REDU

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Closed Loop of Biocomposites

Maxim Narbrough 11.6.2026

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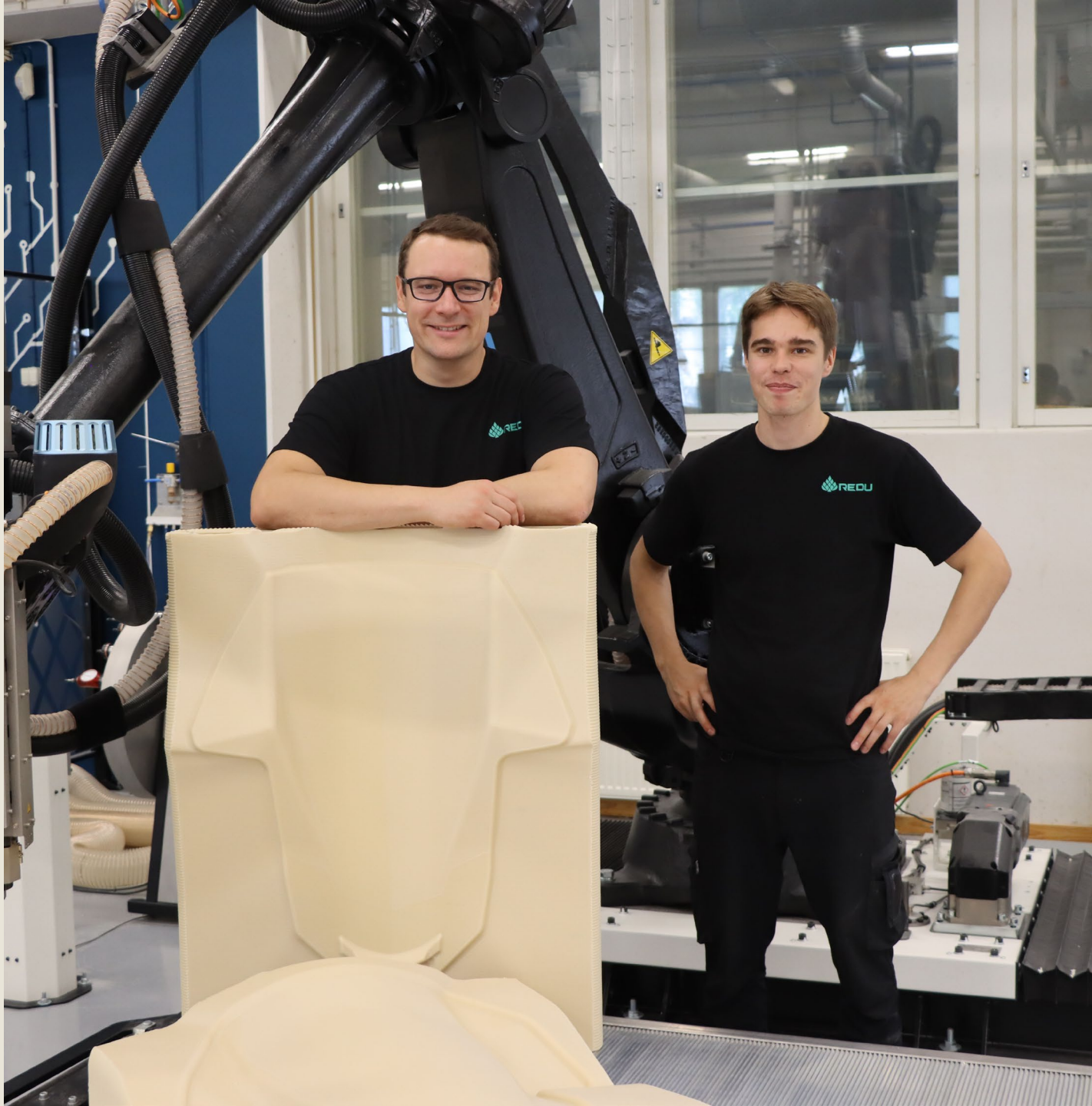
What we do with composites

- Application partner operating within the 3DTY project ecosystem
- Academic and research-driven validation of sustainable polymers
- Material testing and application development
- Solve challenges when transitioning to large-scale 3D-printing



