

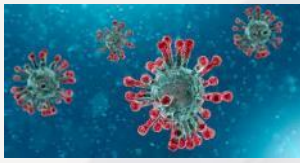


UNIVERSITY OF  
LIVERPOOL

2020+ Review  
Mark Whitley



Detector  
Development  
Manufacturing  
Facility



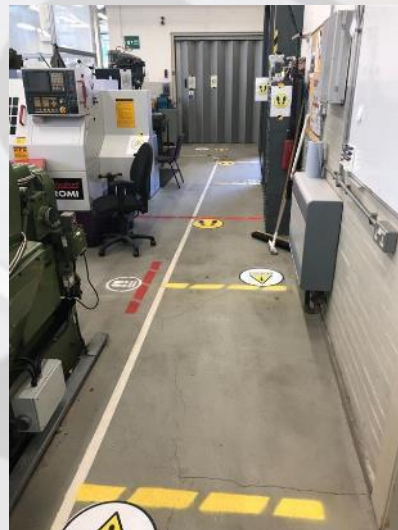
We have all had a very different year than what we ever expected.

For the DDMF this meant that we could not carry out anything like our normal duties. We did adapt as best we could and for several week we were all trying to self teach different machine programming software, we setup help groups on Teams and had regular meetings. But really we needed to get back on campus as soon as we could.

Dan and I started a return to campus plan as you can imagine this was constantly evolving. But when the time came we were ready. After working very closely with Tim Jones (Departmental safety committee) and with the University Safety Office we were able to start our phased return.

We are the lucky ones were able return to campus on the 1<sup>st</sup> July albeit as 2 separate teams this worked very well and we were able to start a recovery plan working through a priority work load.

September we evolved our system to allow us all to come back as one team, this greatly improved our effectiveness.



We don't all look like this!



