



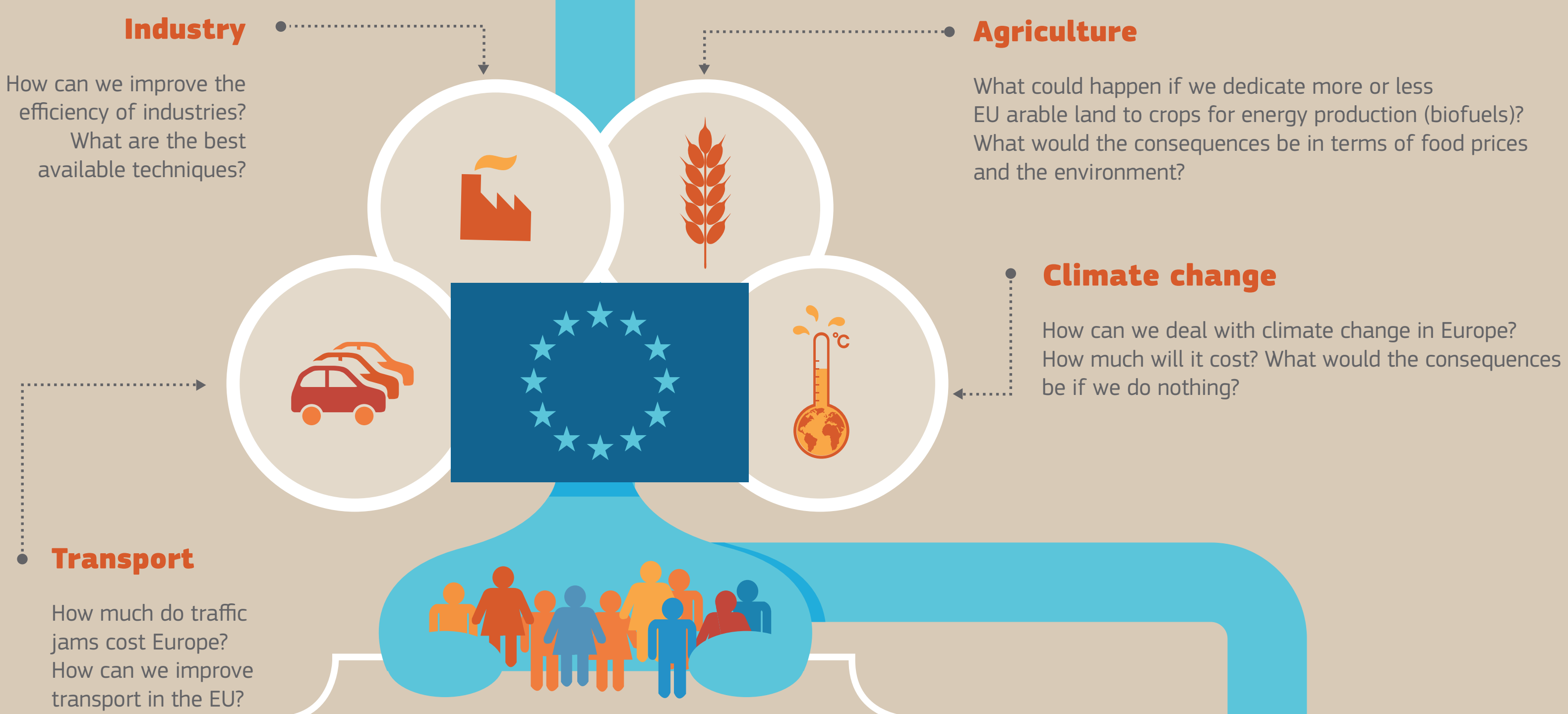
# SCIENCE-BASED POLICY SUPPORT

The JRC-IPTS Contribution

## DECISION MAKING IN THE EU

LET'S SEE AN EXAMPLE

## AVAILABILITY OF WHEAT



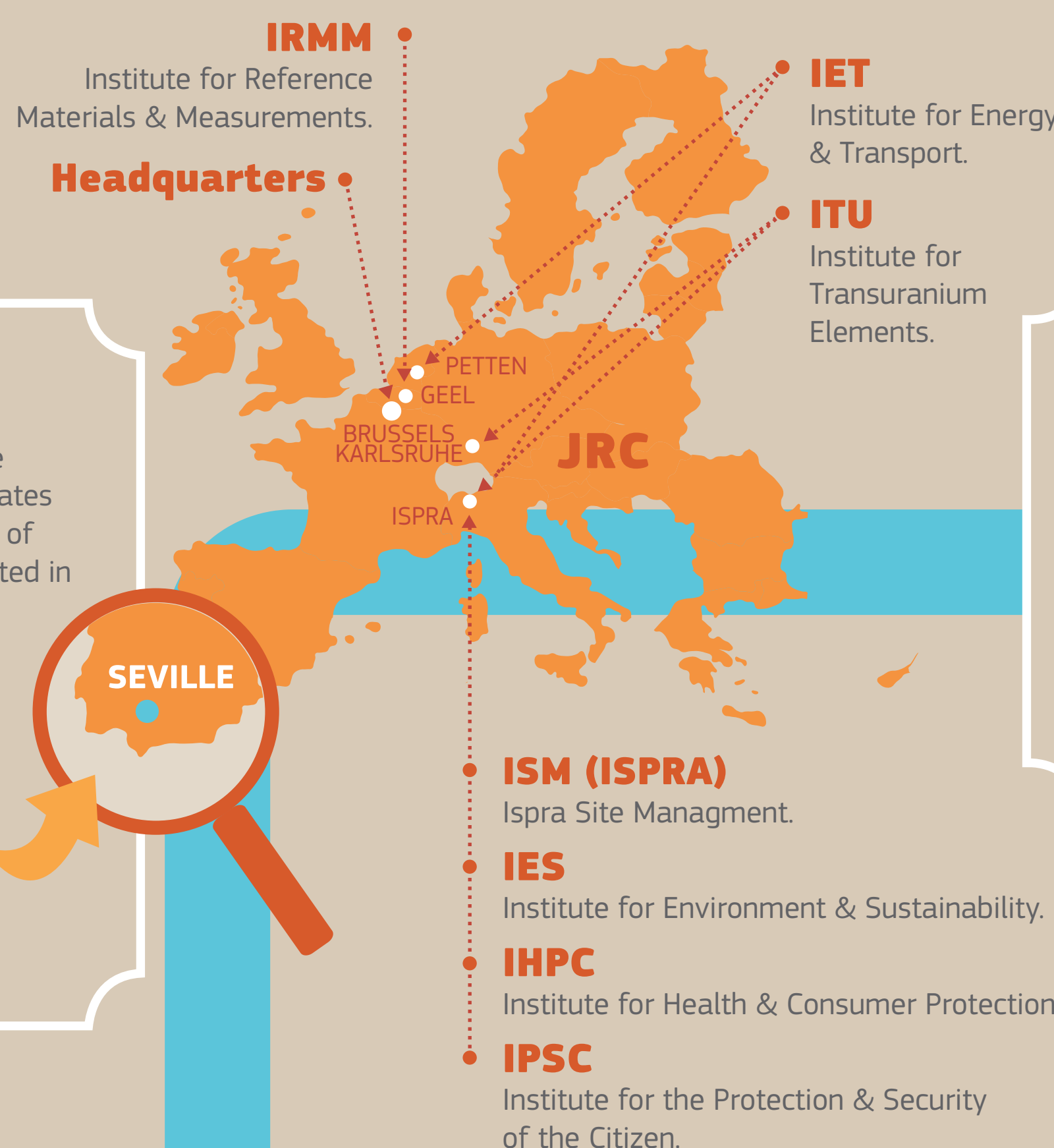
### ANSWERS TO BE GIVEN DECISIONS TO BE TAKEN

Decisions that affect Europe as a whole in a very wide variety of areas have to be taken at EU level in order to solve social and economic issues and challenges. Policy-makers need advice so that they can base their decisions on reliable scientific analysis.



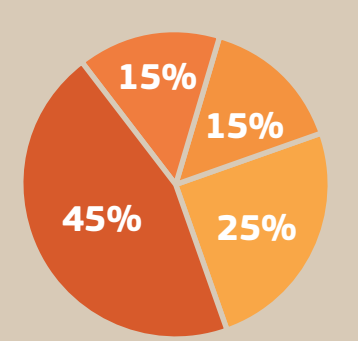
### JRC, WE ARE THE ADVISORS

The Joint Research Center provides EU Institutions and Member States with scientific analysis and advice. It has 7 Institutes throughout Europe, each one specialised in different areas.



**IPTS**  
The Institute for Prospective Technological Studies evaluates the socio-economic aspects of any issue at stake. It is located in Seville.

- Policy studies 45%
- Policy intelligence platforms 15%
- Techno-economic bureaux 15%
- Economic Models 25%



### APPLIED SCIENTIFIC RESEARCH

Scientists at JRC-IPTS obtain and manage relevant data, analyse the current situation and perform calculations to see how different decisions could improve aspects of each situation.

SCIENTIFIC REPORTS

## SCIENCE-BASED POLICY MAKING

JRC-IPTS studies help policy-makers to better appreciate all the implications of a given challenge. This results in better, modern and science-based legislation. **Science helps design better policies. Science helps build a better Europe.**

SCIENTIFIC REPORTS

## AVAILABILITY OF WHEAT

The EU is the world's first wheat producer and one of the top five exporters

