



3D printout of the ready element shape

Company

CNH Industrial Polska deals with the construction of combine harvesters and presses.

Project

Printing of a gauge for the shape of a corn harvesting machine header nose, past the stamping press.

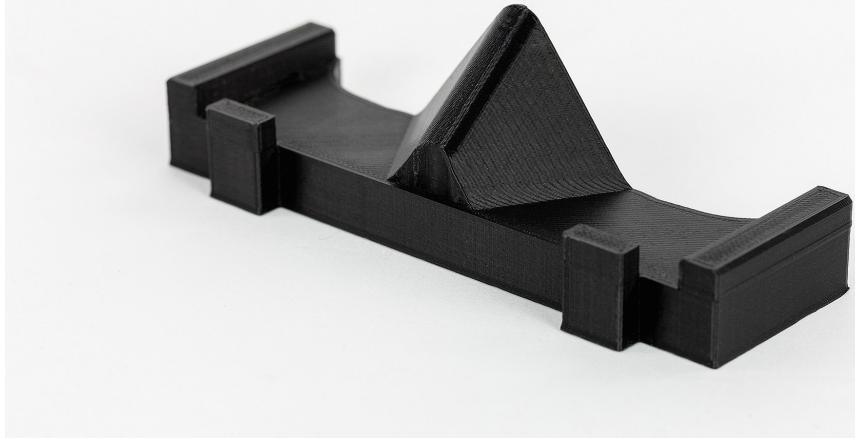
Project data

3D print	Part of a skull	
Use	Preoperative planning	
Material	PLA	
3D printer	3DGence DOUBLE P255	

	3D printing	Medical 3D imaging, design, injection molding
Time	30 h	200 h
Cost	710 £	5 900 £

The 3D printed gauge for each produced detail enables rejection of only the faulty individual details instead of the whole production batches, as it used to be in the event of random control. If a faulty piece is found, the reaction may be fast.

The gauge was made in the form of a 3D printout, which enabled production costs reduction.



Goals:

1 Reduced costs of detail gauge production

So far, gauges and metres for ready details were manufactured with the use of traditional methods, either of metal or plastics. The average cost of a gauge for one detail amounted to approximately PLN 750. The company cared for the highest possible production cost reduction, therefore, they decided to introduce 3D printing. The current cost of the gauge manufacturing is only some dozen of zlotys. **The use of a 3D printer enabled 98% of savings in the gauge production costs.**

2 Shorter lead time for a solution

The lead time of a new tool from the design to detail manufacturing phase is very important for production companies. The process of ordering, purchasing and manufacturing a gauge by external companies lasted about 3 to 4 weeks. 3D printing enables the detail production within one day. **With an in-house 3D printer, the waiting time for a ready gauge may be shortened to even 40 minutes.**

3 Fast production error discovery

Previously the bending correctness check was made every several pieces by a quality control staff. In case of a faulty piece, the whole faulty batch of material was rejected. **3D printing of a gauge shortens the time of detecting production non-compliance.**



A 3D printer enables gauge and metre production in only 1 day.