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Validation of materials

Biocomposites and recycled materials tested at REDU:

- KCL Formi® 3D Nordic Birch PLA 10, PLAr14, PLA 20, Iconic Black PLA 12
- KCL Formi® 3D rPETG Opal white / Clear
- Sulapac Flow 1.7
- EcoRub EcoAdd PETG20
- Brightplus Loimu-D55

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Cooperation with KCL

- testing/validation of basic parameters
- validation of specific customer/partner projects
- validation of advanced 3D-printing properties
- recycling of printed parts
- reuse of recycled materials
- shared values

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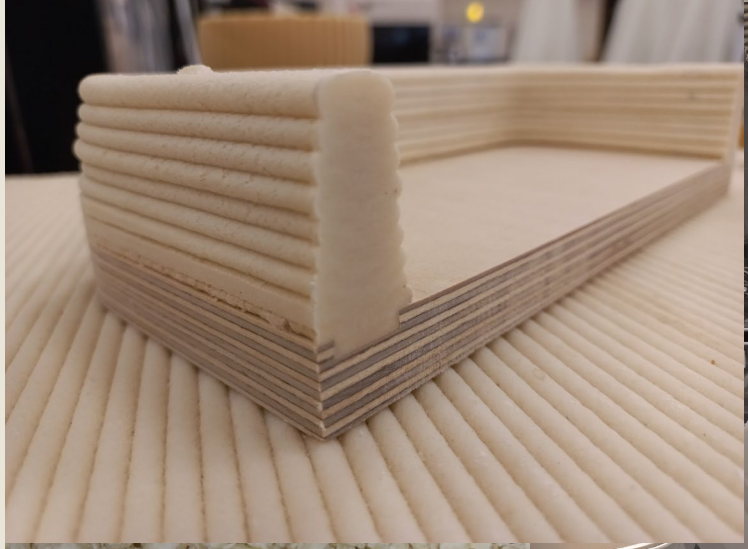
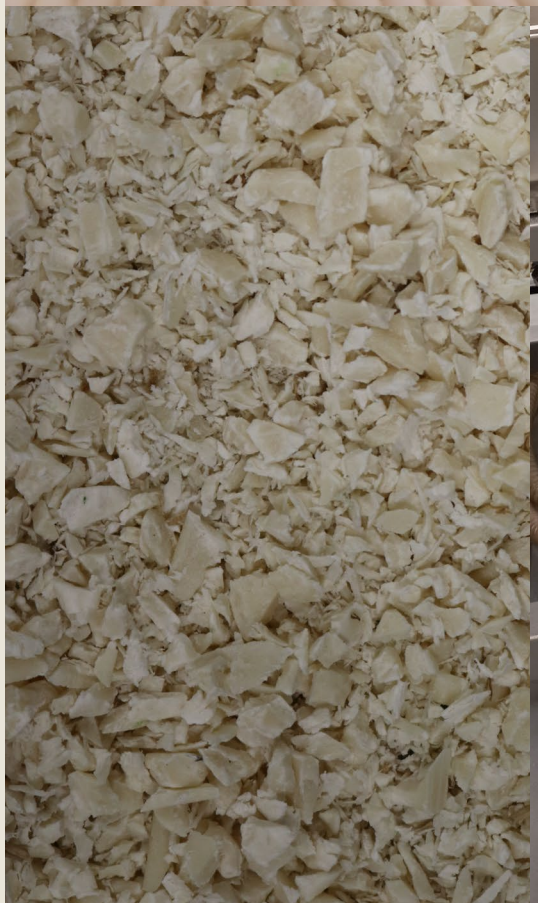
Closing the loop

- testing recycled materials
- recycling of printed parts
- validate recycled material properties
- identify suitable applications
- explore different recycling approaches
    - shredded
    - pellets
    - filament





