

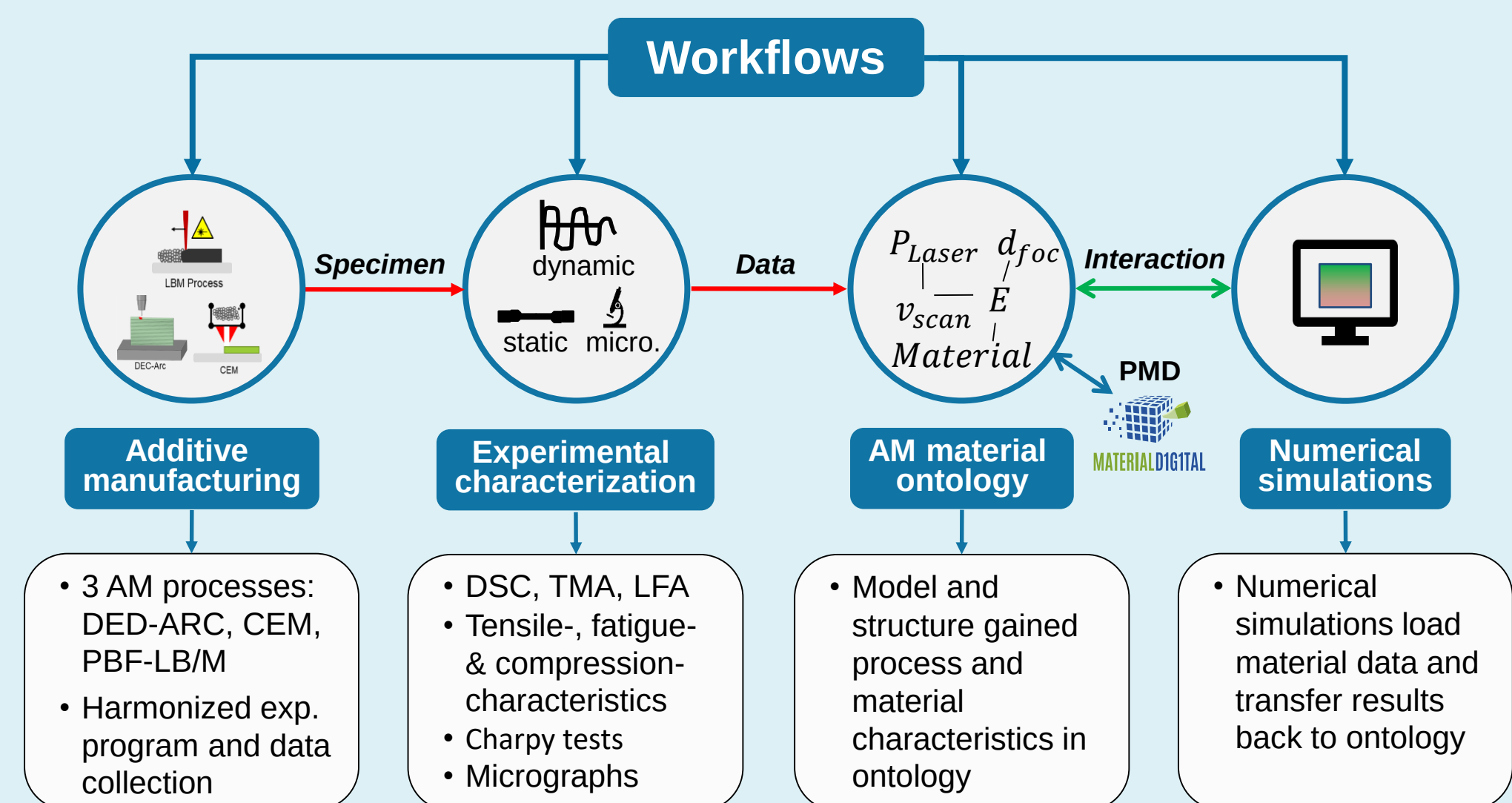
ODE_AM - Ontologien für die dezentrale Erfassung von mehrskaligen statischen und zyklische Kennwerten von additiv gefertigten Stahlstrukturen aus Experiment und Simulation

Thomas Bjarsch^a, Jan Reimann^b, Jorge Lizarazu^c, Mohamed Kamal^d, Heiko Beinersdorf^c

