

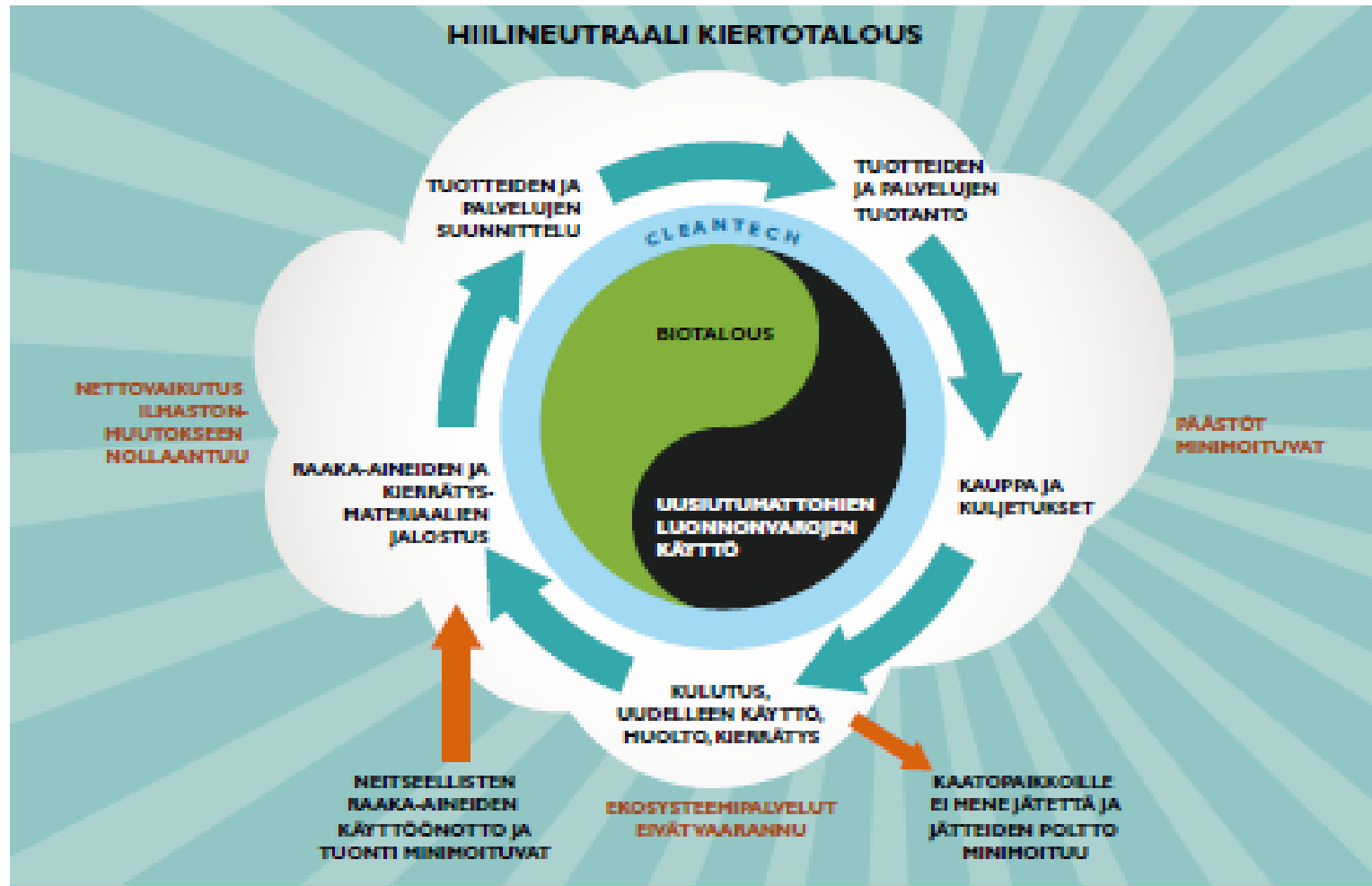


# Miten kiertotalous muuttaa biotaloutta?

Jussi Manninen, VTT

Biomassan käyttö tulevaisuudessa  
biotuotteisiin ja energiaksi 17.11.2016

