



# Co-operative Councils

## Innovation Network

### COVID-19

### South Tyneside Council

## Innovative Provision of PPE

Creating visors to boost supplies to frontline care workers using 3D printers and laser cutters based at The Word in South Shields, using materials donated from businesses and organisations

### Context

As in many areas of the country, Covid-19 has had a profound impact on the residents of South Tyneside, affecting many aspects of life including employment, income, education, physical and mental health, social isolation and mobility. The Council was acutely aware early on in the national lockdown that there was a general shortage of the supply of PPE. While the national effort was based around PPE for NHS Hospitals, many local care homes were struggling to secure supplies of appropriate PPE to keep staff and residents safe. It knew of examples across the country and beyond of 'maker spaces' using 3D printers to manufacture face visors. As part of The Word cultural hub it has a Fab Lab which is open for use by the general public; this space contains four 3D printers. At this stage the building was closed, and the 3D printers not in use, so it made sense to find a way to use them to support communities.

### Development

The Council consulted care homes to identify their needs for PPE and found there was a shortage across the sector of full face protective masks. It was aware of organisations around the country that had used 3D print technology to manufacture face visors. The Word has a resident artist who worked in the Fab Lab before the Covid-19 pandemic; she volunteered to produce the masks if the Council could give her access to the printers there. The 3D printers lay down many thin layers of material in succession to produce an object. The Council asked NHS supplies for the design and specification to produce face visors appropriate for use in care settings. The frame used PLA – a compostable bioplastic which is friendly to the environment. The missing element was the supply of elastic for the fasteners which led to a partnership with local businesses who could supply such material. The project



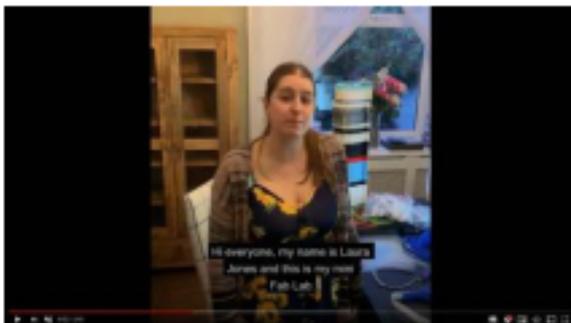
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could be implemented very quickly because of the cooperation and partnership with the Council departments (Culture and Leisure, Health and Social Care, Public Health, Procurement, Asset Management) and with external agencies (local businesses, care homes).

## Implementation

The 3D printers were taken to the artist's house where she set up a production line in her garage. Initially a simple design involved printing a support, attaching acetate to it and securing the mask with elastic. The major obstacle was finding the raw materials to produce the masks. The PPA (material for 3D printers) was easy to obtain but there were issues with acetate and elastic as they were in high demand. However, they found a supplier on a local industrial estate who were happy to donate. With all materials shipped to the artist's home directly, she set up production of up to 200 masks per day. The completed batches of masks were picked up by the Council's Asset Management Team to a central resource. From here they were distributed to care homes. Individual care homes could order supplies via a specific PPE inbox, and the order was made up and delivered in the handyman van collected from the Town Hall.



3D printers are a new tool against Covid-19

## Review

The project reflected the great sense of community spirit and partnership that is characteristic of South Tyneside as a borough. Individuals who work in different departments of the Council, care homes and businesses all came together to provide the different elements of the service. South Tyneside has always worked well with partners and has a reputation for innovation. This project confirmed that this approach to problems can provide a novel solution which could only have been implemented through the willingness of individuals and organisations to work co-operatively, allowing people the freedom to

work outside of their normal roles and be creative in how they do things. The project provided an innovative and co-operative solution to a problem in a time of crisis. It wishes to build on this model to look at future challenges it can meet through cooperation and innovation in the longer term.

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