

BIOMASS STREAMS OF THE 6 SCALE-UP REGIONS

Frans Feil, Marisa Groenestege

BTG Biomass Technology Group BV

Training session on *efficient regional biomass
logistics and infrastructure*

7 Sep 2023



BIOMASS STREAMS

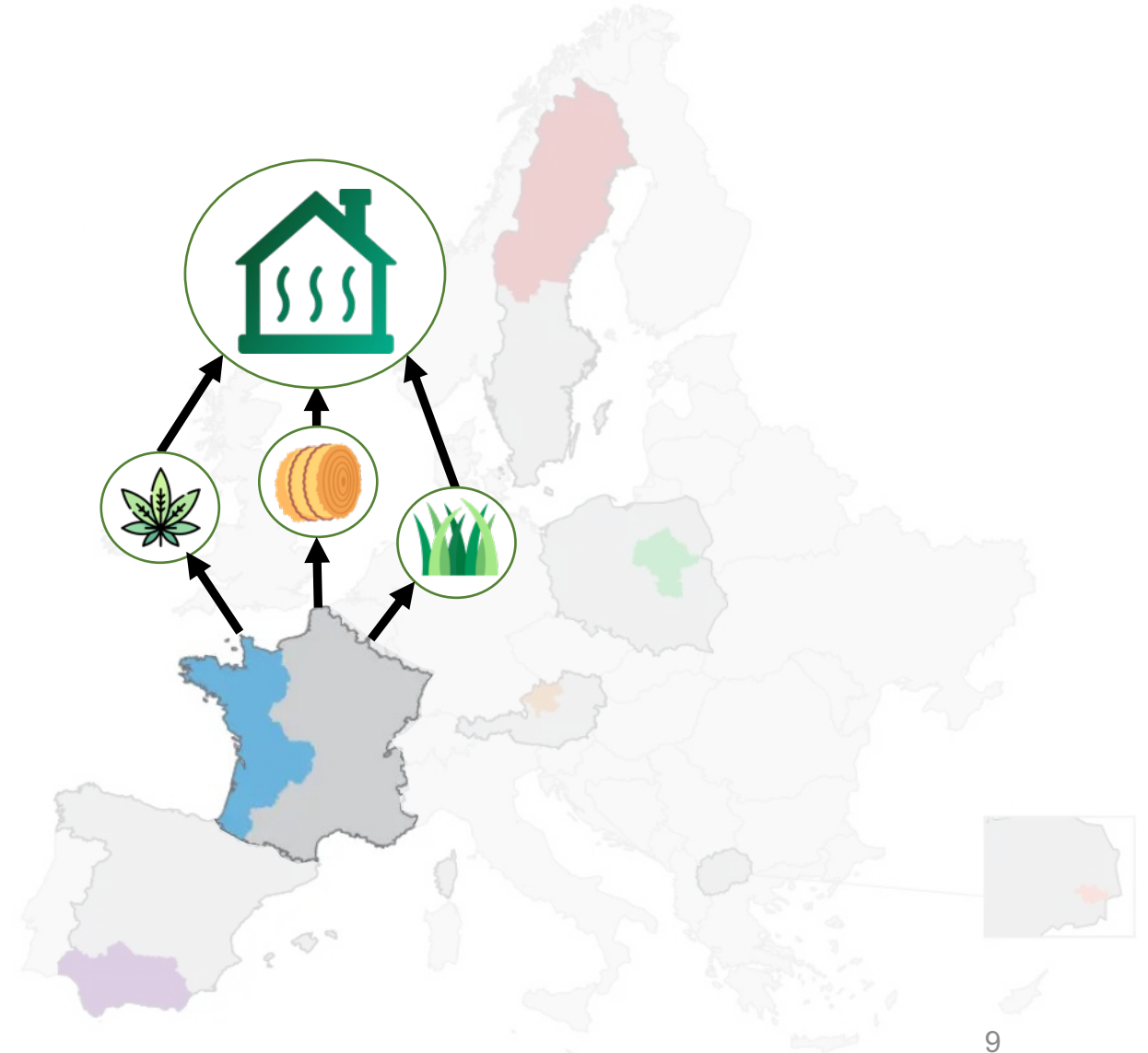
- For each region:
 - What are the **biomass** streams?
 - Are they main **product** of **by-product**?
 - Are they produced on the **land** or at the **factory**?
 - What are the desired **end products** for this project?
- Final remarks



