VTT PowderPiloting
Material solutions from powder to product
VTT PowderPiloting boosts up your development from early stage feasibility studies to pilot scale production of powder based materials and components.

Benefits

- Whole chain from raw material synthesis to component performance testing
- Verified manufacturing processes through piloting
- Reality check of ideas and inventions through feasibility studies
- Optimised cost/performance through tailored material compositions
- Material efficiency through circular economy
- Support for different stages on product process
Material solutions

Coatings
• Cost efficient solutions against wear, corrosion and high temperatures
• Tailoring material properties to fulfil performance criteria of harsh operation environments

Components
• High performance components with cost-efficient and sustainable manufacturing
• Tailoring component to meet the highest demands and standards

Functional additives
• Graded or locally reinforced structures, added functionality like integrated catalytic properties or electro-magnetic properties

Circular economy
• Alternative raw materials based solutions
• Utilisation of secondary materials and industrial side streams

Facilities and competences

Powder manufacturing
• Gas atomisation
• Spray drying
• Plasma spheroidisation
• Mechanical alloying and mixing
• Powder classification

Powder consolidation
• Additive Manufacturing (AM)
• Hot Isostatic Pressing (HIP)
• Powder Injection Molding (PIM)
• Self-Propagating High Temperature Synthesis (SHS)
• Thermal spraying
• Laser cladding

Post treatments and characterisation
• Heat treatments
• Surface treatments
• Performance testing and validation
• Powder characterisation and usability analysis
Get in touch with us:

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See our references:  
[www.vtt.fi/powder](http://www.vtt.fi/powder)

**VTT** beyond the obvious

[www.vttresearch.com](http://www.vttresearch.com)