# Showcase

## One Man and his Machine

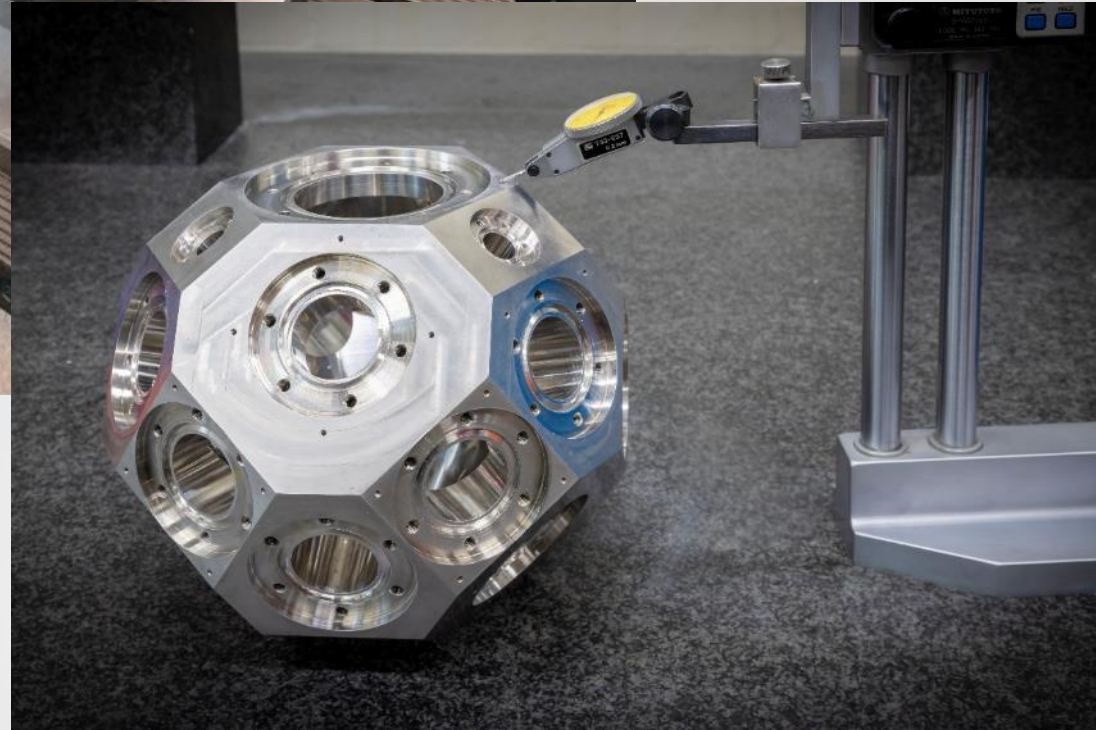
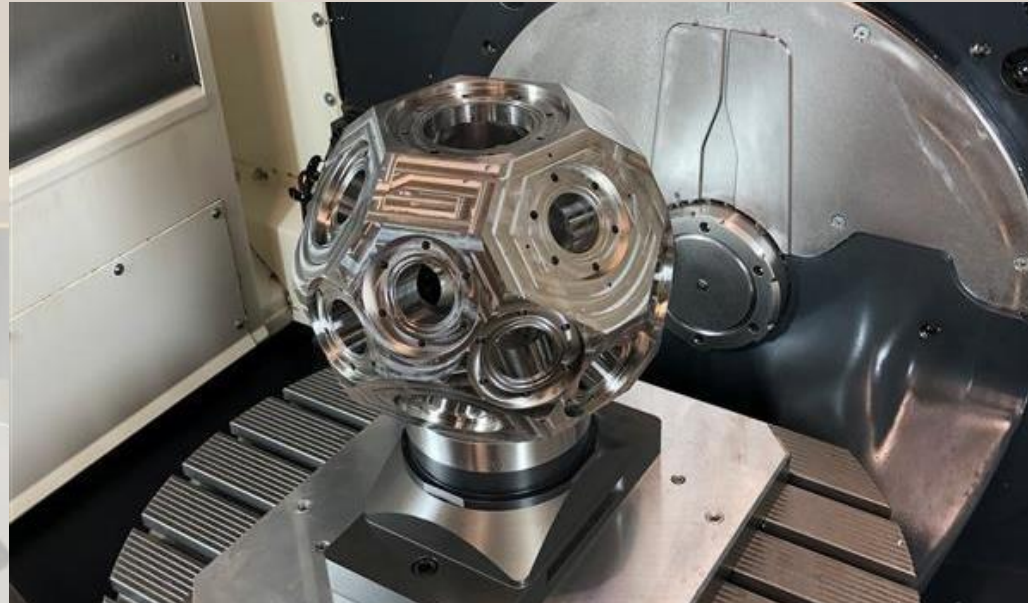
Congratulations to Kevin for the completion of the two LHCb hoods. This was a huge amount of work lasting almost 2 years





# Showcase

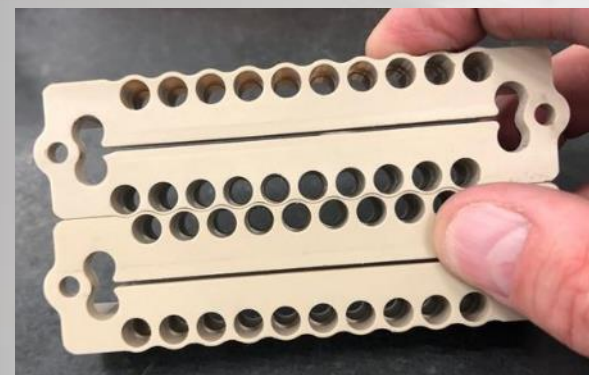
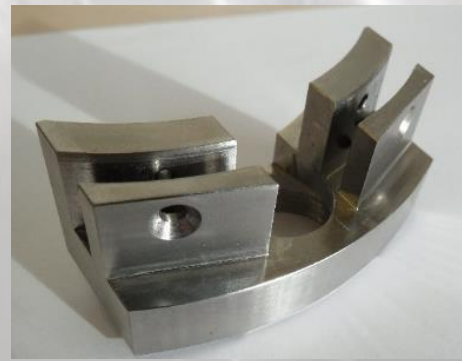
## Chamber for Atom Interferometry