THE BIOMASS STREAMS

French Atlantic Arc

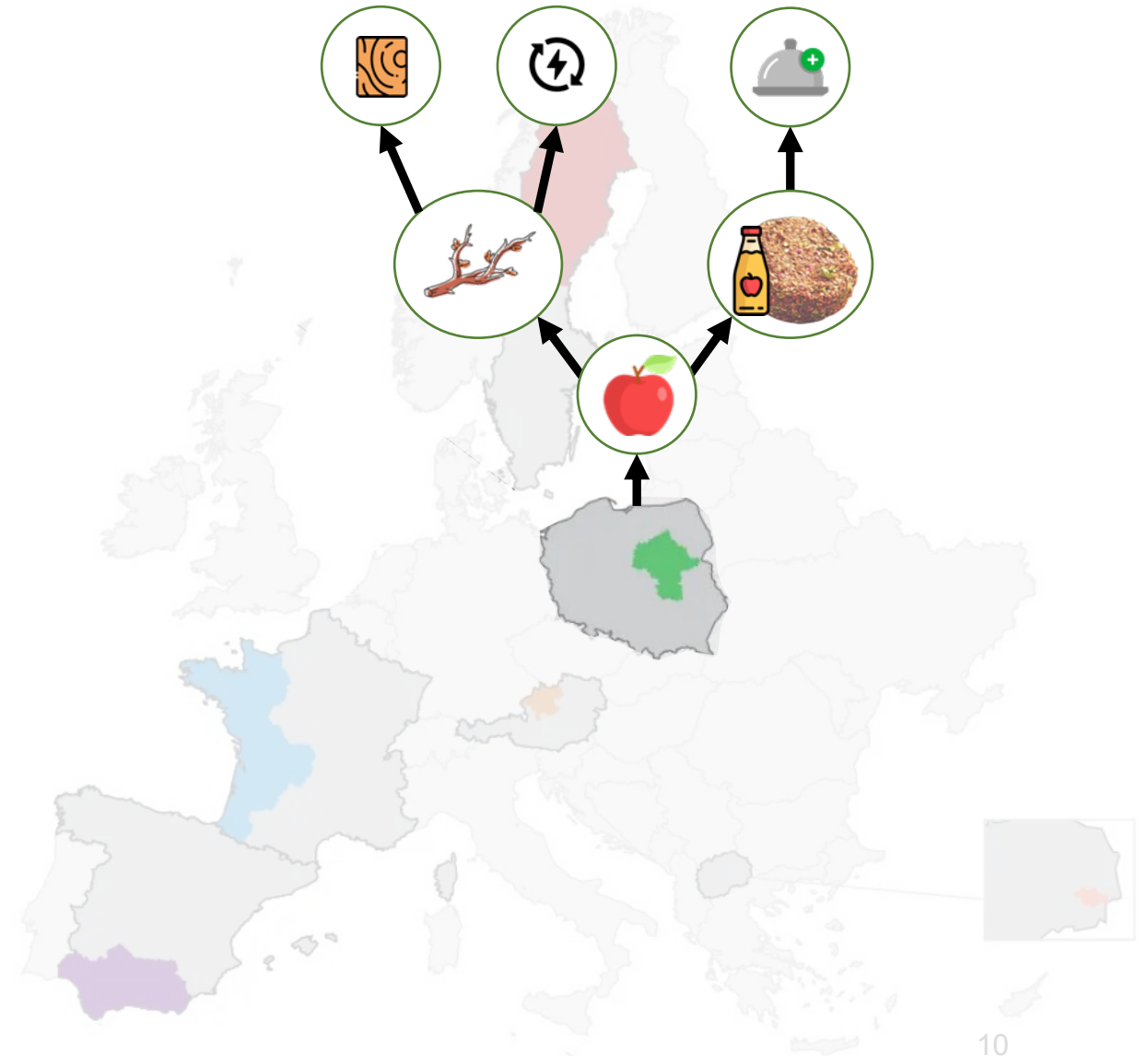
- Feedstock:
 - Plant fibres:
 - Hemp, straw, miscanthus
(main product = primary biomass, produced on the land)
- End use:
 - Biobased insulation panels for buildings



