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Successful R&I in Europe 2025 - 12th European Networking Event

# Process Development and Optimization for Resource Recovery

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## Resource recovery includes:

- keeping materials in product cycle
- Primary material input reduction, especially of critical materials
- Optimizing processes
- Rethink processes and redesign products
- New applications for used products or material streams



**Post consumer products, all kind of waste streams, water, food, nature....**



## Main Topics:

- Treatment of complex waste streams
- Recovery of valuable materials and disposal of hazardous materials
- Process and plant evaluation and optimization



## Resources and References:

- Certified disposal centre for electronic scrap
- Treatment capacity of tons/day
- Crushing and sorting devices
- Evaluation experiences (Certified Auditor related to WEEELABEX)





## Main Topics:

- Usage of new or functionalized materials
- Usage of Green chemicals
- Development of hybrid processes
- Trace substance elimination
- Reuse of (industrial) waste water streams



## Resources and References:

- Water treatment and membrane plants from laboratory to pilot scale
- Electro dialyses plant
- Process evaluation and development skills



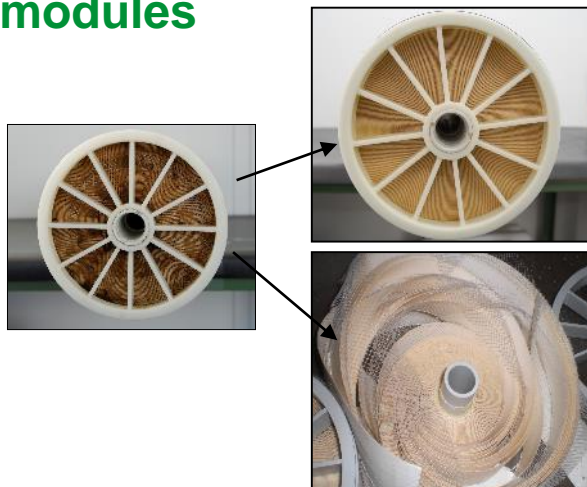
## DiKueRec: AI supported input recording of disposed refrigerators



- Camera and sensor based input recording for recognizing volume, size, cooling agent and blowing agent
- Aim to optimize recycling efficiency and to minimize emissions



## RORe<sup>3</sup>: Sustainable treatment concept for end-of-life reverse osmosis membrane modules



- Refurbish of RO modules to UF or NF modules
- Material recycling of damaged or deposited modules
- Usage and further development of “membrane autopsy tools” to evaluate membrane status



## We contribute:

- Process development and evaluation experiences.
- Related analyses skills.
- Experiences in several research programs and project acquisition.

## We are looking for:

- Application partners,
- Research institutions (universities, institutes, industry) in the field of
  - membrane processes
  - recycling and circular economy
  - water treatment.

Please contact us:

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