# Biotalous, kiertotalouden ja cleantechin suhde



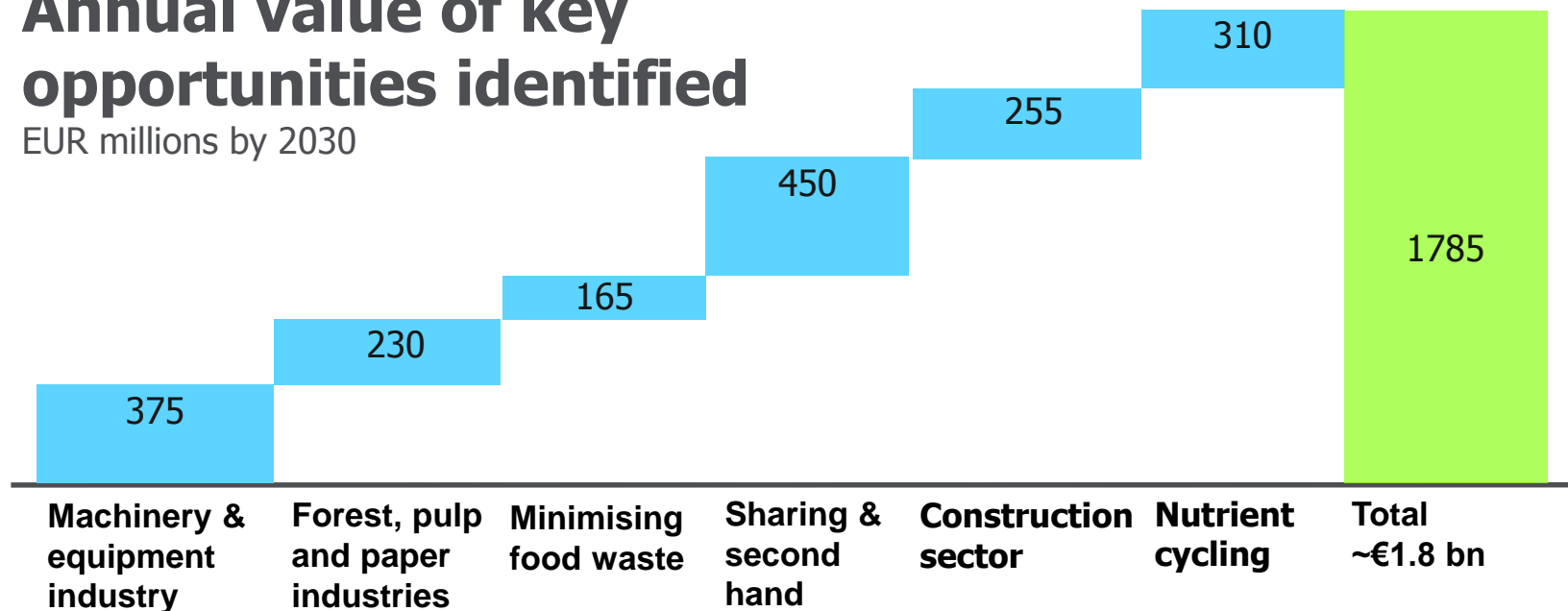
# Kiertotalouden potentiaaliksi Suomessa on arvioitu 2 – 3 Mrd per vuosi vuonna 2030