# Showcase

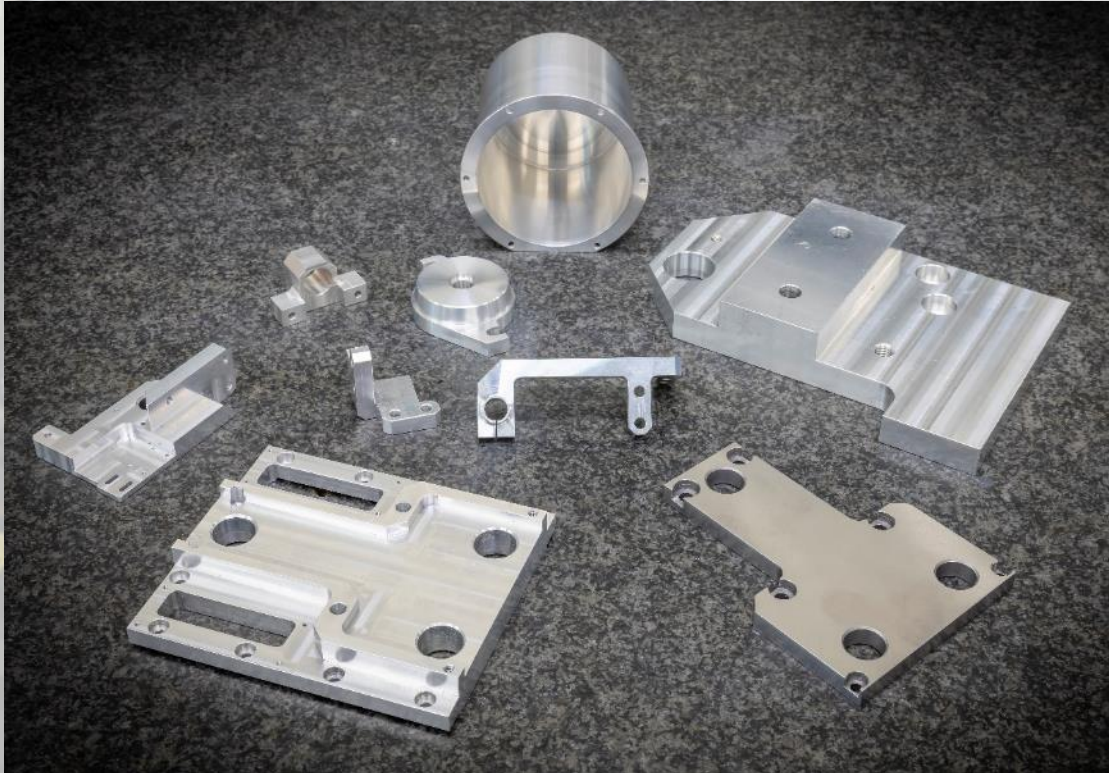
## LHCb and Magis Parts





# Showcase

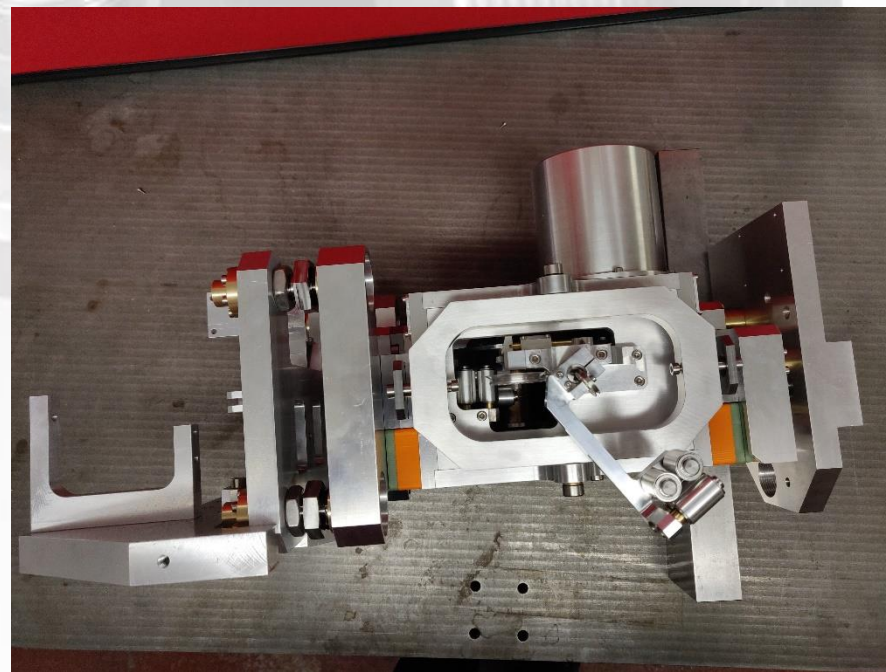
