



# 3D Design Software for Organic Models

The industry's most comprehensive  
hybrid design software for organic models.



## Intuitive. Engineered. Done.

### Redefining the boundaries of organic 3D design.

Geomagic Freeform empowers designers to create complex, handcrafted-style sculptural and organic forms that are often too complex for traditional CAD systems.

By eliminating the need for costly, time-consuming physical-to-digital conversion workflows and reducing reliance on multiple software tools, Freeform streamlines your entire modelling process. It bridges the gap between artisanal design and modern digital manufacturing, making it the go-to solution for some of the world's most recognised brands.



### Design With A Different Approach

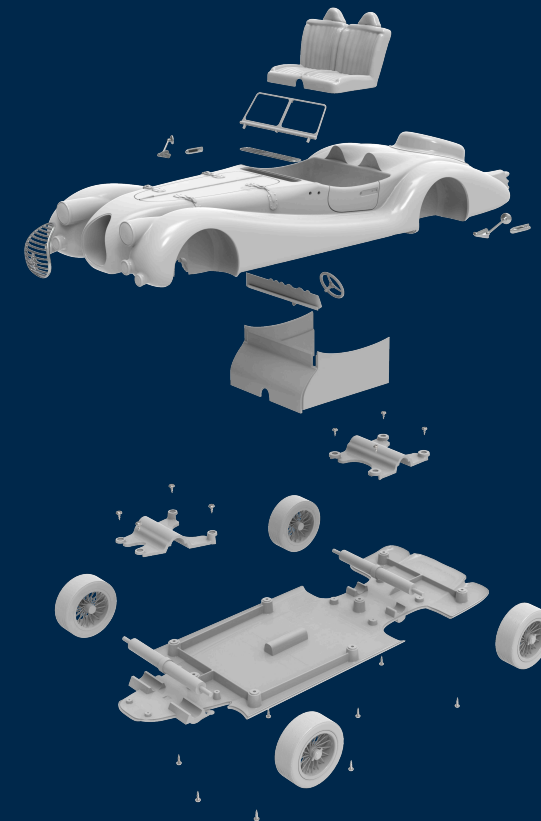
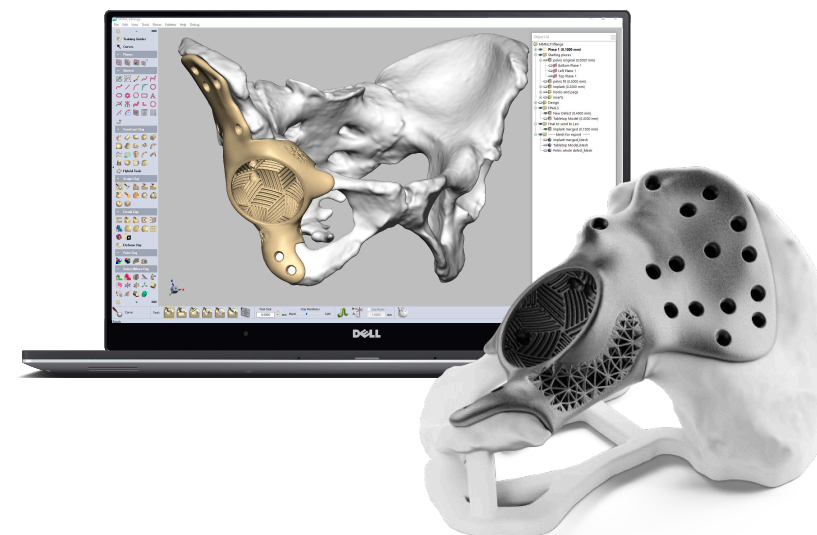
Break through the limitations of traditional CAD design and bring your visions to reality. Geomagic Freeform offers a comprehensive design and sculpting toolset allowing you to sculpt, detail and deform virtual clay models into any form you desire. Take your designs to the next level with the advanced toolsets in Geomagic Freeform Plus. Design for manufacturability is made easy by employing hybrid based conversions, surfacing, CAD editing tools, and mold prep tools, giving you the best of organic and digital design.