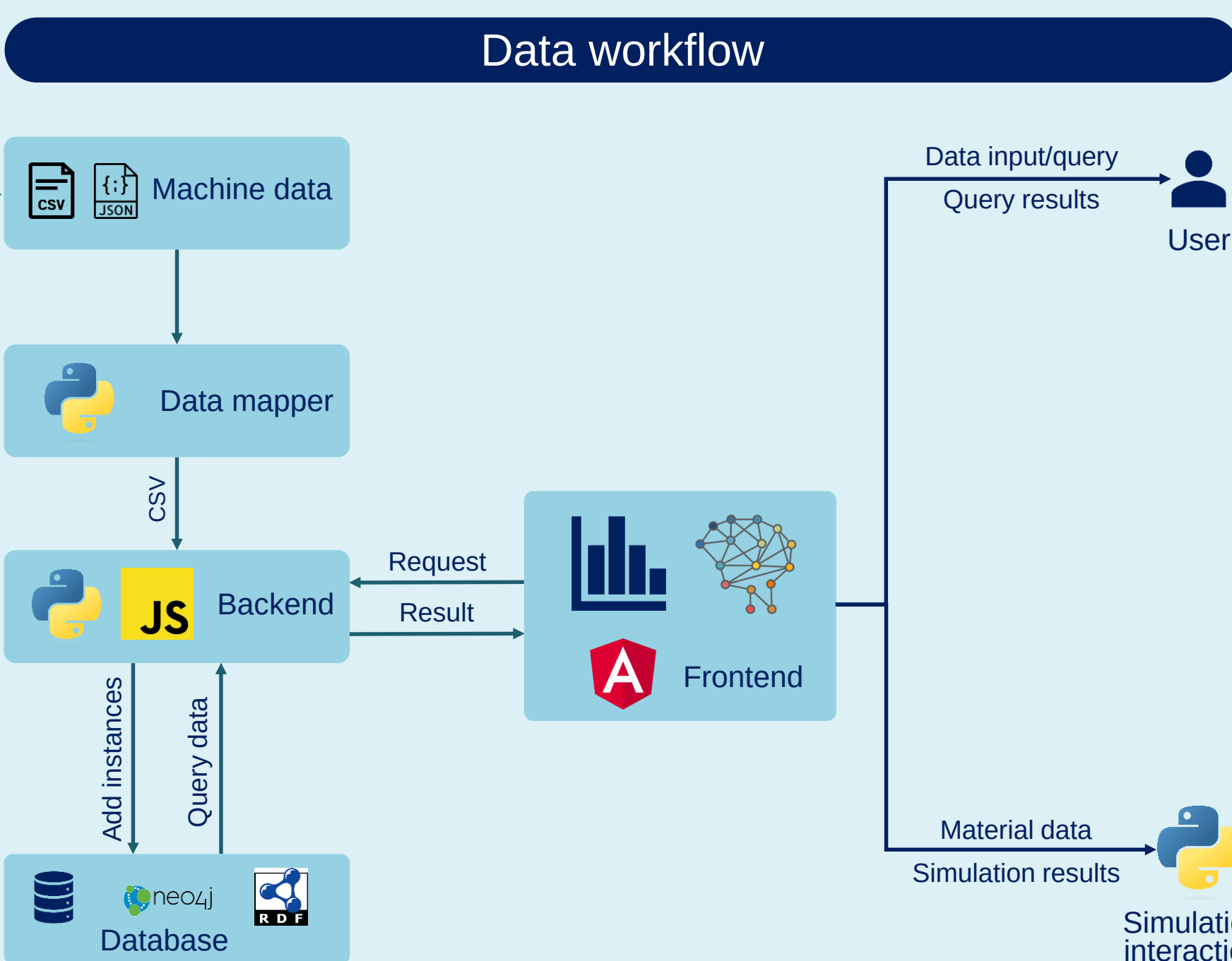
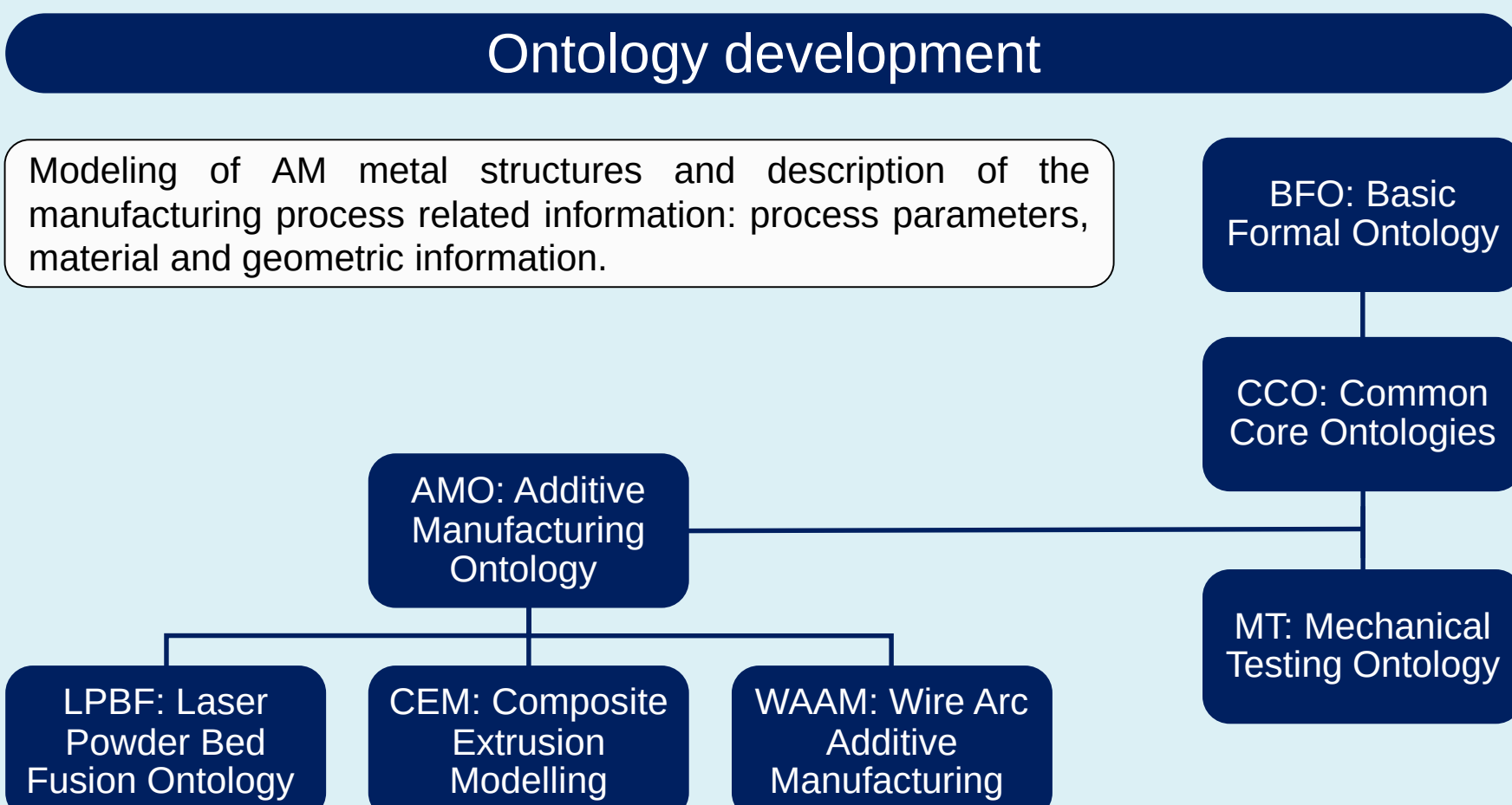
^a Fraunhofer IGCV, ^b TU Ilmenau, ^c MFPA Weimar, ^d Technische Universität Hamburg