THE BIOMASS STREAMS

Mazovia, Poland

- Feedstock:
 - Residues from apple production:
 - Apple prunings
(from the land => primary residue)
 - Apple pomace
(from the factory => secondary residue)
- End use
 - Energy/ materials
 - Innovative food products

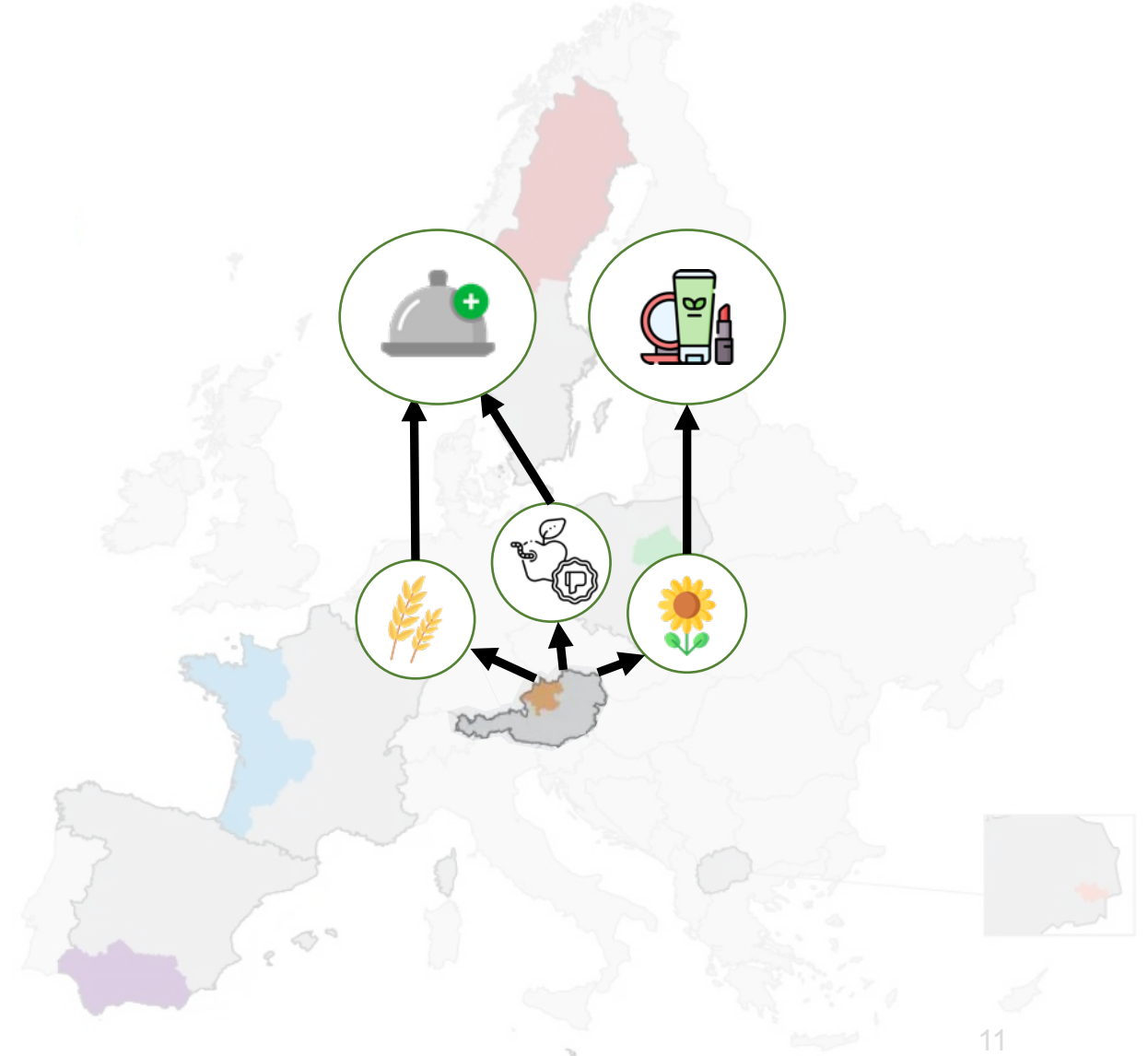


THE BIOMASS STREAMS

Upper Austria

- Feedstock:
 - By-products:
 - Beer & Bakery production (grains)
 - Fruit production
(primary and secondary residues)
 - Sunflower oil
(secondary products = from the factory)