### Add Organic Design to Traditional CAD

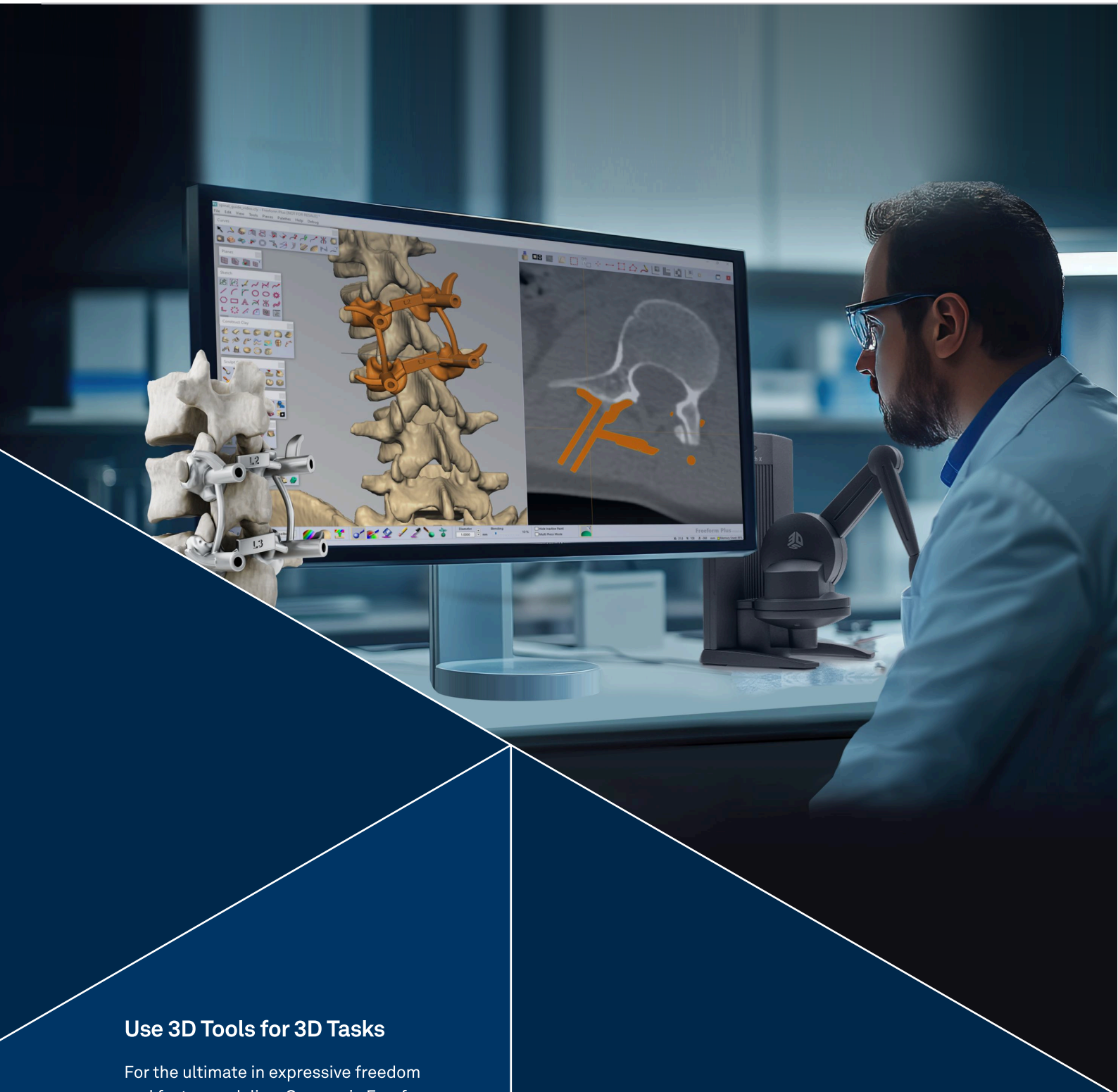
Geomagic Freeform is purpose-built to get your design into production, including its robust interoperability tools to handle import and export of 3D file formats including STL, OBJ, PLY, IGES, STEP and other neutral formats. Combine CAD files with sculpted features to create accurate organic solids that are defined by explicit dimensions.