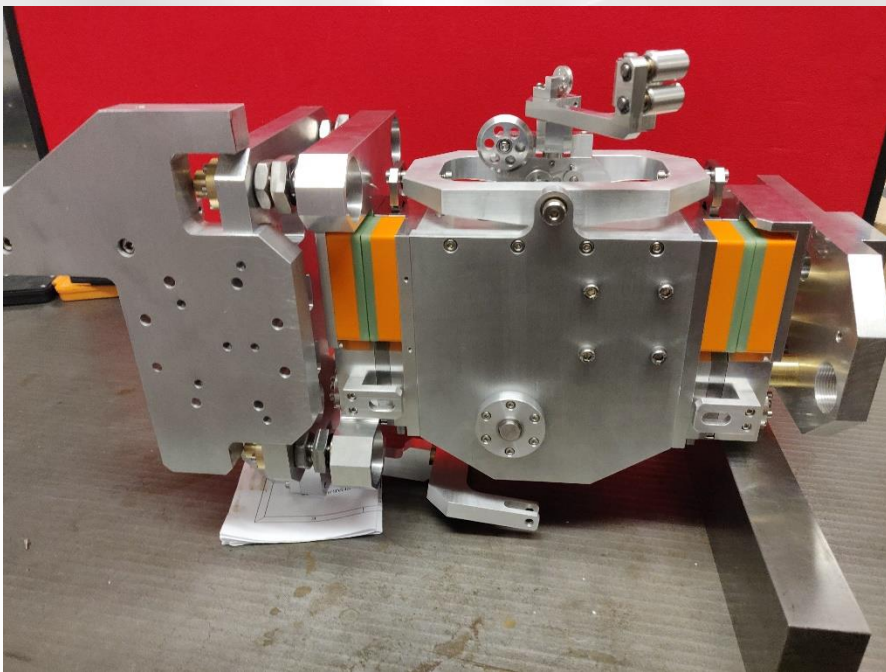
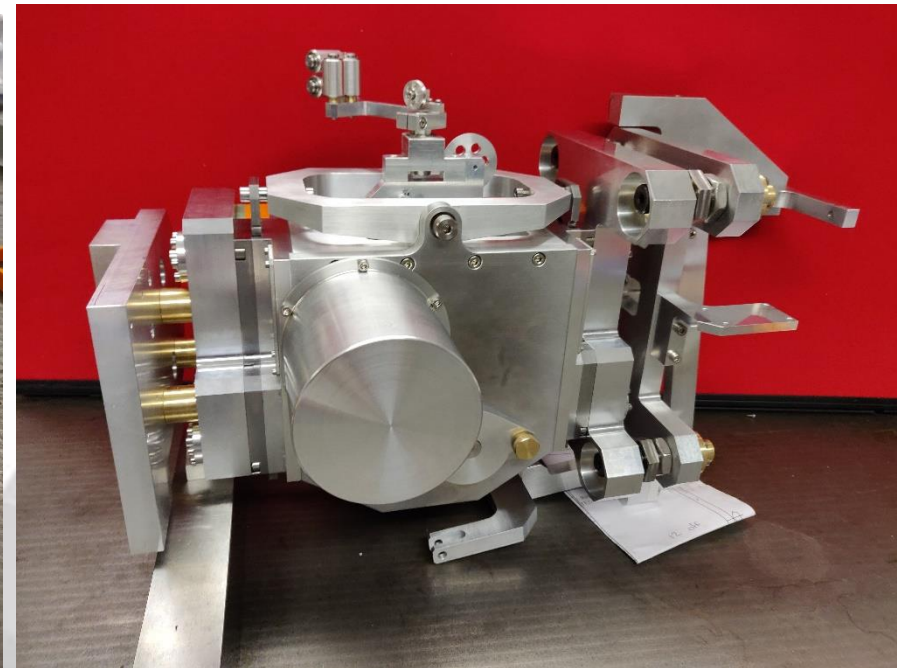
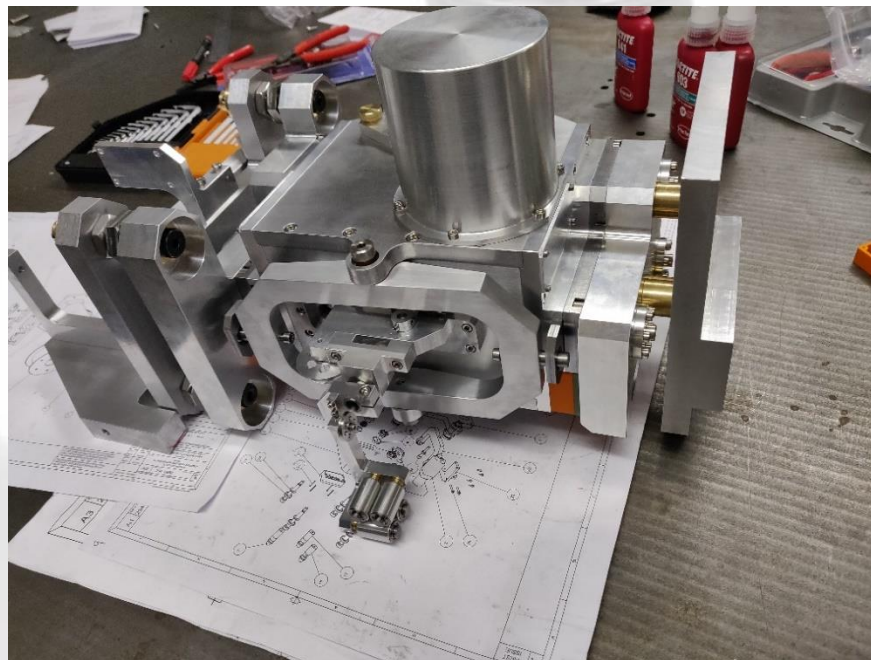
Small selection of the 380 parts that we have produced  
for the DUNE Winding head assemblies





