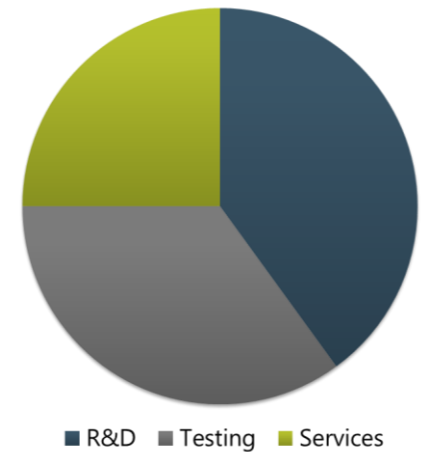


# SusChem 2017 Brokerage Event

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**Centexbel: PVC recycling**

- Collective research and technical centre
- Two main domains:
  - Textiles
  - Plastics
- Membership organisation
- Staff: >160 persons
- Main activities: testing & R&D
- R&D technology fields
  - Melt processing of polymers in textiles & composites
  - Coating & finishing
  - Textiles for health, safety & security
  - Plastic processing



- **Materials:**
  - (Bio-based) polymers
  - (Nano)additives,...
  - Characterisation, e.g. durability
  - Environmental aspects
  - Recycled fractions
- **End products:** light weight, multilayer & composites, design for/from recycling...
- **Process** optimisation
- **Applications:** new application areas, cross-sectorial

- **Our interest:** Removal of brominated flame retardant out of textiles & plastics
  - Halogenated flame retardants show a high efficiency at low loadings, so often used
  - Halogens: persistent, bio accumulation, toxic to humans → certain compounds are forbidden (REACH regulation) - continuous pressure from NGOs on OEMs to ban halogens
  - Set-up recycling process for textiles and plastics containing bromine → removal of brominated compounds
- **Call:** CE-SC5-01-2018: Methods to remove hazardous substances and contaminants from end-of-life materials (RIA)
- **Deadline:** Feb 27 1<sup>st</sup> stage, Sept 5 2<sup>nd</sup> stage

- **Project idea:** Recycling of PVC and extraction of so-called 'legacy additives' (heavy metals and phthalates)
  - Set-up and demonstration of circular material stream for PVC (flooring) products
  - Scale up of emerging methods for PVC recycling:
    - Transforming 'old' PVC into reusable PVC resin with varying rigidity
    - Extraction of phthalates and metals
- **Call:** CE-SC5-01-2018: Methods to remove hazardous substances and contaminants from end-of-life materials (RIA)
- **Deadline:** Feb 27 1<sup>st</sup> stage, Sept 5 2<sup>nd</sup> stage

### Current consortium:

- Centexbel: RTD, super critical CO<sub>2</sub> technology for removal hazardous substances; revalorisation of PVC and additives
- RTD – extractive extrusion
- Large company – reuse of PVC for flooring
- Relevant European Association

### Partner search:

- Company – scale up of chemical extraction, process engineering
- Company (at least one) – reuse of PVC for applications other than flooring
- Company – Mechanical shredding of (PVC) waste streams
- RTD – alternative techniques for removal of hazardous substances

# Contact details for project ideas:

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