### Design Anything with Built-in Precision

Geomagic Freeform picks up where traditional CAD software stops. This hybrid modeling system has the flexibility and benefits of many different modeling paradigms incorporating Surfaces, Solids, Mesh, SubD, and Clay. Make smooth surfaces and razor sharp edges with SubD, model precisely defined CAD shapes with NURBS and Solids or deform and emboss shapes with Clay.







### Use 3D Tools for 3D Tasks

For the ultimate in expressive freedom and faster modeling, Geomagic Freeform products work exclusively with the 3D Systems Touch haptic devices to deliver freedom of motion and the physical sensation of sculpting in a virtual environment. This more intuitive way of interacting with your 3D design reduces learning curves, speeds design and allows you to deliver top-notch 3D data.

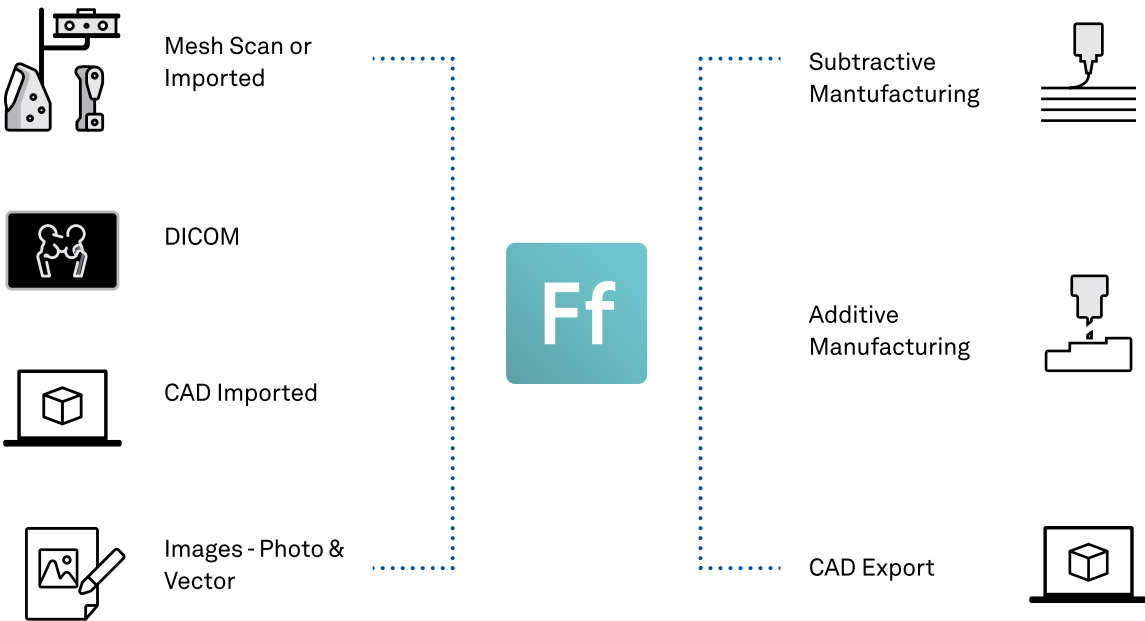


## Unlock complete design flexibility

Freeform is the world's most powerful hybrid modeler, supporting all industry standard file formats, such as:

- Mesh
- SubD
- Voxels
- CAD surfaces and solids

Unlock complete flexibility, with model representation and export for any existing workflow. Whether you're 3D Printing, machining or combining the two, Freeform enables Designers to concentrate on what's important.



### Manufacture Directly from Your Designs

Geomagic Freeform Plus allows you to identify and remedy potential manufacturing issues early in the design process so you can retain artistic control while avoiding production surprises and costly oversights. Confidently 3D print your designs with pre-printing analysis tools to ensure the part prints right the first time. You can also use Freeform data to quickly 3D print casting patterns for fast, accurate creation of investment casts. Powerful voxel technology exports water-tight models requiring no additional costly model repair software.