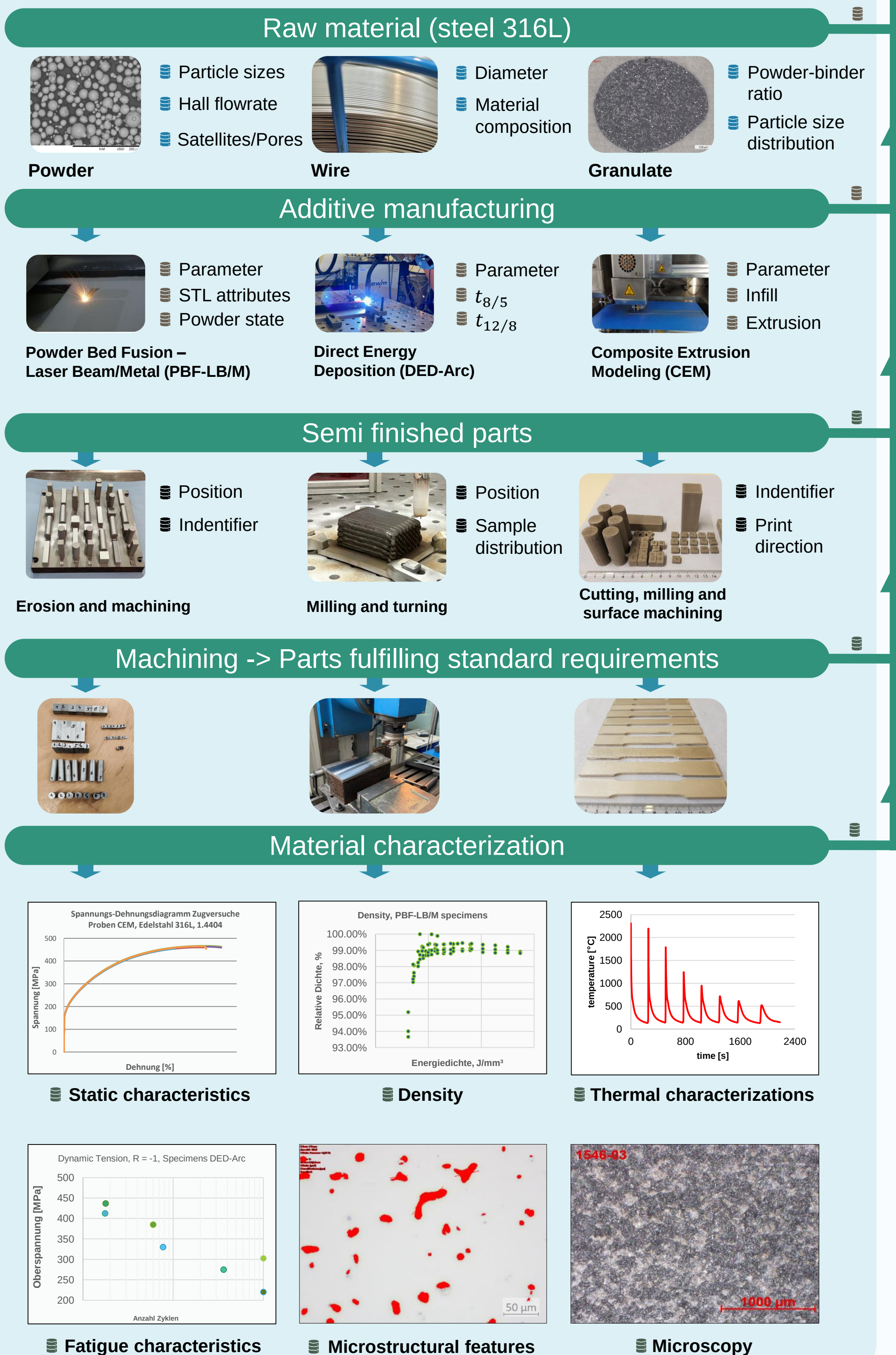
Overview



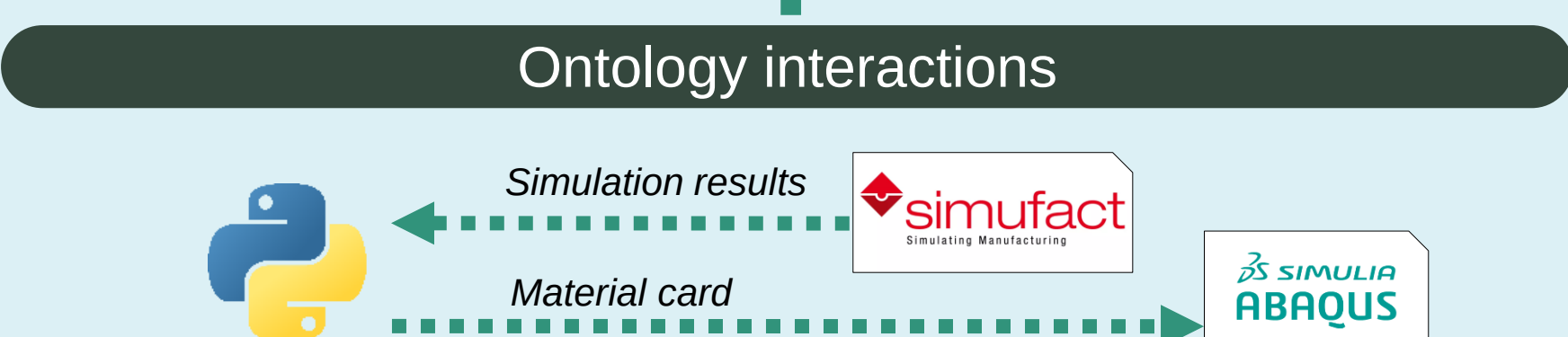
Ontologies and workflow



Additive manufacturing and characterization



Simulation



- Static/Dynamic analysis: Python grabs material data from ontology and transfers them to necessary format of material cards as an input for commercial simulation tools
- Process simulation: Results from thermo-mechanical process simulation (i.e. time t_{8/5} for DED-Arc process) are transferred from simulation tool back to ontology

