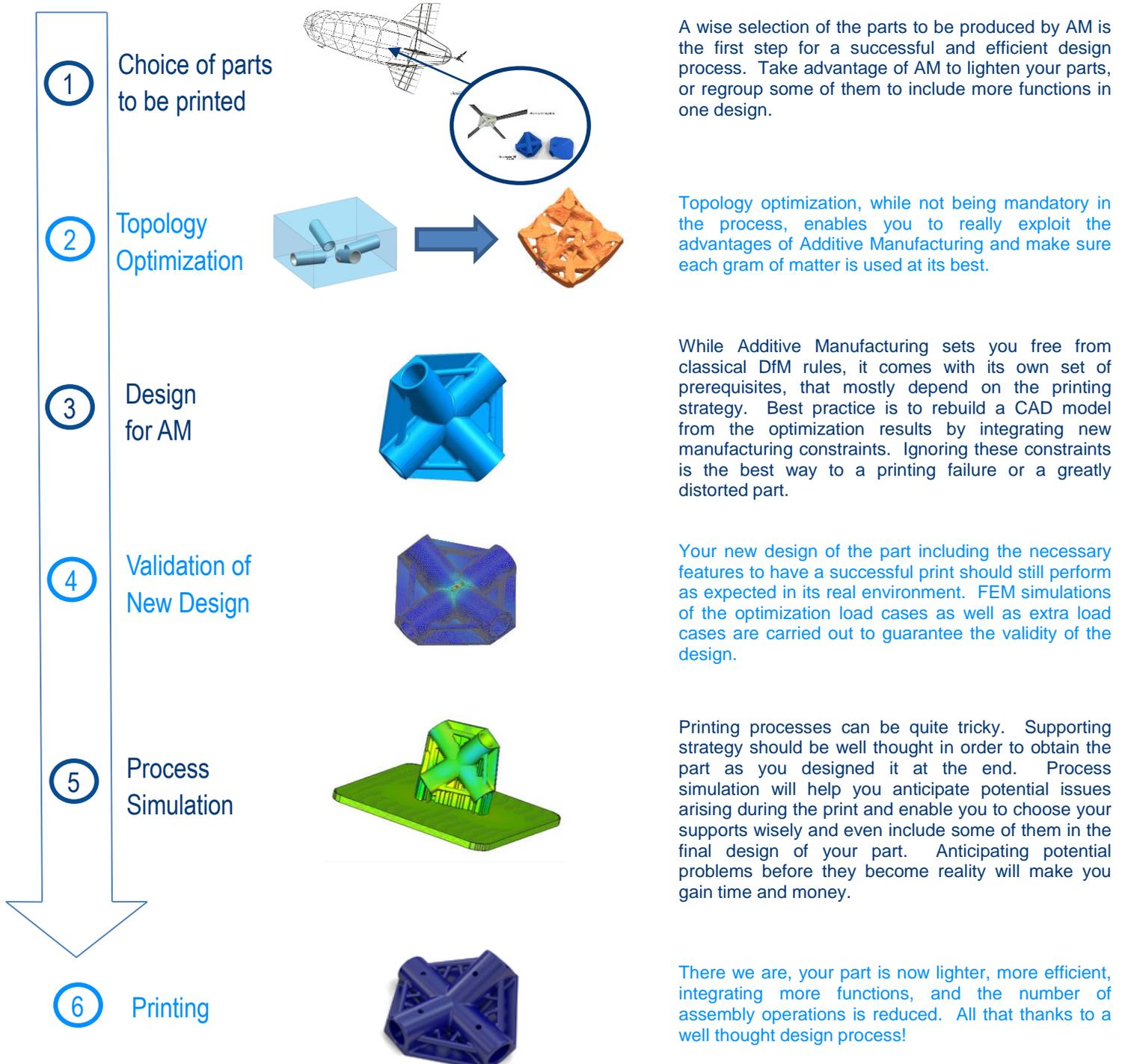


Assisting You through the Complete Design Process for Metal Additive Manufacturing

Additive Manufacturing is going mainstream because its larger design freedom enables the production of concepts considered unfeasible in the past. Nevertheless, in order to make a successful transition to AM, one must make sure to do it right from the start. GDTEch can help you for one, few or all the necessary steps.



Topology Optimization:

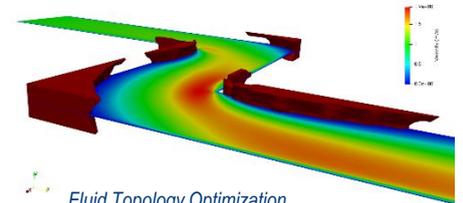
Take advantage of GDTEch's 20 years of experience in the field to get the most out of your structure. Mechanical, Fluid and Thermal properties can be optimized: higher stiffness or eigenfrequencies, lower pressure drops or better heat conduction are some examples of how topology optimization can enhance your parts and assemblies.

Designers naturally tend to reproduce or slightly modify the existing ones. Topology optimization will help you explore new ideas you would never have thought of and come up with **revolutionary designs!**

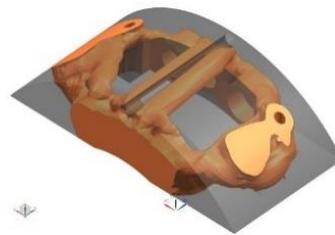
Process simulation:

Using the best strategy for the printing job reduces the risk of failures and of out-of-tolerances parts. But what exactly is the best strategy? What kind of supports should be used and where should they be attached? What is the ideal printing direction? Process simulation will help you answer all these questions, bypassing the waste of time, energy and powder typical of "trial and error in the printer method".

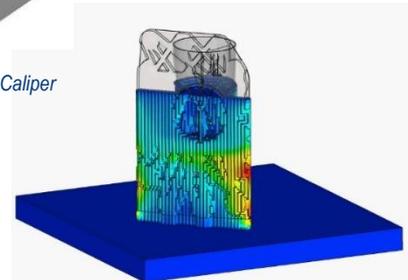
Since numerical simulation in general is the DNA of GDTEch, it is very natural for us to tackle these issues with you and help you fine tune the design of both your parts and your supports **to print them right first time!**



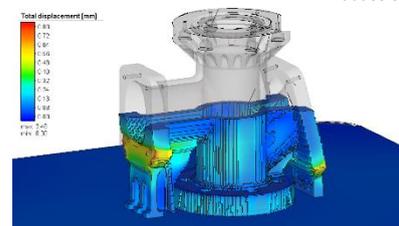
Fluid Topology Optimization



Topology Optimization of a Brake Caliper



Process simulation of a T Pipe and its interface plate



Process simulation of the VTT Pipe case study

The **complete design chain is covered** with the software packages available @ GDTEch:

- **Topology Optimization:** Siemens Topol, 3DS Tosca, Ansys, Altair OptiStruct, OpenFoam (Fluids) and Oofelie (Multiphysics)
- **STL files cleaning** and **CAD rebuild:** Altair Inspire, Ansys SpaceClaim, Siemens NX, AutoDesk MeshMixer and Meshlab
- **CAD / DfAM:** 3DS Catia V5, 3DS SolidWorks, Creo, Siemens NX and Rhino
- **FE Analysis Validation:** Siemens SAMCEF, MSC Nastran, ANSYS, 3DS Abaqus and Altair Optistruct
- **Process Simulation:** MSC Simufact and Siemens NX4AM

CONTACT US NOW

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