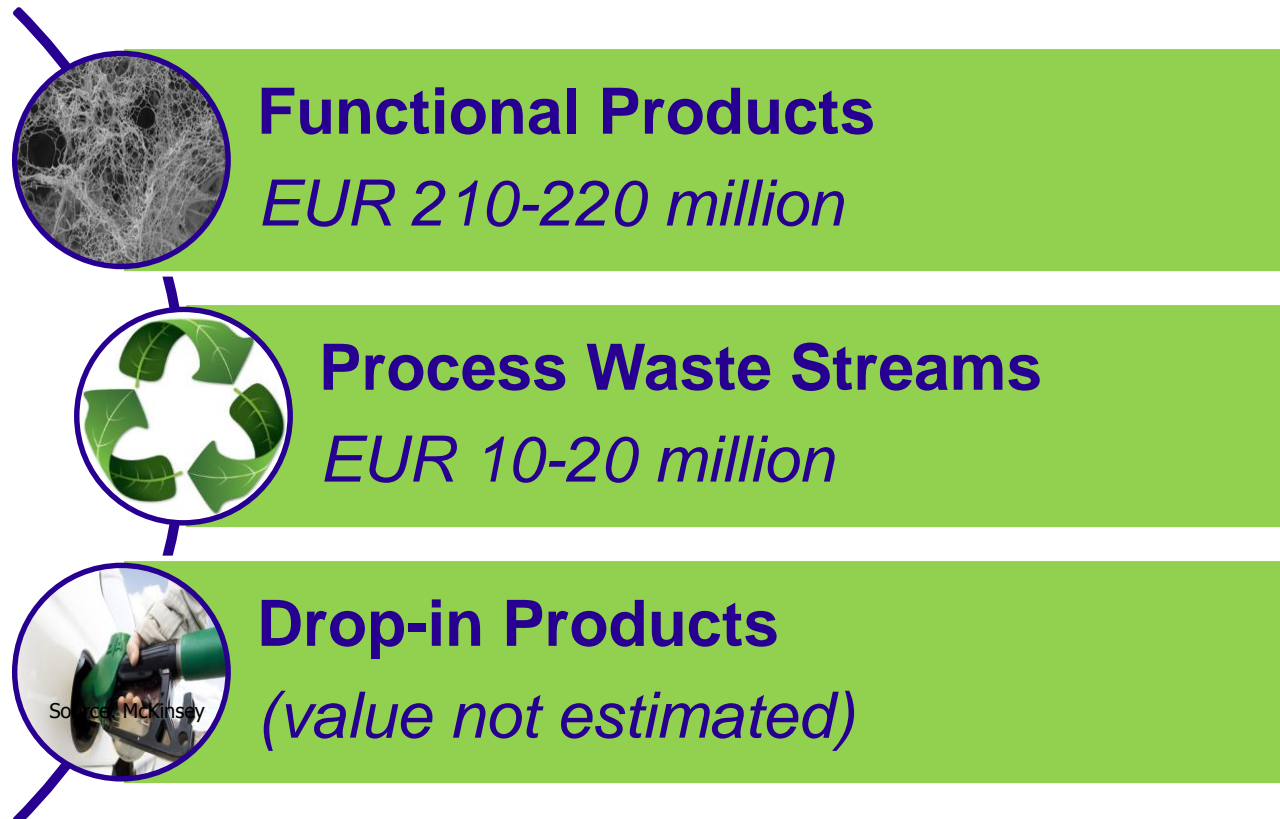
# Iso osa potentiaalista on bioperäistä

## Annual value of key opportunities identified

EUR millions by 2030

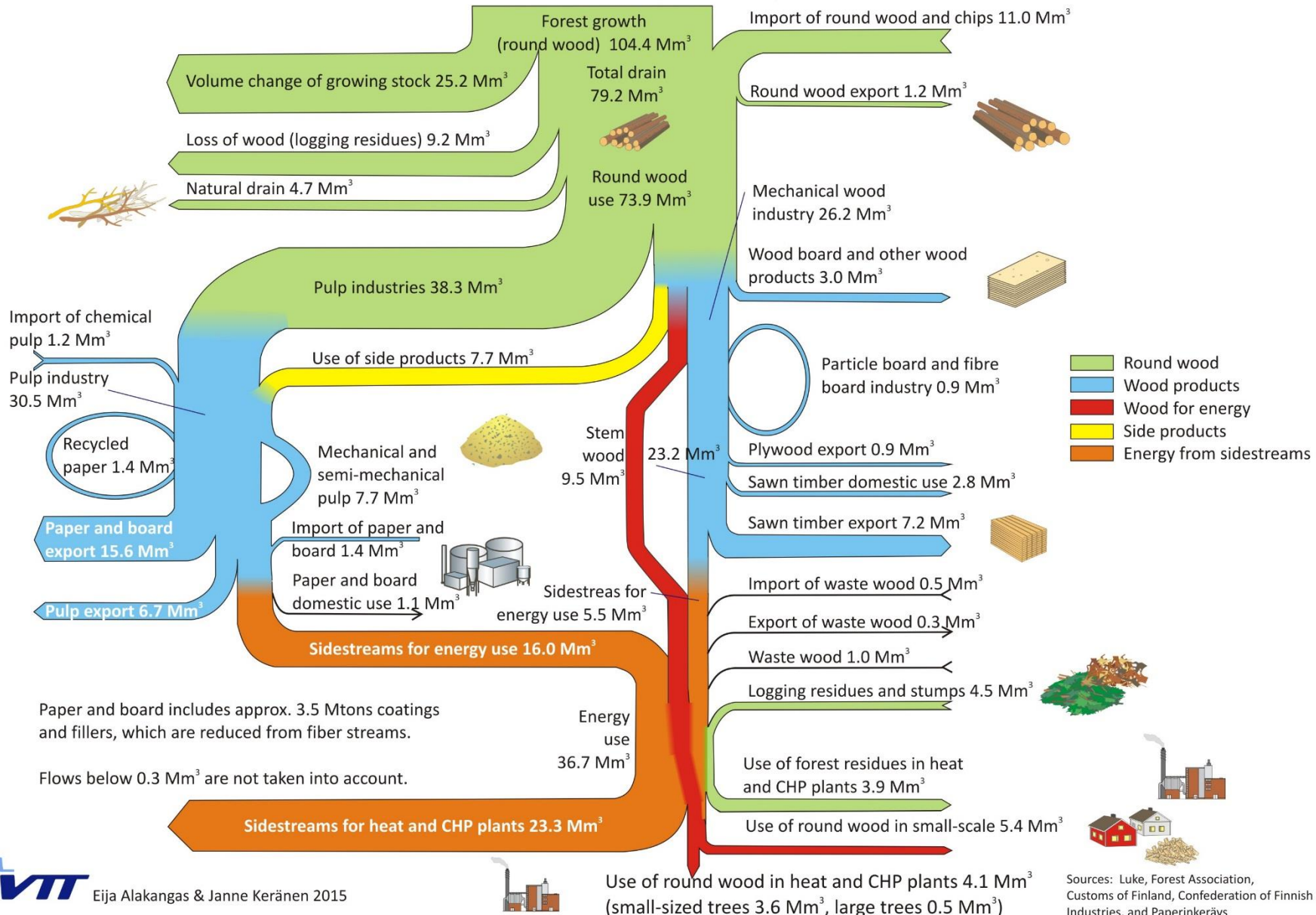


# Metsäteollisuuden sivuvirtojen hyödyntämispotentiaali on 230 M€/vuosi vuonna 2030



# Wood flows in Finland, 2013

Growing stock (stem) 2 357 Mm<sup>3</sup>  
(47% <20cm, 34% 20-30cm, 19% >30cm)



## Mitä EU:ssa ajatellaan?

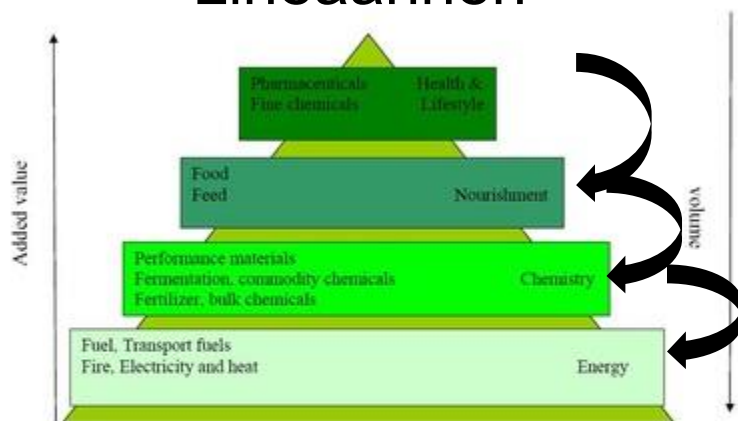
- In the bioeconomy, land use and food security are optimized through a sustainable, resource-efficient and largely waste-free utilisation of Europe's renewable raw materials, so contributing to a circular economy. Therefore, the bioeconomy can help in the move towards a low-waste society through waste prevention and waste valorisation.
- A guiding principle towards more efficient use of biomass in the wood sector is the idea of cascading use. One definition of
