

## **INNOVATIVE 3D PRINTING HUBS LAUNCHED TO DRIVE PROTECTIVE EQUIPMENT PRODUCTION AT SCALE**

*Thought leaders collaborate in united mission to provide NHS with the vital PPE they require during the COVID-19 crisis*

**LONDON, 2020:** As the need for personal protective equipment (PPE) reaches critical in the UK, an emergency working group - **SHIELD (Sustainable Hub for Innovation, Execution, Launch and Distribution)** - brings industry leaders and experts together in umbrella collaboration to create innovative solutions to meet the PPE demand, including cutting edge 'printing hubs' in London *this week*.

***Currently for every patient being treated in an Intensive Care Unit (ICU), between 30-40 sets of PPE are needed, per day. That means, over the projected course of the COVID-19 pandemic, one ICU could use up to 9.2 million sets of PPE to protect their staff from the virus.\**** SHIELD, emerging two weeks ago as a best-practice collaboration of independent PPE campaigns, came together to build supply streams in response to this need. Developing new designs for sustainable masks and visors in addition to other critical PPE on a mass scale, SHIELD's aim is to support any coordinated national effort under one single mission to protect NHS frontline staff in the fight against COVID-19.

**Innovation Specialist Dr Kate Hammer at Hero Support** comments: "Within SHIELD we are collaborating to develop responsive supply streams for visors, gowns, ventilator consumables and other mission-critical medical devices." **Project Director Dr Alisa Pearlstone** adds "We're actively pulling in our industry contacts, from raw materials and textiles to technology".

The first hub to go live this week, situated at Makerversity in Somerset House, London, with support from Farnell is designed to generate 1,700 visors per day from 3D printers, funded by non-profit organisation HEROES who's 'Help Them Help Us' initiative supports the physical, mental and day to day needs of NHS staff across the nation. **HEROES Co-founder Dr Dominic Pimenta** says: "As we try to keep up with the effect of the virus on the UK, supplies are in demand and there is a need for sustainable solutions. Being an ICU doctor myself I am in a position to test our products on the ground giving us the opportunity to be agile and evolve with the virus each day. For Heroes, it was a no-brainer to be involved as supporting the NHS frontline with immediacy and impact is why we exist".

**Leader of Makerversity effort Nate Petre, who has been working in collaboration with Makerversity's design experts,** also comments: "Practical people around the world, enabled by digital tools, platforms to collaborate and low-cost desktop prototyping and manufacturing

have volunteered to help fight the spread of COVID-19. I felt like Makerversity, a space filled with tools and the members' enormous creativity could help the government create useful solutions to the growing crisis."

A second hub is due to be launched by the National 3D Printing Society (N3DPS), by the end of April, anticipating production of tens of thousands more. **N3DPS Co-Founder Mason Rowbottom** says: "Being able to bring our community into the national effort, SHIELD has enabled us to ensure our makers are providing PPE safely and efficiently."

The expert collaboration also includes individuals from **NEAD, Med Supply Drive UK, Helpful Engineering, ContractorsAppeal.com, Women in 3D Printing, Do Some Good** and **The Industry Prints**. As the crisis continues to grow further designers, printers and suppliers are needed to help streamline efforts in a bid to get equipment into the helping hands that really need it.

**Campaign Director at ContractorsAppeal.com Paul Ford** says: "Being part of the collaborative team sitting behind SHIELD is an incredible honour. Working with innovative and creative minds while fighting the effect of Covid-19 is an experience to behold. Supporting our NHS Heroes could never be more important. Contractors Appeal has reached out to the entire construction industry and beyond to seek their support; the response has been incredible"

**Advisor for SHIELD and MSD-UK Committee Member Ro Sharma** says "The fantastic effort of collaboration and coordination between a great many talented and focused individuals will make SHIELD a force for good in the response to the current crisis. The united 'umbrella effort' of campaigns will be of huge support to any coordinated national efforts to supply PPE to the NHS and care workers"

To join the effort, donate materials and equipment, or to help fund any of the initiatives, visit here to find out more: <https://www.shieldproject.org/>

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Notes to editors:

**ABOUT SHIELD** (Sustainable Hub for Innovation, Execution, Launch and Distribution):

SHIELD has emerged as a best-practice collaboration of independent PPE campaigns, thought leaders and industry experts. SHIELD members are united in their critical missions to provide NHS and care workers with the vital PPE that they require to do their job safely, in the midst of the COVID-19 crisis. SHIELD represents a single 'umbrella effort' to support any coordinated national efforts to supply PPE to the NHS and care workers.