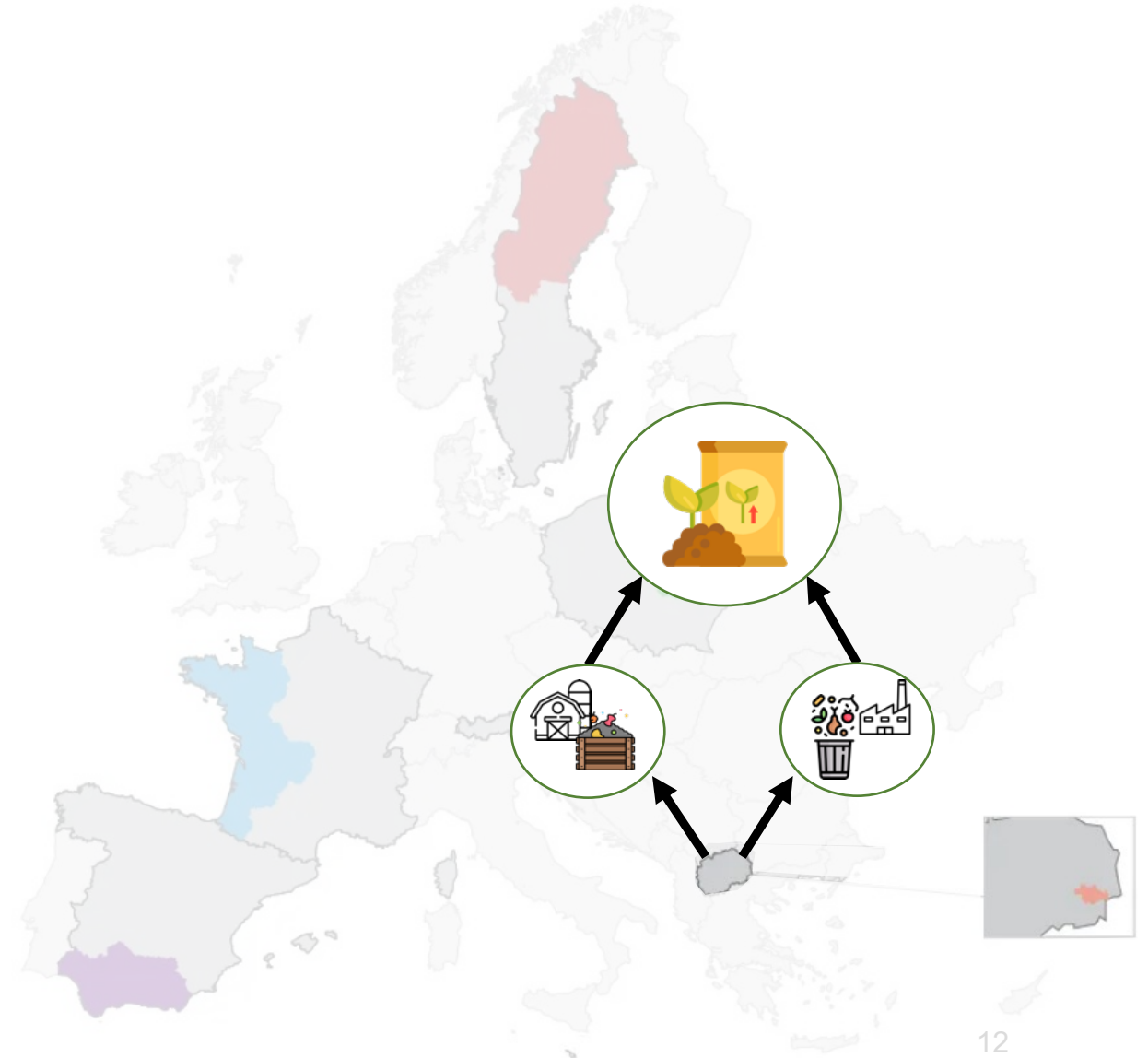
- End products:
 - Innovative food products
 - Cosmetics
(from sunflower oil press cakes)