### Quickly Import and Repair 3D Data

Easily import STL, CAD, scan and other 3D data from any source and instantly use them in your designs. Quickly repair faulty and low-grade 3D data into smooth workable models.

### Easily Communicate in 3D

The stand-alone Freeform Viewer will display clay models from Geomagic Sculpt and Geomagic Freeform. Simple visualization, zoom, rotate, pan, measure and cutaway tools allow others to see a model without having to be proficient in the software.



## Freeform Industries



## Academic & Education



Automotive &amp; Motorcycle



## Ceramics



## Characters & Creatures



## Collectibles & Giftware



## Confectionery



Consumer Products



Dental



## Engraving, Relief & Flatware



## Film & Video



## Fine Arts & Sculpture



Footwear



Home Decor &amp; Housewares



Jewelry, Coins, Medals



Medical



## Packaging



## Personal Products



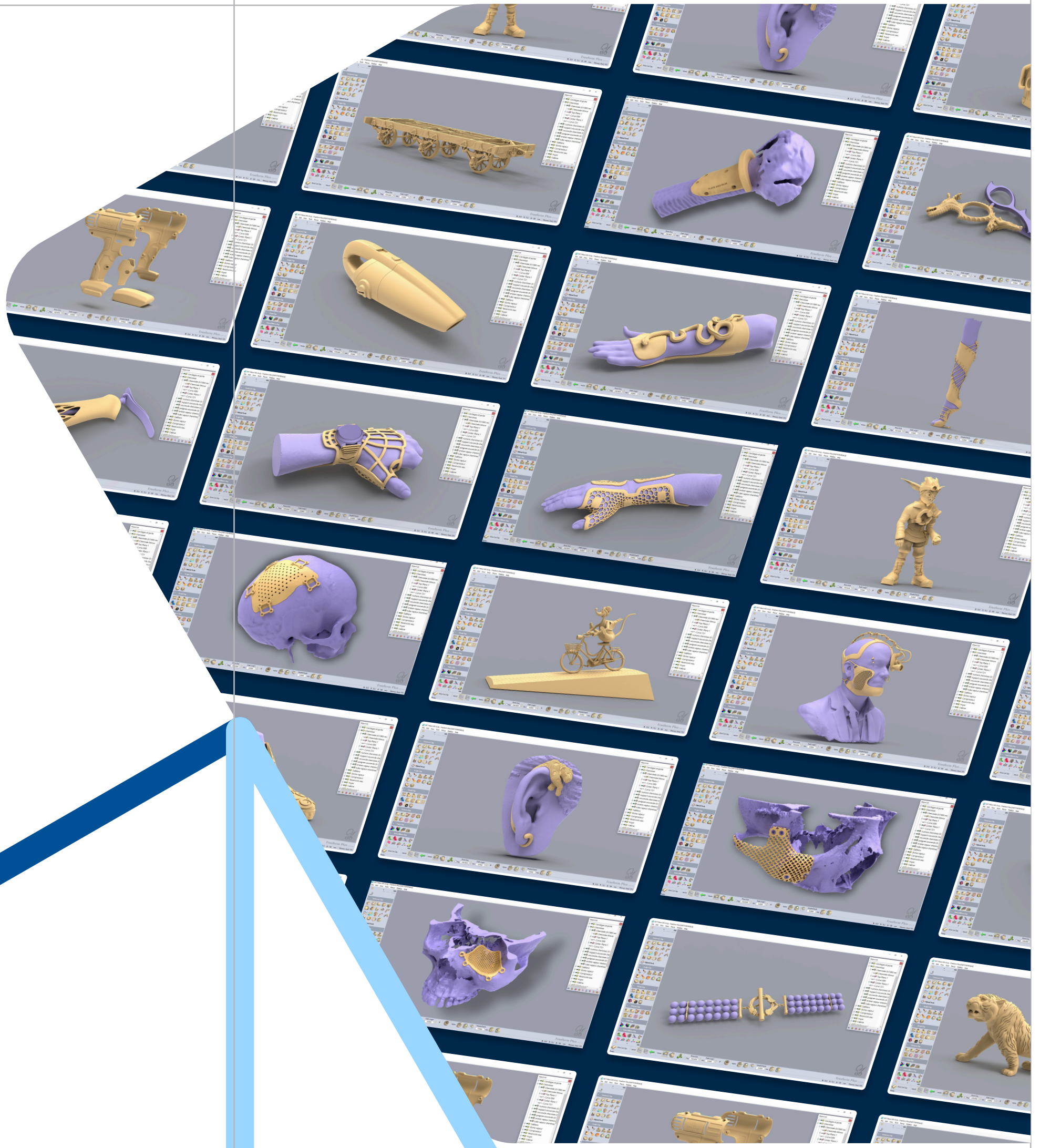
## Sporting Goods



## Tooling



Toys &amp; Promotional





“

When I am looking for talent, I do not even have to concern myself with what app they have expertise in. I do not even need to look for someone who has EVER used a 3D modelling (BE) app. I can just look at their portfolio and hire based upon their eye, because I know they will be productive in Freeform within 2 weeks.

Christopher PardellCo-Proprietor Pardell Designs

Product Feature Comparison

Geomagic's organic 3D engineering systems transform the way designs are brought to life, and meet a full spectrum of design needs Geomagic Sculpt offers simple and fast organic design to 3D printing with the core sculpting and SubD toolset. Geomagic Freeform provides more tools for advanced design and runs automation scripts. Geomagic Freeform Plus takes the toolset to the ultimate level providing extensive hybrid design capabilities, prepping models for mold tooling and manufacturing, and automation script creation.

Key Product Feature	Freeform+	Freeform	Sculpt
Voxel-based modeling	•	•	•
Mesh conversion and boolean support	•	•	•
SubD surfacing, modeling	•	•	•
StructureFX - LayerFX, CageFX, SurfaceFX	•	•	•
Manual patterning of pieces onto surfaces or in free-space	•	•	•