#### **ABOUT SHIELD MEMBERS:**

**HEROES** (Healthcare; Extraordinary; Response; Organisation; Education; Support) founded by NHS workers to help NHS workers, brings direct insight from the frontline on the physical, mental and day to day needs of staff across the nation. HEROES was set up to deliver on one mission at its heart; Help Them, Help Us.

**Makerversity** was launched in 2013, with the support of Somerset House, born out of a desire to support emerging talent, frustration about limited space for creators and the lack of opportunities for young people to get excited about careers in emergent industries. Makerversity has since grown into a vibrant, pioneering curated membership community, comprising hundreds of creative and technology entrepreneurial businesses working at the cutting edge of product design, the internet of things, architecture, software development, digital manufacturing, creative technology and toolmaking, as well as fashion, furniture and many more disciplines. Somerset House have been a key supporter of Makerversity since it began, enabling it to operate an affordable workspace for the most exciting emerging creative-tech businesses in the heart of Central London. Makerversity is now the largest resident of Somerset House Studios, a major cross-disciplinary workspace championing collaboration and experimentation. Makerversity works together with Somerset House across programming and support activities, exploring new ways of developing changing creative practices.

**The National 3D Printing Society** is a network originally built by three university students from Huddersfield University and Cambridge University. They started by establishing their own successful societies within their own universities and then they assisted in helping their fellow academic peers from various subjects gain access to technology that would assist in bringing their ideas to reality, promoting innovative thinking within a variety of fields and industries. They both provided and gained knowledge that helped them with the creation of a network that will assist the adoption and growth of 3D Printing technology, by providing experiences to promote collaborations. The N3DPS seeks to ensure graduates have access to, and knowledge of Additive Manufacturing (AM). N3DPS refocused its volunteers to make face shields to assist with the PPE shortage.

**Helpful Engineering** is an international team of 3,400 engineers working on a voluntary basis to help fight Covid 19 by designing, developing and implementing PPE and innovative medical equipment. HE are pleased to provide project management and specialist engineering support to SHIELD. You can find out more at [www.helpfulengineering.org](http://www.helpfulengineering.org)



**The Industry Prints** is encouraging and co-ordinating architects, engineers and construction consultants across the country to actively print 3D visors for frontline staff whilst collaborating with other industry experts to help lead a coordinated printing effort to protect our NHS heroes.

**Med Supply Drive UK** is an organisation run by volunteer NHS doctors, medical students and individuals who are volunteering their time as they are concerned for the safety of healthcare workers dealing with the COVID-19 crisis without adequate PPE. The equipment is being sourced from industries and businesses who have equipment that they don't currently need. This includes: research labs, engineering departments, construction companies, the beauty industry, art industry including TV and film production and electronics/machinery manufacturers. Med Supply Drive UK redirects this essential Personal Protective Equipment to the NHS frontline. So far, they have donated over 15,000 items of equipment and continue to work hard to ensure our NHS staff are protected whilst they take care of all of us.

**Hero Support** is a pop-up citizens procurement service, founded by professionals from many sectors, working on a pro bono basis to supply high-grade PPE (Personal Protective Equipment), both crowdfunded and donated, to frontline healthcare NHS and care staff. The PPE is sourced from vetted suppliers, within a volatile and complex environment. We have warehousing, and a dispatch team redeployed from the British festival circuit, and are partnering with the Doctors Association UK, which is collecting data on PPE needs from certified doctors.

**The National Equipment Appeal Database (NEAD)** co-ordinates the collection of civilian-held personal protective equipment (PPE) and distributes to Hospitals, GP Practices, Care Homes, all other healthcare and ancillary staff.

**ContractorsAppeal.com** is an initiative to seek construction, manufacturing, institution and private individual donation of PPE. It also purchases PPE through JustGiving for distribution through the NEAD database

**Women in 3D Printing** is a global organization dedicated to promoting, supporting, and inspiring women who are using Additive Manufacturing technologies. Our mission is to increase the visibility of women in the Additive Manufacturing industry and encourage more women to use 3D Printing technologies.