THE BIOMASS STREAMS

Strumica, Macedonia

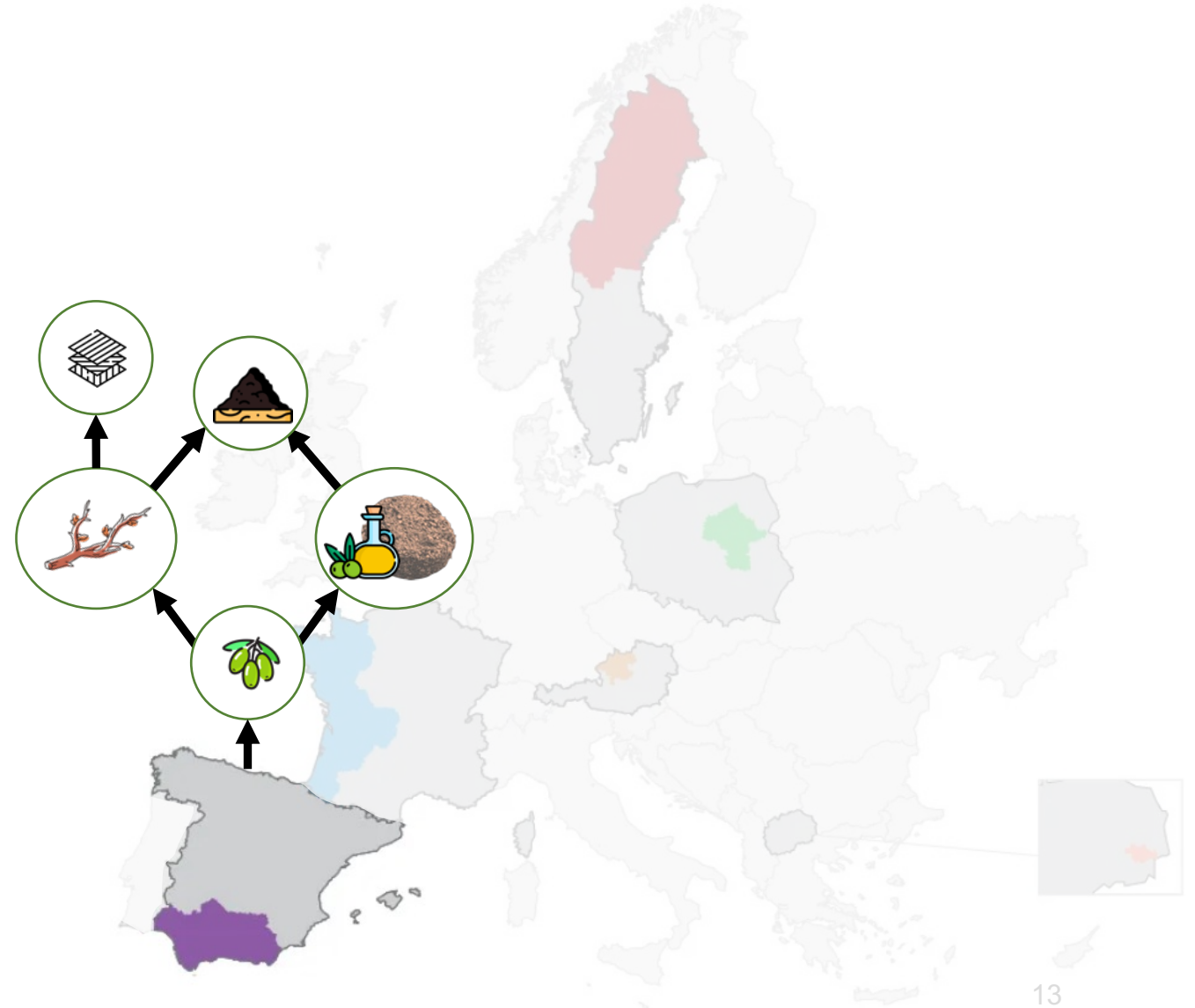
- Feedstock
 - Agricultural residues
(from the field = primary residues)
 - By-products of food processing
factories
(= secondary residues)
- End products
 - Compost



