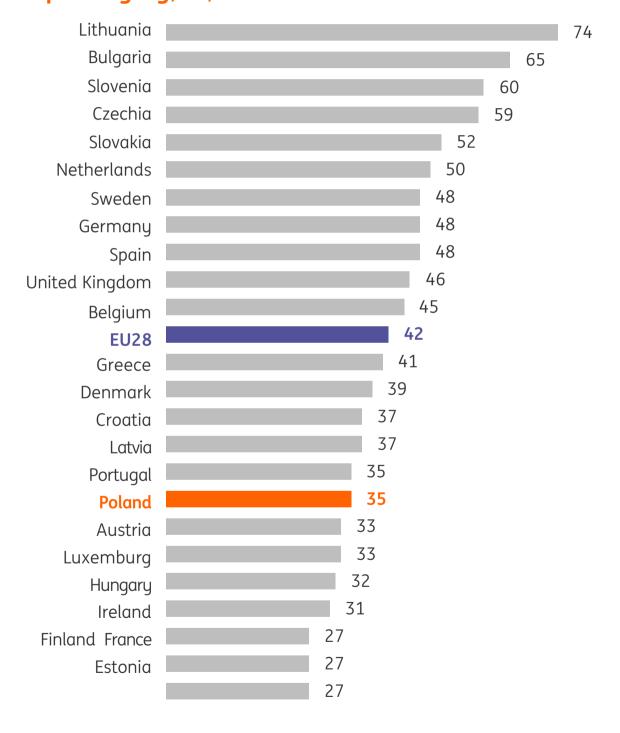
Still low municipal waste generation in Poland

## Municipal waste per inhabitant, in kg per year in 2018, by country.



Source: Eurostat, table: env\_wasmun

## Percentage of recycled plastic packaging, %, in 2018



Source: Eurostat, table: env\_wasmun

## Poles have a fairly positive attitude to circular economy

Compared to other EU countries, the Poles care a lot about durability of goods at the point of purchase, segregate waste and prefer multi-use products

#### But

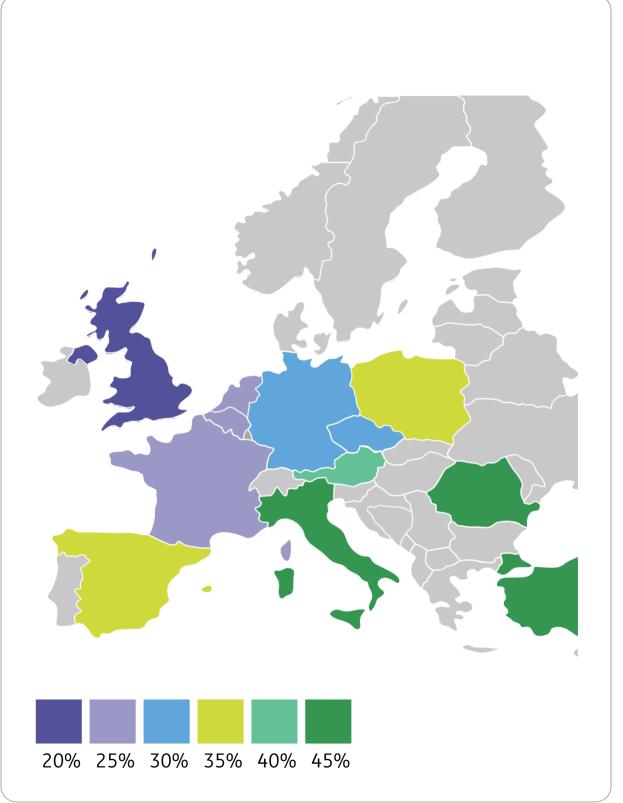
- Poles are less willing to repair household goods
- Recycling infrastructure is missing
- Return system is of limited scope

#### Exemplary questions:

- In the last year, have you ever: recycled an empty plastic bottle, or tin can, instead of throwing it into the trash / taken a broken or old electronic device, such as a computer or phone, to a dedicated ewaste recycling facility / disposed of batteries in a special way, e.g. taking them to a recycling facility or dedicated bin / used clothing you don't want any more either in other ways, such as by using them as cleaning rags or painting clothes, sold them online or given them to a second-hand store?
- When you buy homewares that you expect to keep for at least five years, such as a couch or a washing machine, which of these are the most important three features? Price, durability, easiness to buy?