Automatic surfacing of clay or polygon models for export as NURBS surfaces	•	•	•
3D printability analysis	•	•	•
Independent clay file viewer	•	•	•
2D Sketch tools, including outlined text	•	•	•
Export of orthographic or turntable modes (bmp, jpg, or png)	•	•	•
3D import of neutral formats (.stl, .obj, .ply, .xml, .zpr, .iges, .stp, .step)	•	•	•
Ruler tool (3D measurements)	•	•	•
Split piece	•	•	•
Register pieces	•	•	
SubD surface texturing	•	•	
StructureFX - CellularFX (lattices)	•	•	
Bend and twist tools	•	•	
Cage and lattice deform	•	•	
2D Slicer tool for part analysis, extraction of sets of offset images & profiles	•	•	
Shell Cut creates new surface following layer of profile cut objects	•	•	
MultiVox viewing and painting	•	•	
Extrude open boundary in mesh	•	•	
Engrave text on mesh	•	•	
Export of volumetric data (.3mf, Image Stacks)	•	•	
Conversion of SubD to NURBS	•		
Batching and background processing of reduce and export	•		
Wrap for Freeform	•		
CAD solids and surface tools	•		
Complex draft analysis and correction	•		
Automated mold parting line function	•		
Mold parting surface extrusion from parting line curves	•		
3D import of CAD native formats (.x_b, .x_t, .sldprt)	•		
Import of volumetric data (DICOM, Image Stacks)	•		
Dynabot record-and-playback platform for enabling task-based automation	•		

\* Freeform is not a medical device and Hexagon does not claim that it is intended for medical treatment, planning, or diagnosis. Images shown are intended to be representative of models created by Freeform users. While many customers have successfully integrated Freeform into their workflows, it is essential for customers to comply with all applicable regulatory requirements.



Hexagon is the global leader in measurement technologies. We provide the confidence that vital industries rely on to build, navigate, and innovate. From microns to Mars, our solutions ensure productivity, quality, and sustainability in everything from manufacturing and construction to mining and autonomous systems.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 24,800 employees in 50 countries and net sales of approximately 5.4bn EUR. Learn more at [hexagon.com](https://hexagon.com) and follow us [@HexagonAB](https://twitter.com/HexagonAB).