THE BIOMASS STREAMS

Andalusia, Spain

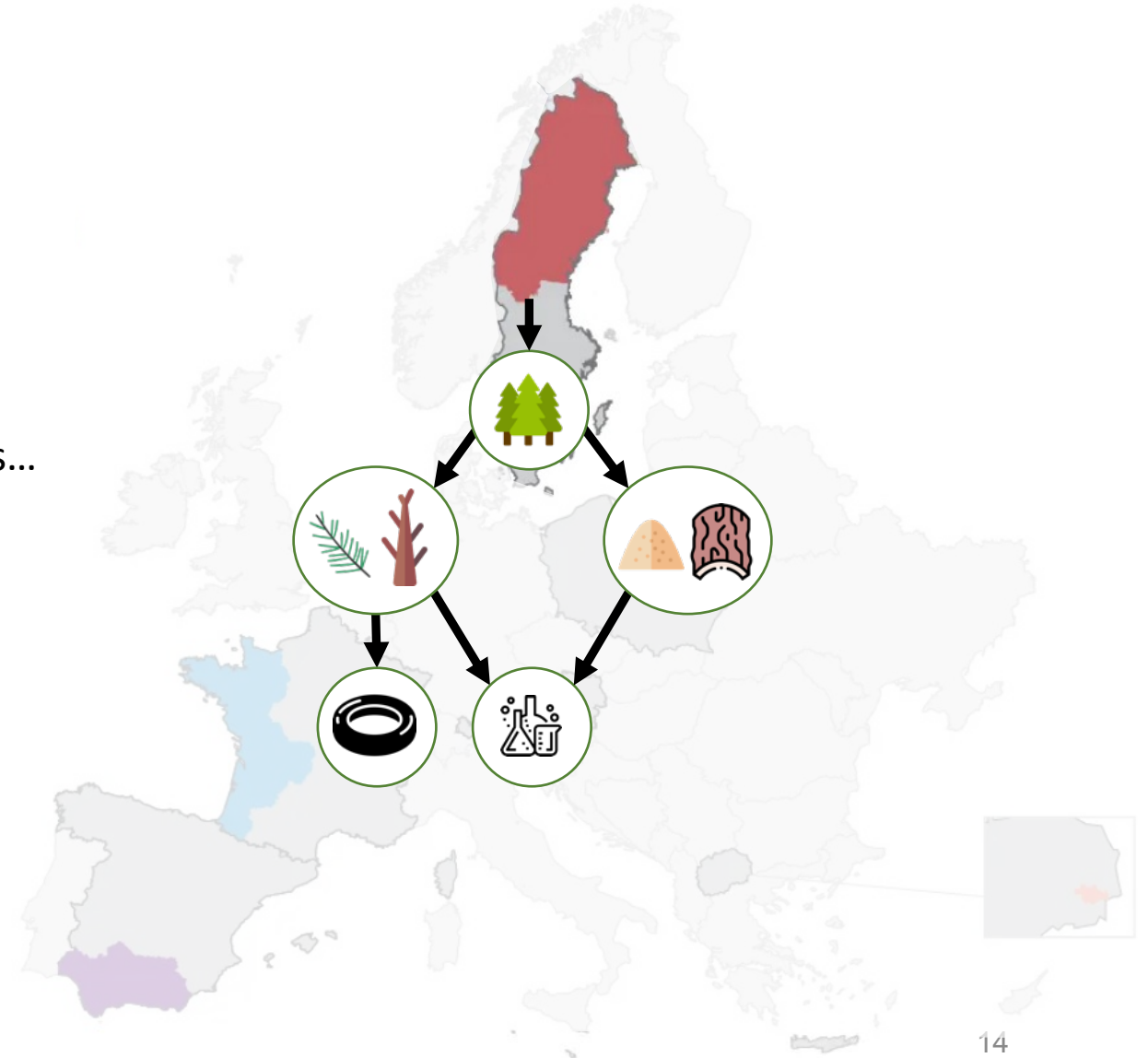
- Feedstock
 - Residues from olive production:
 - Prunings (primary residue)
 - pomace and wastewater (secondary residues)
- End products:
 - Biochar
 - Biomaterials