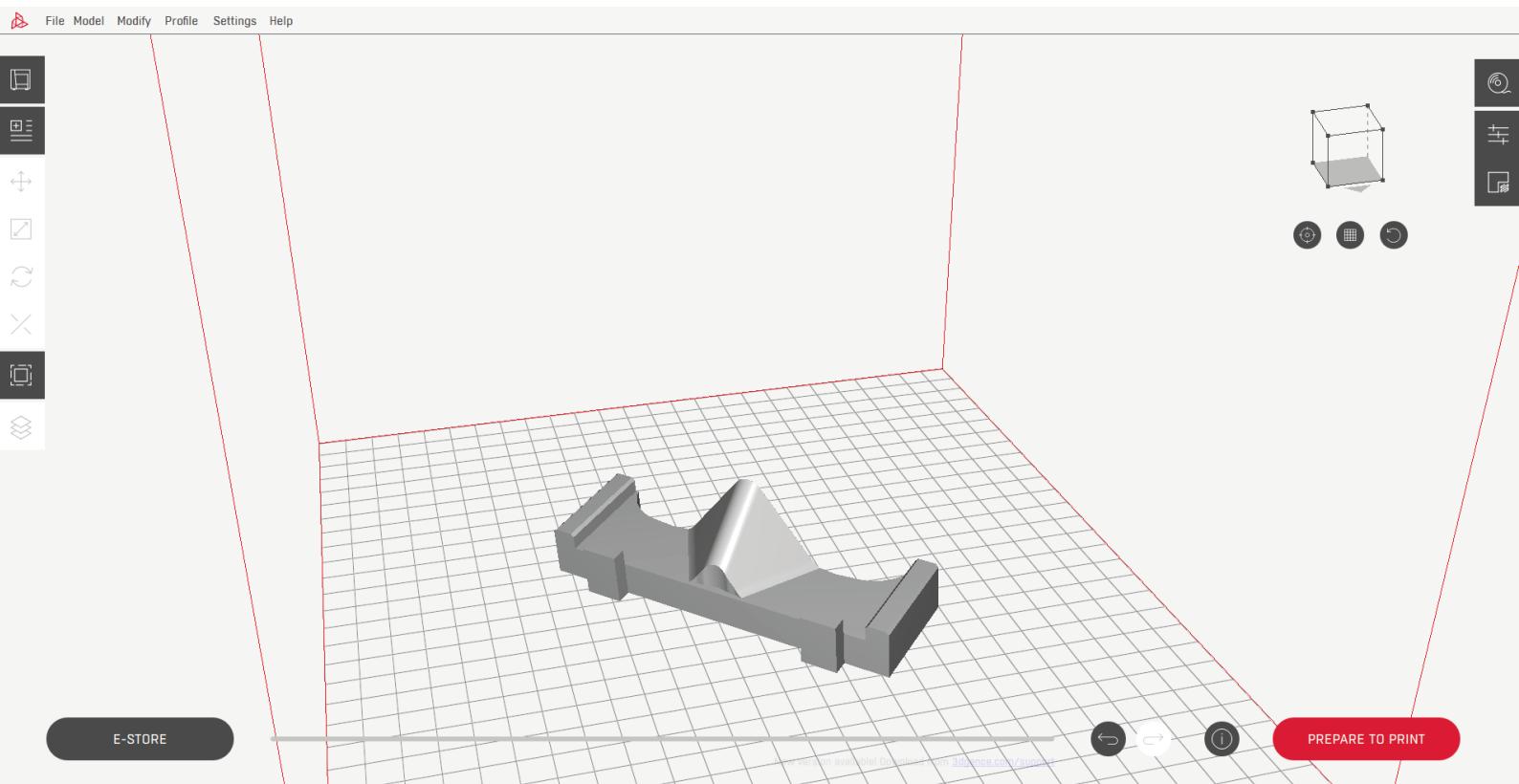
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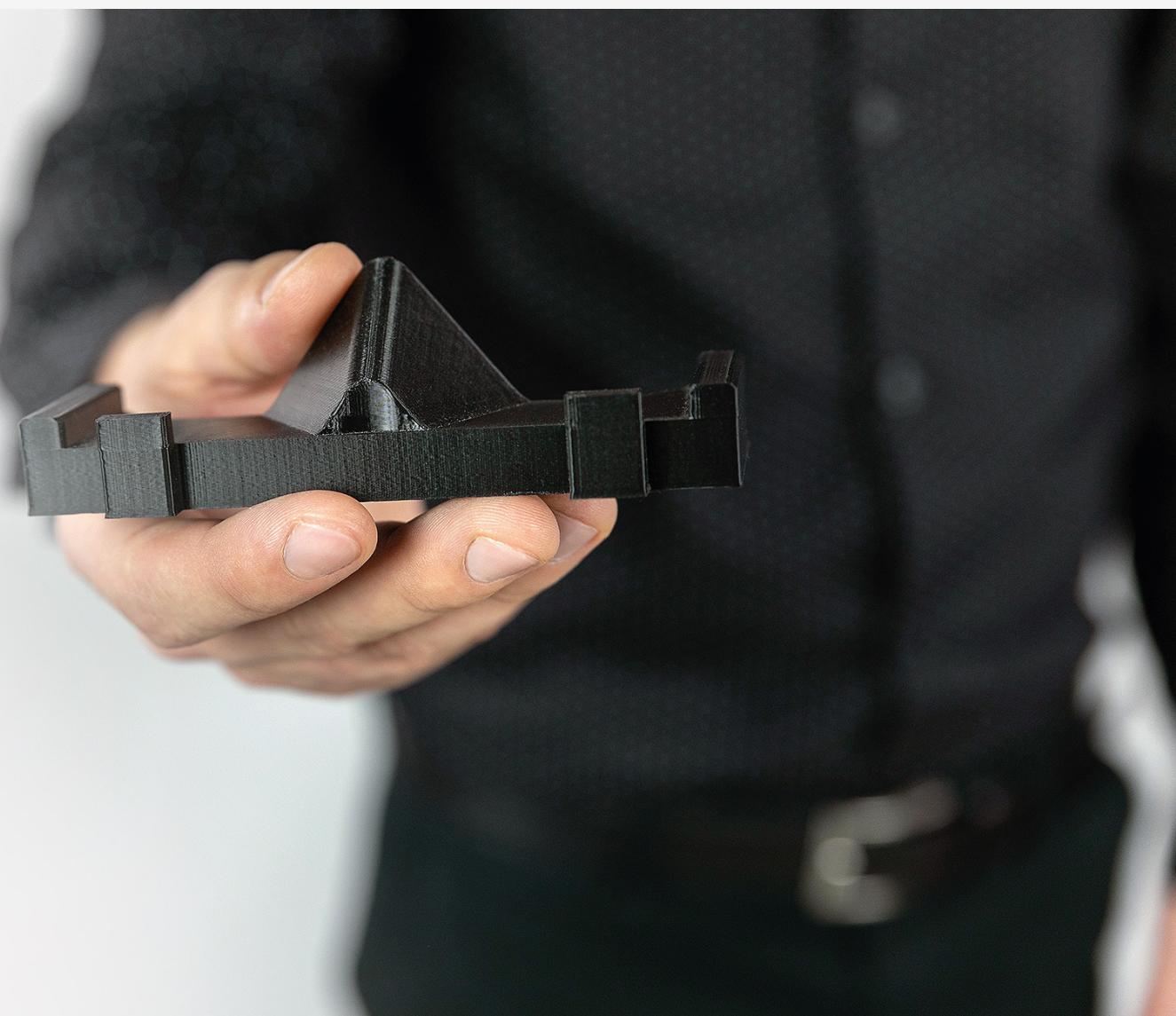
The use of 3D printing by our company lead to significant savings, both as regards the time and the costs of preparing gauges and metres.

The costs of manufacturing a single element may be reduced even by 98%, thanks to which we have recorded a return on the investment in a 3DGence printer very soon.

Krzysztof Gawinek, Technologist at CNH Industrial Polska

Visualisation of the gauge model in 3DGence Slicer 4.0 software.





3D printed element
of production tooling.



3DGence is a progressive manufacturer of industrial, high-performance 3D printers, and a provider of comprehensive and innovative 3D printing solutions including professional accessories and engineering-grade materials.

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