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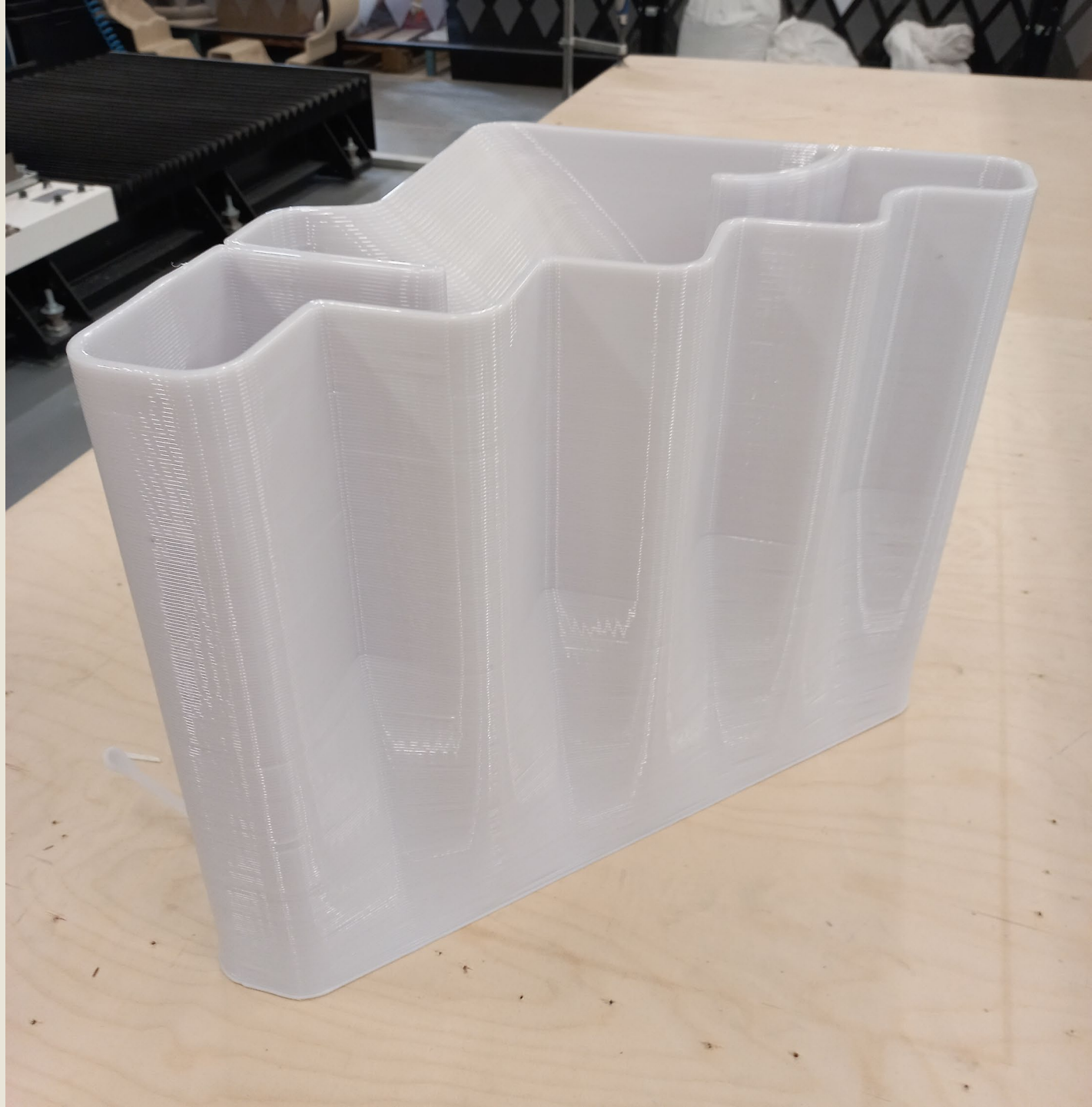
Future projects

- Preliminary study for development of digital manufacturing hub at REDU
    - aim to develop facilities for in-house material recycling
    - develop expertise in recycling materials for 3D-printing

- PaJarvis project: AI in manufacturing
- TERA project - Regional network for technical resilience

3DTY



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Thank you!

Lapland Education Centre REDU

Maxim Narbrough

Project manager | 3DTY project

maxim.narbrough@redu.fi

+358 40 137 2056

www.redu.fi/ www.3dty.fi