Source: Index based on results from the Financial Barometer ING



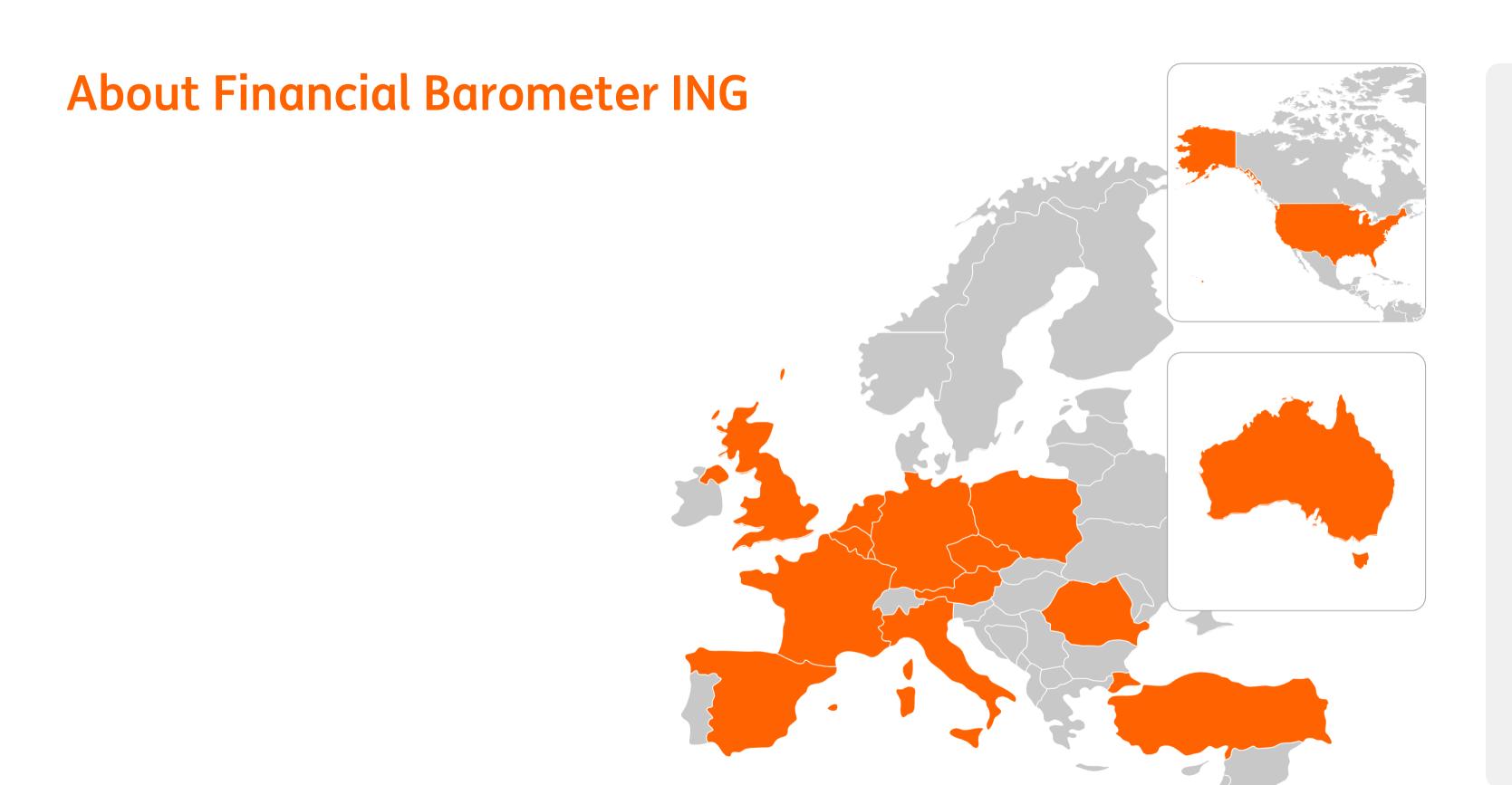




## Many countries in the world are heading towards a circular economy

However, the EU's ambitions seem to be the largest

- G7 Group Resource Efficiency Alliance
- UN circular economy among Sustainable Development Goals 2030 ("responsible consumption and production", "clean water and sanitary conditions", "clean and affordable energy").
- Japan, Korea regulations to practices in line with 3R principles and targets on materials re-use
- China target of 72% recycling of solid industrial waste
- USA Program of Sustainable Material Management, nationwide 50% target of food waste reduction through 2030



15 countries

15 146

respondents from all over the world

1 015

respondents from Poland

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