





# **Evaluating circularity potential of various recycling** technologies for biocomposites waste from the aircraft industry

THIS POSTER: Evaluation of technologies for biocomposite recycling and selection of 4 most promising recycling technologies

**Introduction & Problem** 

Aviation industry contributes ~2% of human-produced CO2 emissions. Biocomposites in the aircraft industry can provide significant environmental benefits compared to conventional materials and composites

ISSUE: Non availability of technologies for recycling biocomposite

**ELIOT Project Approach** 

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#### **ELIOT Solution**

waste from the aircraft industry.

#### **Key Assessment Parameters**



- > Potential applications of the output products
- > SWOT analysis
- > Technology readiness level (TRL)



### **Technology Desirability Matrix**



#### Dissolution Solvolysis Mechanical Conventional Pyrolysis м Technology Micro Valley of Death Heating Fluidized Bed Pyrolysis Gasification Cement Kiln Incineration Energy Enzy Degradation Disposal Landfill 🔵 **Technology Readiness Level**

Circularity Potential Versus TRL

for EoL Options for Composites

Circularity Potential Versus TRL for EoL **Options for Biocomposites** 



## CONCLUSIONS

Four technologies - Dissolution, Solvolysis, Pryolysis and Mechancial recycling - ranked better on circularity potential analysis and technology desirability matrix. These four recycling technologies were selected for further investigation and technology development (TRL 4-5).



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**Waste Management Strategy**