- this principle has been provided by the German Federal Environment Agency: “a strategy for using raw materials or the products made from them in chronologically sequential steps as long, often and efficiently as possible for materials and only to recover energy from them at the end of the product life cycle.”
- However, taking the cascading principle as a binding rule applied to all kind of biomass should be avoided as it would bring unnecessary new barriers to the development and commercialisation of much needed environmentally beneficial bioeconomy products in Europe. Biomass should be used depending on the most pressing needs and/or societal challenges to be addressed.

Where next for the European bioeconomy?

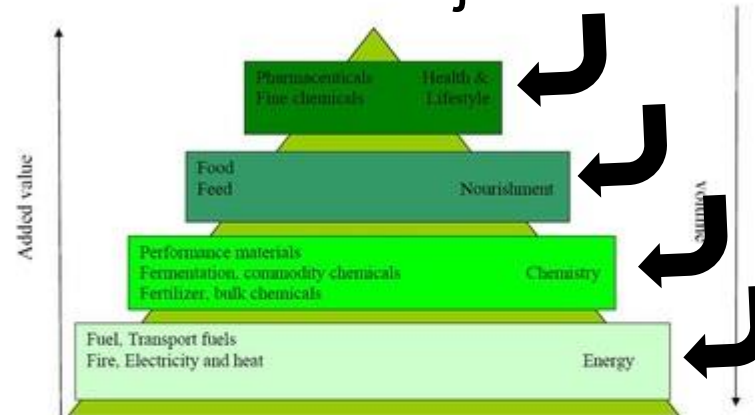
The latest thinking from the European Bioeconomy Panel and the Standing Committee on Agricultural Research Strategic Working Group (SCAR)

# Ei ole yhtä määrittystä kaskaadille

”Lineaarinen”



”Rinnakkainen / biojalostamo”





# Miten eri kaskadikäsitkset vaikuttavat liikevaihtoon ja lisäarvoon?