THE BIOMASS STREAMS

North Sweden

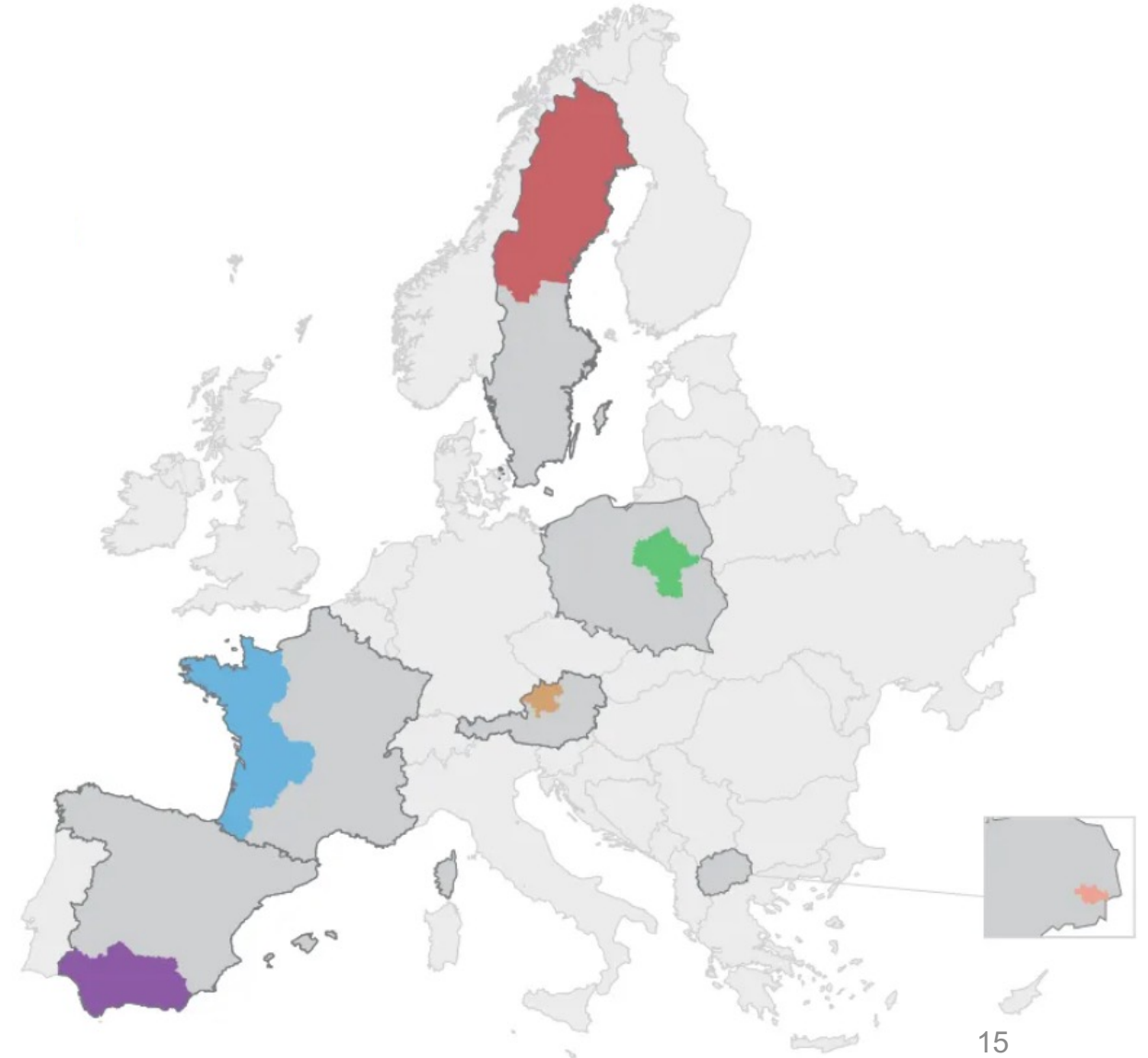
- Feedstock:
 - Logging residues: needles and tops
(in the forest: => primary residue)
 - By-products from mills: bark, sawdust, shavings...
(= secondary residues)
- Endproducts
 - Natural rubber from bark
 - Chemicals from needles



THE BIOMASS STREAMS

Final remarks

- Feedstock availability depends on – in short -:
 - Land use, harvesting and competition with other crops (for primary biomass, such as hemp)
 - Harvesting and collection process in the field (for primary residues, such as prunings)
 - Processing system (for secondary residues, such as pomace).
 - Value of product and buying power (= economic availability).
- Environmental constraints
 - Quality of the soil (among other constraints) and possibilities to recycle nutrients (especially for crops).



THANK YOU FOR YOUR ATTENTION

Frans Feil,
BTG Biomass Technology
Group

feil@btgworld.com

PROJECT PARTNERS



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101060264.