### HOW TO GUARANTEE PRODUCTION AND PRICE OF WHEAT

Wheat is a key element in our diet, is a feed for livestock and is used to produce biofuels. Its availability may vary due to a large number of variables that are beyond our control.

### OVER A HUNDRED VARIABLES ARE TAKEN INTO ACCOUNT!



- If oil prices increase, it makes energy more expensive for farmers (energy needed for farm machinery, production of fertilisers, etc.). At the same time, higher oil prices encourage farmers to produce wheat and other cereals for biofuels rather than for food or feed.
- Exchange rate variations affect the wheat trade: for instance, if the US Dollar depreciates, importing wheat from the US would become more attractive than producing it in the EU.
- In general when economic growth is weaker, consumers' demand for wheat decreases (and prices too). On the other hand, when economic growth is high, people consume more food and eat more meat. This means an increased demand for wheat (for food and feed). And prices could go up.
- Every year weather fluctuations (e.g. droughts) directly impact on the production of wheat. On the longer term, the impact of climate change might result on changes of wheat production.

### MODELLING SOFTWARE

### SIMULATION OF REALITY

Scientists at IPTS take into account all these variables and process them using *modelling* computer software. Computer models allow them to create a set of many different possible scenarios: wheat availability and price is simulated in each of these scenarios.

### MODELS HELP TO CREATE EU POLICIES

Simulation of possible scenarios gives policy-makers a clearer vision of how wheat production can vary, allowing them to take measures to ensure the availability of wheat for EU citizens at the best price for a certain period of time.

### POSSIBLE SCENARIOS

- POSSIBLE SCENARIOS**
- Scenario 1
  - Scenario 2
  - Scenario 3
  - Scenario n ...

