

# HP and NTU Singapore inaugurate Digital Manufacturing Corporate Lab



[Tess Boissonneault](#) • January 21, 2020

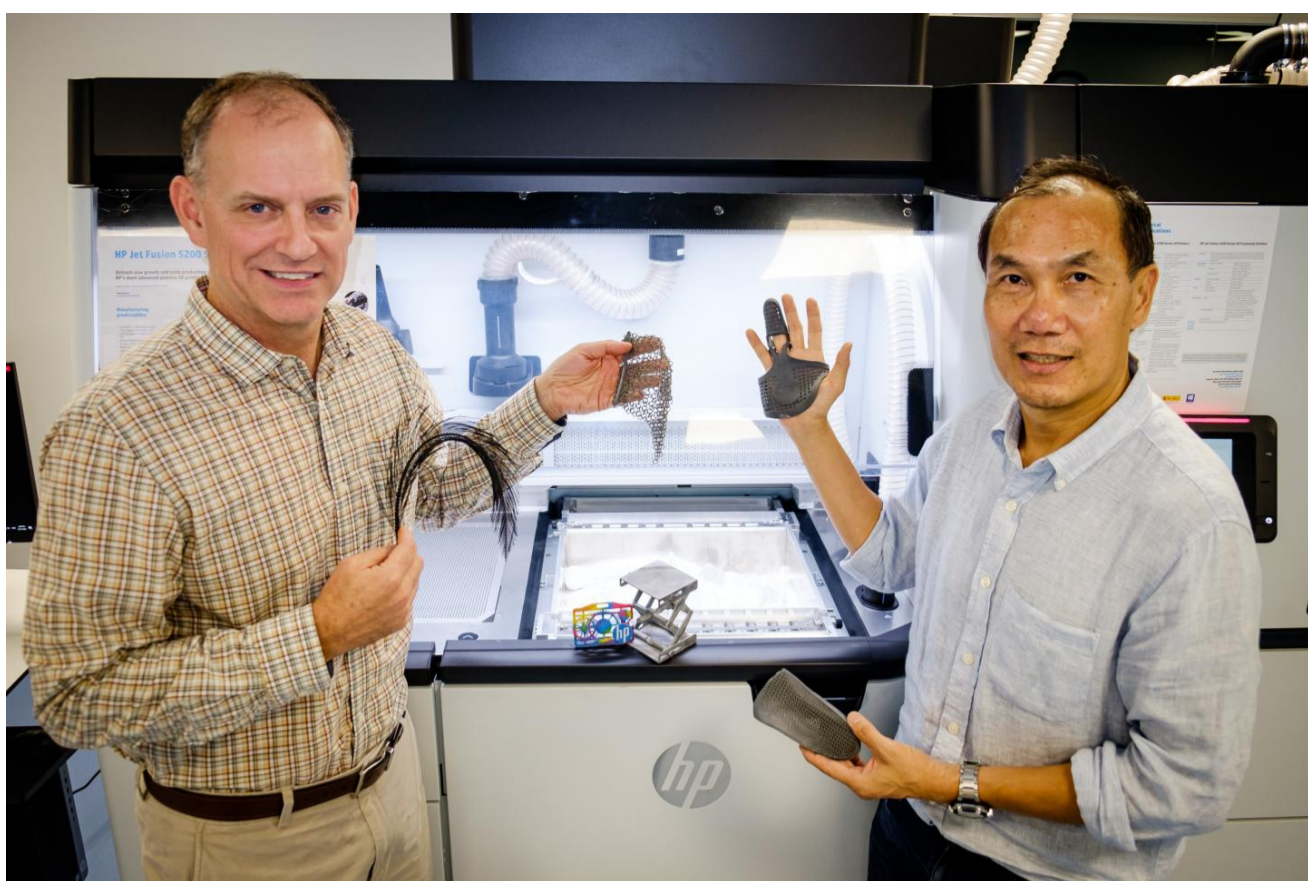
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In 2018, the Nanyang Technological University (NTU) Singapore, 3D printing company [HP Inc.](#) and the National Research Foundation Singapore (NRF) [joined forces to advance AM](#) by announcing a new dedicated facility. Today, the partners are celebrating the official opening of the HP-NTU Digital Manufacturing Corporate Lab by showcasing digital manufacturing technologies that they say will improve the efficiency, cost and sustainability of manufacturing and supply chain operations.

Among the digital manufacturing technologies being demonstrated by HP and NTU Singapore are intelligent design software tools developed to automate advanced customization and supply chain models that enable faster time-to-market and greater sustainability. The partners also unveiled a new skills development program, which is aimed at upskilling AM talent in Singapore.

The intelligent design software tools being developed at the HP-NTU lab will enable engineers to more easily customize and optimize the mechanical properties of materials. The tools also enable designers to create parts that meet strength, flexibility and weight requirements.



*Co-directors of the HP-NTU Corporate Lab: NTU Associate Professor Tan Ming Jen (right) and Dr. Mike Reagan (left)*

The second project presented consists of tools to optimize end-to-end supply chains. HP and NTU Singapore are jointly developing solutions to enable manufacturers to decrease processing times for part identification (i.e. finding what parts are best suited for 3D printing) and to measure the environmental impact of their supply chains.

Finally, the skills development program unveiled by the lab is aimed at training and upskilling local talent in Singapore, with a focus on additive manufacturing and digital design. The program covers the fundamentals of AM and digital product design, data management and automation. The program is part of the SkillsFuture program.



“The advanced technologies and automation solutions jointly developed by NTU and HP are expected to impact businesses in Singapore and beyond, as these innovations are geared towards efficiency, productivity and most importantly, sustainability,” said NTU Senior Vice President (Research) Professor Lam Khin Yong. “Over the last year, we are able to see the first fruits of the collaboration, which combines NTU’s deep capabilities in machine learning, data science, AI and additive manufacturing, with HP’s expertise in innovation and technology solutions. Technologies developed at the Corporate Lab can then be test-bedded on the NTU Smart Campus, a microcosm of an urban city.

The new Corporate Lab is run by a team of over 60 scientists, researchers and engineers, working together to develop solutions for 3D printing, cybersecurity, AI, machine learning and other digital manufacturing technologies. With the training program, the lab hopes to train about 120 working

professionals per year.

“HP’s passion for innovation, together with NTU’s world-class research capabilities, allow us to achieve new breakthroughs and unlock new solutions for both business and society,” said Shane Wall, CTO and Head of HP Labs, HP Inc. “Our joint work in 3D printing, AI, machine learning, security and sustainability will produce disruptive technologies that define the future of manufacturing. Working together, we can create the workforce of the future and ensure the 4th Industrial Revolution is also a sustainable revolution.”



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