# Showcase

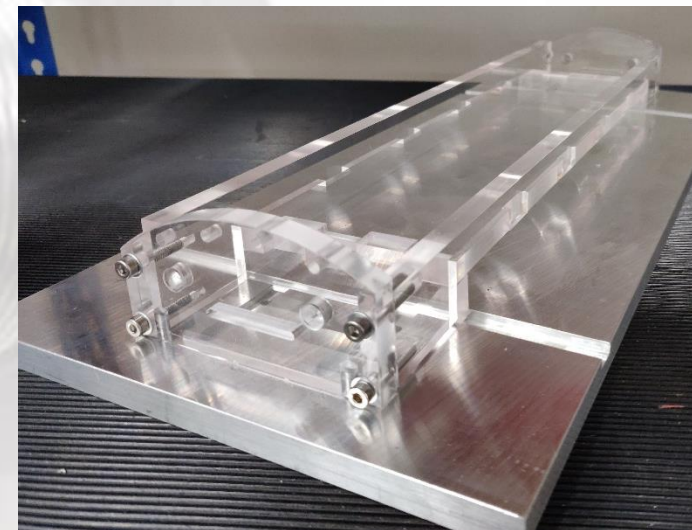
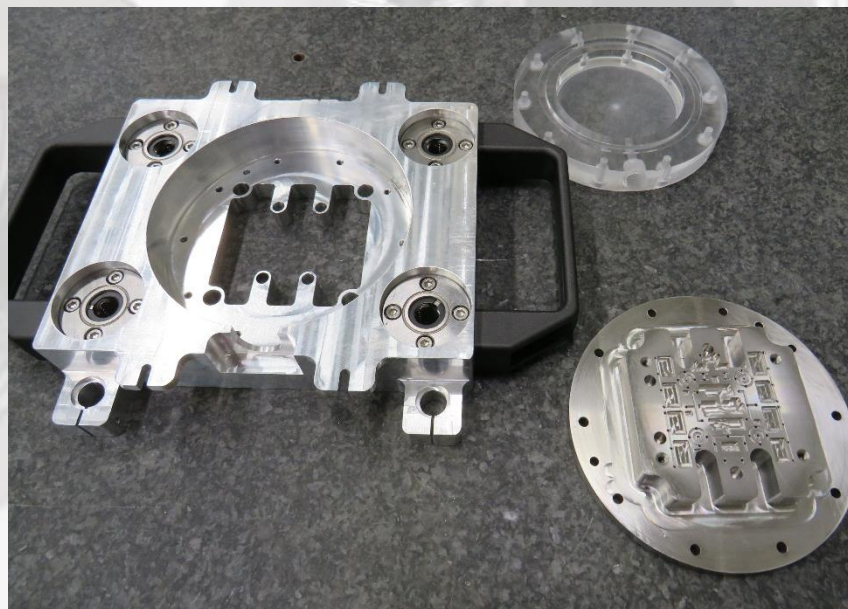
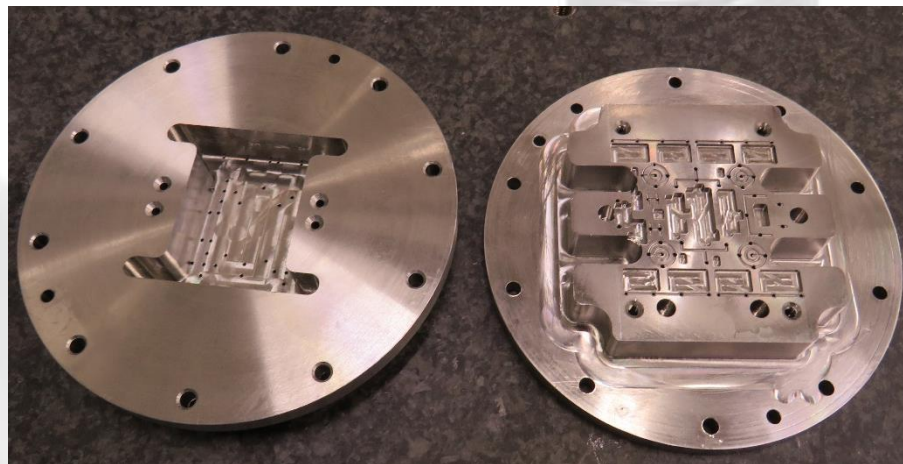
4 Winding heads  
assembled have now been  
shipped to Daresbury





# Showcase

Atlas and Mu3e  
components





# Facility Improvements

## New Grinding Room

We have recently moved all of our grinding equipment into the same space. This will help to protect our other equipment from the abrasive materials used in the grinding processes



## New Inspection Area

Newly created space with in the main machine shop dedicated to Inspection





# Facility Improvements

## Canteen and locker room renovations



April 2007

Only photo I could find of  
the old tearoom







# Facility Improvements

New Computer Aided Machining programming area

Thanks to Caroline and Paul from the Condensed Matter Group for agreeing to move along the 1<sup>st</sup> floor corridor which enabled us to create this much needed space. We have created a dedicated planning and Programming area Which is used by the whole team.





