

Additive Manufacturing & 3D Printing News Roundup (July 18 – July 27, 2025)

New Product and Technology Announcements

Snapmaker U1: A New Era for Consumer 3D Printing Snapmaker has launched its U1, a next-generation consumer 3D printer, which debuted on Kickstarter with a suite of new features. Built on a CoreXY structure, the U1 achieves print speeds of up to 300mm/s and travel speeds of 500mm/s, with acceleration hitting 20,000 mm/s². This allows the printer to be five times faster than many comparable desktop models. A key innovation is the SnapSwap™ system, which enables quick toolhead changes in just five seconds, facilitating multi-material and multi-color printing with minimal purge and waste. The U1 also features a super-compact automatic material system with RFID recognition for official filaments, backup mode for seamless spool switching, and a series of advanced compensation algorithms like Input Shaping and pressure advance to ensure smooth and dimensionally accurate prints.

- **Source:** <https://www.snapmaker.com/en/snapmaker-u1>

3D Systems Launches FDA-Cleared Jetted Denture Solution in the U.S. 3D Systems has announced the full commercial release of its NextDent Jetted Denture Solution for the U.S. market, revolutionizing traditional denture manufacturing with seamless automation. This marks the first-of-its-kind commercial option for jetted, monolithic 3D-printed dentures, using MultiJet Printing (MJP) technology to produce a final product in as little as one day, a significant reduction from the traditional five-day turnaround. The solution includes the NextDent 300 MultiJet 3D printer, new FDA-cleared NextDentJet Teeth and NextDentJet Base materials, and a software suite that automates design and nesting. The result is high-strength, aesthetically pleasing, and durable dentures that are fully cured immediately after printing, eliminating the need for post-curing. This end-to-end digital workflow significantly reduces labor, material waste, and costs while offering unparalleled accuracy and repeatability.

- **Source:** <https://www.3dsystems.com/dental-jetted-dentures>

Industry News

Farsoon Technologies Reaches 150 Large-Format Metal 3D Printer Sales Milestone

Farsoon Technologies has achieved a significant milestone, reporting the sale of 150 large-format "meter-scale" metal 3D printing systems worldwide. The rapid adoption of these systems, including the flagship FS1521M series with build envelopes up to 1,530 x 1,530 x 1,650 mm and up to 32 lasers, reflects a growing demand for high-throughput metal additive manufacturing. These machines are now being integrated into production lines in critical sectors like aerospace, where they are transitioning from prototyping tools to essential staples for end-use part manufacturing. The systems' advanced features, such as a dual-layer airflow system for process stability and a high-capacity modular powder management system for continuous production, are key drivers of their success.

- **Source:** <https://www.machinery-market.co.uk/news/40279/150-sales-for-Farsoons-large-format-metal-3-D-printers>

Safran Expands Production Capacity with Second Nikon SLM Solutions System The Safran Additive Manufacturing Campus has acquired a second NXG XII 600 system from Nikon SLM Solutions to bolster its production capabilities for the aerospace industry. This strategic

investment enables Safran to produce large, complex aluminum components with greater efficiency, flexibility, and a lower cost-per-part. The NXG XII 600, with its powerful 12-laser configuration and large build envelope, addresses critical production challenges by easing bottlenecks and increasing operational redundancy. This acquisition continues a long-standing partnership and is seen as a key step in helping Safran meet stringent aerospace standards while fostering innovation for both current and future aircraft programs.

- **Source:**

- <https://nikon-slm-solutions.com/newsroom/safran-additive-manufacturing-campus-expand-s-production-capacity-with-second-nxg-xii-600-from-nikon-slm-solutions/>

Regulatory and Standards Development

Filamentive Launches Material Sustainability Profiles Filamentive, a UK-based 3D printing filament company, has introduced Material Sustainability Profiles (MSPs) to address the lack of clarity in environmental claims within the industry. These concise data sheets provide verifiable information on a material's ecological characteristics, including its polymer origin, the proportion of recycled content, packaging type, and end-of-life disposal guidance. The initiative, which comes after a company survey revealed that 89% of users value sustainability but struggle with a lack of comparable data, aims to offer a transparent decision-making tool. The MSPs also list compliance with key standards such as REACH, RoHS, ISO 9001, and ISO 14001, setting a new benchmark for accountability in the additive manufacturing supply chain.

- **Source:**

- <https://3dprintingindustry.com/news/filamentive-debuts-sustainability-profiles-for-3d-printing-materials-242417/>

Key Academic and Research Findings

Researchers Develop Infinitely Recyclable 3D Printing Resin A research team at Zhejiang University has developed an infinitely recyclable 3D printing resin, marking a significant step toward a circular economy in additive manufacturing. Published in *Science*, the study details a novel light-triggered photo-click reaction that allows the material to be fully recovered and reused without performance degradation. Unlike conventional resins that form tough, non-recyclable carbon-carbon bonds, this new resin forms dithioacetal bonds that act like molecular "clips." These bonds can be formed with light to create a part and then broken with gentle heat to revert the material to its original components for re-printing. The modular nature of the material also allows for tuning to create a range of products, from elastomers to rigid plastics, all from the same base chemistry.

- **Source:** <https://www.zju.edu.cn/english/2025/0601/c75270a3057627/page.psp>

Binghamton University Scientists 3D Print High-Output Biobatteries Scientists at Binghamton University have achieved a breakthrough in sustainable energy by 3D printing stainless-steel biobatteries. The collaborative team, led by Professors Seokheun "Sean" Choi and Dehao Liu, used laser powder bed fusion (LPBF) to fabricate a porous stainless-steel anode that maximizes the surface area for bacteria to thrive and generate electricity. This design has enabled the biobatteries to produce nearly 1 milliwatt of power from a series of six units, a record-breaking output for such a design and enough to power small, autonomous IoT devices. The stainless-steel components are also reusable, as the bacterial cells can be detached and power levels can be maintained after multiple uses.

- **Source:**

<https://enertherm-engineering.com/3d-printed-steel-bacteria-battery-achieves-record-breaking-energy-output/>

Notable Applications Across Sectors

ORNL and Partners Use 3D Printing to Reshape Nuclear Construction A groundbreaking collaboration between the Department of Energy's Manufacturing Demonstration Facility at Oak Ridge National Laboratory (ORNL), Kairos Power, and Barnard Construction is leveraging large-format additive manufacturing (LFAM) to transform nuclear energy infrastructure. The team has successfully developed and validated large-scale, 3D-printed polymer composite molds for casting complex, high-precision concrete structures for the Hermes Low-Power Demonstration Reactor. This innovation allows for the rapid fabrication of modular components, dramatically cutting down construction time and cost. The project demonstrates how AM can be used to modernize a traditional construction sector and sets a new standard for nuclear infrastructure by combining national lab innovation with practical, real-world application.

- **Source:** <https://www.ornl.gov/news/3d-printing-reshapes-construction-nuclear-energy>