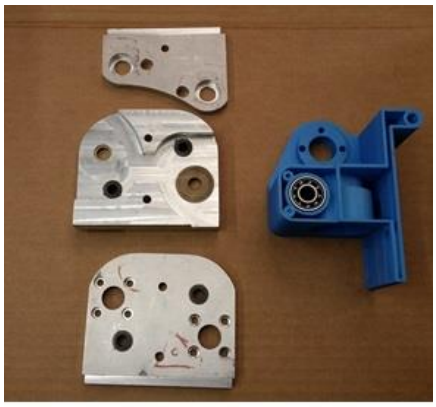
Rapid prototyping vs. traditional prototyping methods

 Posted by **Rockingham Manufacturing** on Mon, Jun 08 2015

Rockingham Manufacturing is a subcontract-engineering company and we recently came up with a unique and patented design for a low-cost boat stabiliser that is designed to provide small vessels, such as fishing boats for example, with enhanced stability when at sea. This project was only made possible through 3D printing and could not have been realised through traditional prototyping methods.



Shown (to the left of the gearbox in the design) are parts from the original prototype, which were machined in the traditional manner as three separate components

Having a 3D printer has allowed me to to rapid prototype some key parts and assemblies on new projects in significantly less time compared to using traditional methods.

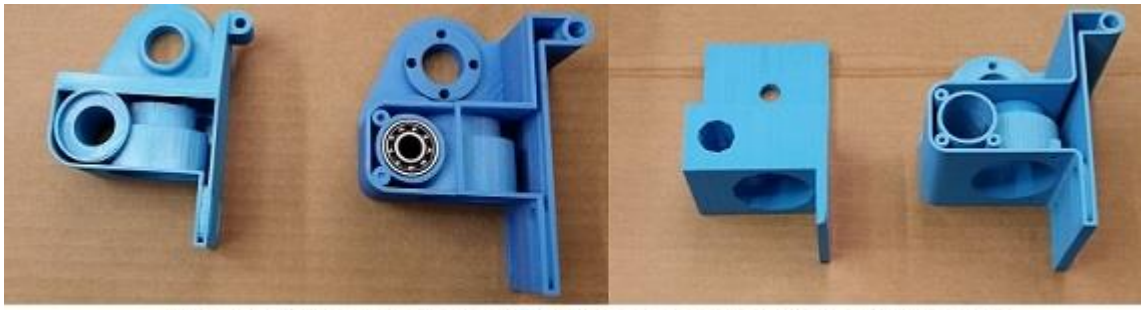
Time I spend typically creating drawings and programmes for machine tools is now bypassed as CAD programmes and files can be directly uploaded into the Ulitimaker 2 for immediate processing and the other machine shop equipment is not interrupted.

No more wasting of metal on machining trials as the m/c tool can be left to run on production work before pre-production runs can begin.

The Ultimaker 2 has completed some parts used in an assembly and it was immediately noticeable that I needed to make some changes due to shape and proportion etc. and this was easily resolved and the 3D printer set to run again on modified parts – very simple.

I think the greater savings are in less waste, less programming and no wasted time on the production m/c tools.

The Ultimaker 2 costs next to nothing to run / hour which compared to the m/c tool is saving thousands, It runs virtually un-manned once I've set it up. The raw material cost is negligible compared to traditional methods.



The evolution of the main gearbox in the company's marine project

Without a 3D printer I would not have progressed my current R&D projects as far as I been able to do so, at the moment it's a win-win situation for me – one that we are very happy about!

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