Lancashire Cyber Foundry

Is 3D printing secure enough for your business?

READ TIME: 2 MINS

AUDIENCE: BUSINESS & TECHNOLOGY

3D printing, also known as additive manufacturing, is becoming more mainstream with 3D printers more commercially available. The cost of 3D printers has plummeted. At the time of writing, there are 3D printers as cheap as £70. The accuracy of 3D printing has improved and continues to get better. The machines are more user-friendly, and it's easier to design 3D models thanks to free software programs.

BENEFITS TO BUSINESS

You would be forgiven for thinking that only manufacturing companies would benefit from the cheap and quick manufacturing of 3D printing technologies. However, there are many other applications of 3D printing beyond simply manufacturing.

3D printing is not just used to streamline manufacturing, for example, printing complex products that used to require multiple pieces as one single piece, reducing waste, saving money and time, but being used in the food industry to enable users to users to create customised shapes, textures and flavours reusing ingredients which otherwise would be thrown away, and by the health industry to make artificial bones.

With a growing sustainable market on the horizon, business' need to be asking themselves how they can utilise this new technology.

SECURITY

However, before you go out and start bulk buying 3D-printers, it's worth considering the current security concerns of 3D printing. They broadly fit into 3 categories:

1. Lack of accountability or central governance

2. Network security (Software vulnerabilities)

3. Printing Security

European Union
European Regional Development Fund

NORTHERN POWERHOUSE
HM Government

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ACCOUNTABILITY

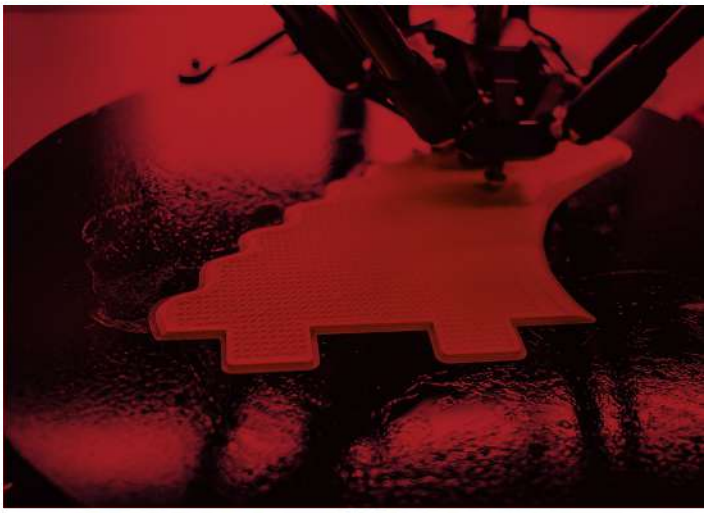
Although not present in its infancy, the internet is now strictly governed alerting governments and authorities to illicit behaviour. 3D printers however aren't subject to such governance. They are able to be networked but interactions between a printer and machine aren't necessarily monitored (certainly not at a government level). With 3D printing, there is no centralised way to monitor what is being printed and who is printing it, which means it can be used for illegal activity. As often is the case, legislation is struggling to keep up with new technical innovations and all their applications.

NETWORK SECURITY

Any device connected to a network poses as a potential entry point for any malicious actors. A current example of this is the prevalence of mobile devices or BYOD (Bring your own device) devices in the workplace. Any machine you add to a network poses a potential entry point for unauthorised users.

PRINTING SECURITY

It's very hard to accurately assess by eye that what you printed is what was delivered. How do you know if the strength is correct and not been tampered with? How do you know the structure is accurate?



ABOUT US

The Lancashire Cyber Foundry runs a programme designed to support businesses facing cyber challenges in Lancashire. Digital Innovation support is part of this programme but there is also business stategy support available too. This includes workshops dedicated to evaluation of the driving forces which will shape the world of today and beyond. Consider how your business is affected by external changes, now consider how much time your business spends evaluating them and planning for them.

To find out more about how your business can access support or register on one of upcoming workshops contact us: *cyberfoundry@lancaster.ac.uk*

ABOUT THE AUTHOR

Geraint Harries

Before starting at Lancaster University over 4 years ago, Geraint had worked in software development roles in both IBM and the Civil Service. In addition to being a qualified teacher, Geraint has worked freelance with a varied client base as a software developer and graphic designer.