



# eMOTOR-VTB

## Recycled magnet-based e-motor digitalised virtual production testbed

The eMOTOR virtual testbed is a set of existing interconnected test rigs, powered by new sensors which measure recycled components behaviours in electric motors.

The aim of the digitalised testbed is to provide the tools for redesign and evaluate an e-motor system made of recycled parts, trying to maximise their usage without compromising performance.

The result is a digital platform that looks at many aspects of recycling, eco-design and performance evaluation of e-motor components along the entire value chain, focusing primarily on the magnets.

SMEs and LEs can explore the advantages of a new eco-designed motor such as:

- Same or improved performances
- An easier future dismantling design
- Long life quality assessment evaluation
- Life Cycle Assessment (LCA) of new design

## Testbed main goals



Evaluate recycled e-motor performance



Encourage e-motor usage with recycled parts



Redesign e-motor for sustainability

Thanks to EIT (European Institute of Innovation and Technology) we had the opportunity to start a research and business project dedicated to the issues of recycling and sustainability. The developed testbed allows the redesign of an electric motor with recycled magnets and the evaluation of its performance. The implementation of this innovative digital solution allows companies to evaluate the use of electric motors with recycled parts in their business, fostering a competitive and eco-sustainability advantage.

**Maurizio Griva**  
Innovation Manager at Concept Reply



## Our project partners

Academic | Research | Network



Politecnico  
di Torino



+ CIM4.0

SMEs | Start-ups



## Interested in experiencing the eMOTOR-VTB testbed?

Testbeds are a great opportunity to mirror real-life manufacturing sites. The eMOTOR-VTB testbed in Torino (Italy) enables you to

- evaluate the performance of e-motors components via our digital platform
- simulate the current state of the system, trace the past and enable predictive analyses to simulate future trends with our digital twin-module
- dismantle the rotor magnets more easily

### Contact us!

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