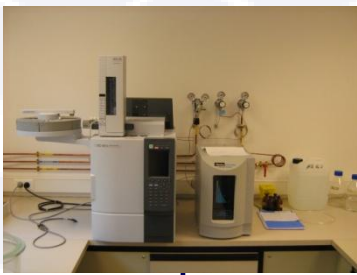


# Micro-organisms as Versatile Business Generators

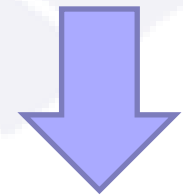
**AVECOM nv**  
**[www.avecom.be](http://www.avecom.be)**  
Haven 9000  
Industrieweg 122P  
9032 Wondelgem

# Biotech by Microbial Teams

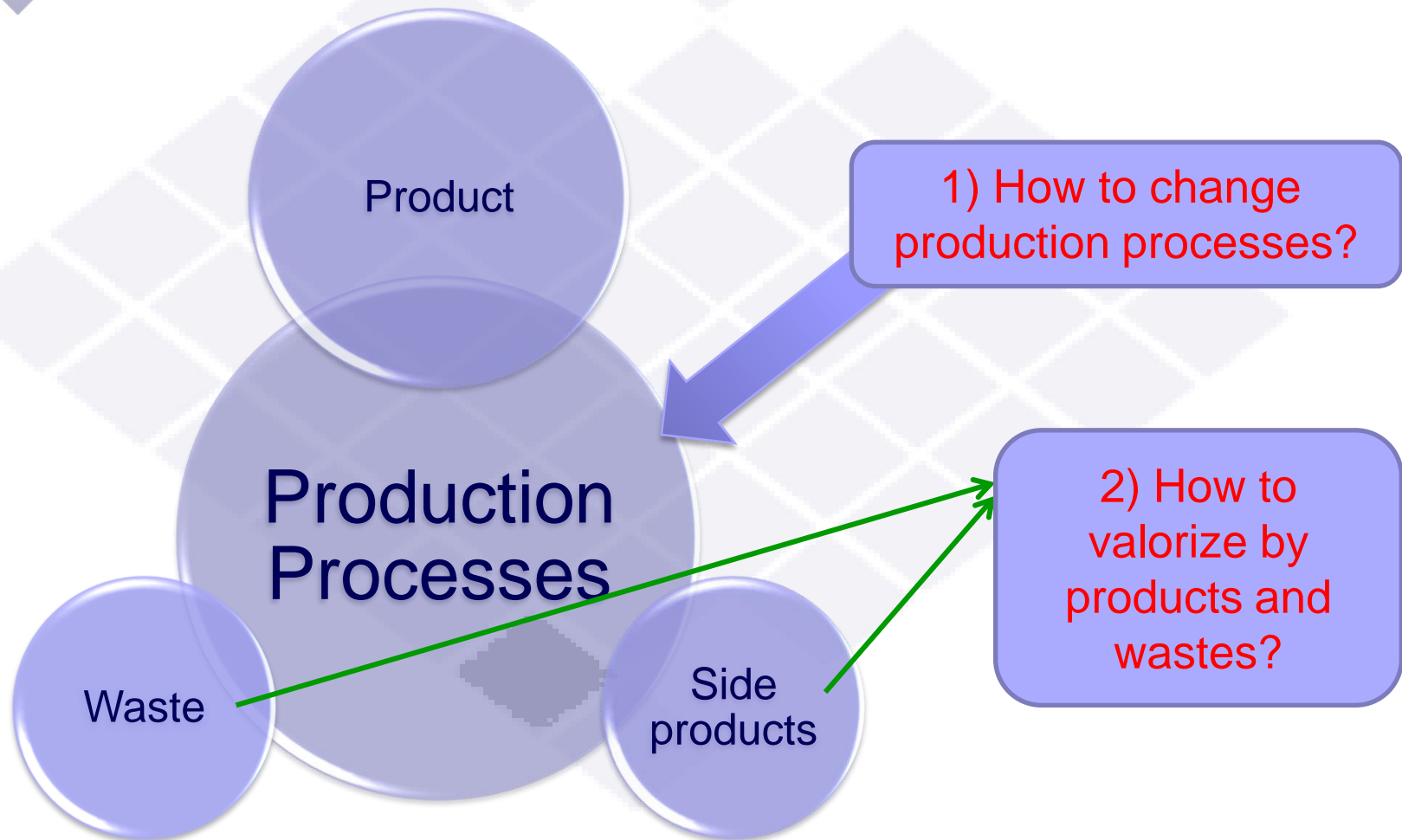
- Expertise
  - Tailor made solutions
  - Training Courses
- Feasibility Studies
  - Water Treatment
  - Soil Remediation
  - Air purification
  - Biotechnological Production Processes
  - Hygiene
- Products
  - Microbial
  - Microbial Resource Management
  - Biocatalysts