## Future Enhancements

Bridgeport  
VMC1500 milling  
machine

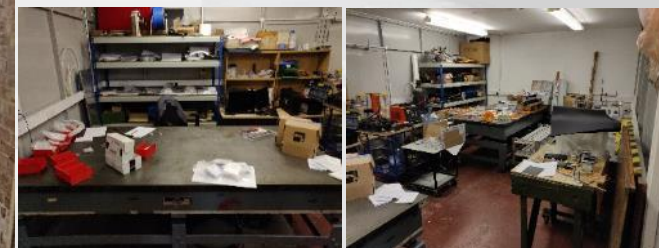


Unfortunately, this machine has been suffering recently, we have carried out many running repairs and have reconditioned the spindle twice in an effort to keep this machine reliably operational, allowing us to produce precision parts. We feel that we have come to the end of reasonable support, struggling to find knowledgeable service engineers and parts



## Basement Area

We would very much like to enhance this area. Take a fresh look at the space available to create speclist areas for sheet metal fabrication, welding, safer materials storage system and more effective lighting and a lick of paint.



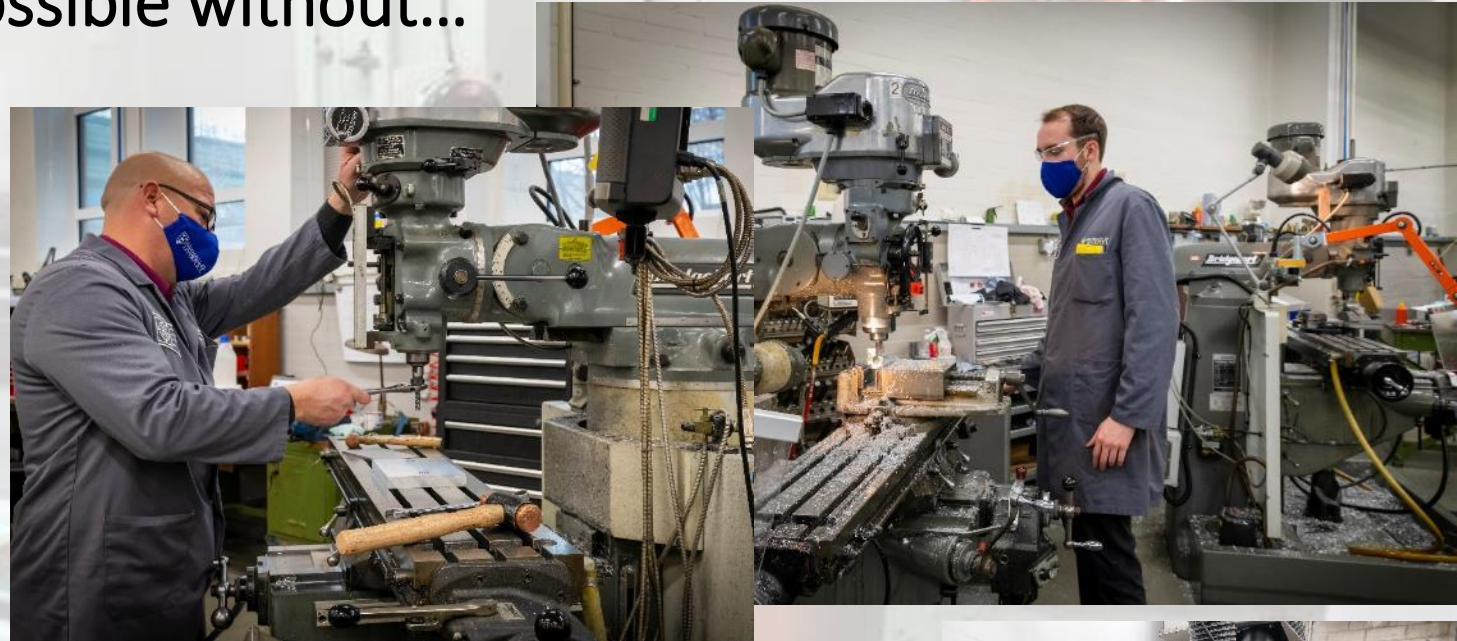




# None of this would be possible without...

Daniel Hollywood      Paul Sinclair  
Rob Malley          Kieran Bridges  
Mark Farrell          Paul Cook  
Tony Watling          John Kervin  
Matt Brown          Emlyn Jones  
And Kevin McCormick

A massive thank you to them for their excellent effort, help and support throughout what has been a challenging year





**We wish you were all here its pretty quiet without you**