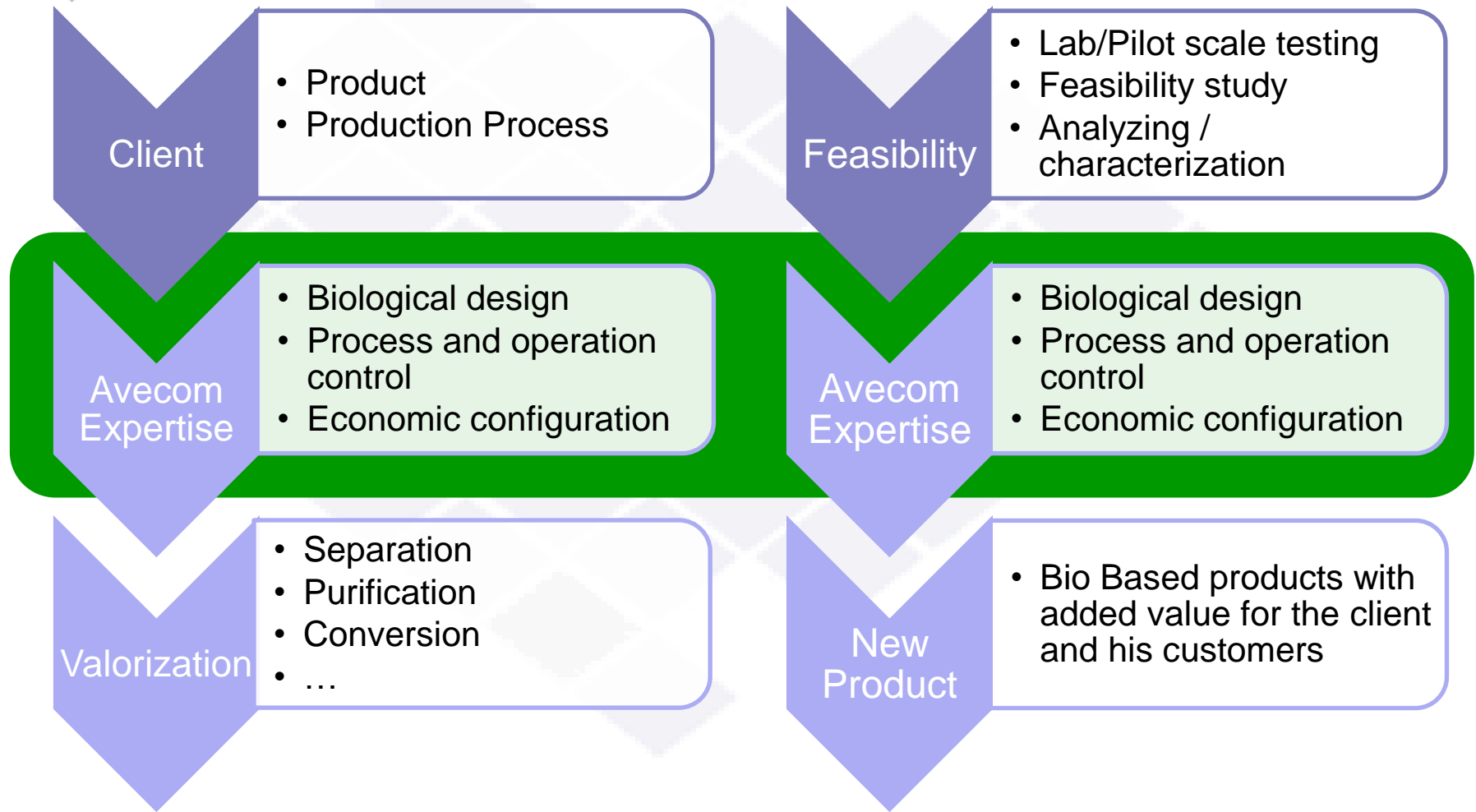
# Bio Based Economy



# Micro-organisms as versatile business generators



# Operational Approaches



- Expertise of Avecom
  - Feasibility study + testing + analyzing
  - Upconcentration/separation:
    - Conventional technologies which can be used or need to be adapted to the application
    - New innovative technologies

## PROCESSING WITH USE OF COMBINATION OF MICRO-ORGANISMS

## PROCESSING WITH USE OF MICRO-ORGANISMS IN FUNCTION OF METABOLISM OR STRUCTURE

- PHB / PHA production in cell
- Micro-organism as carrier for (nano)structure
- Production of algae for:
  - Cosmetics
  - Feedstock
  - Feed additives.
- Lactate production
- Methane production
- ...



# Case Studies: Bio based carriers

→ Use of micro-organism as building block to stabilize metal catalysts

Biogenic Silver stabilized on bacterial cells

(in cooperation with University of Ghent and Janssen PMP)

BioPAD; Pd stabilized on bacterial cells

(in cooperation with University of Ghent and Biorem)

Gold and bimetallic (nano) particles on bacterial cells

(in cooperation with University of Ghent)



100 nm



## Use of micro-organisms to produce building blocks

- Lipoyeast (FP7)



**“Mobilising the enzymatic potential of hydrocarbonoclastic bacteria and the oleaginous yeast *Yarrowia lipolytica* to create a powerful cellular production platform for lipid-derived industrial materials. “**

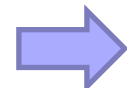
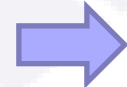


## Use of exhaust gas to grow micro-organisms and reduce NOx emissions

( in cooperation with Indaver and Maris Projects)



e.g. →



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