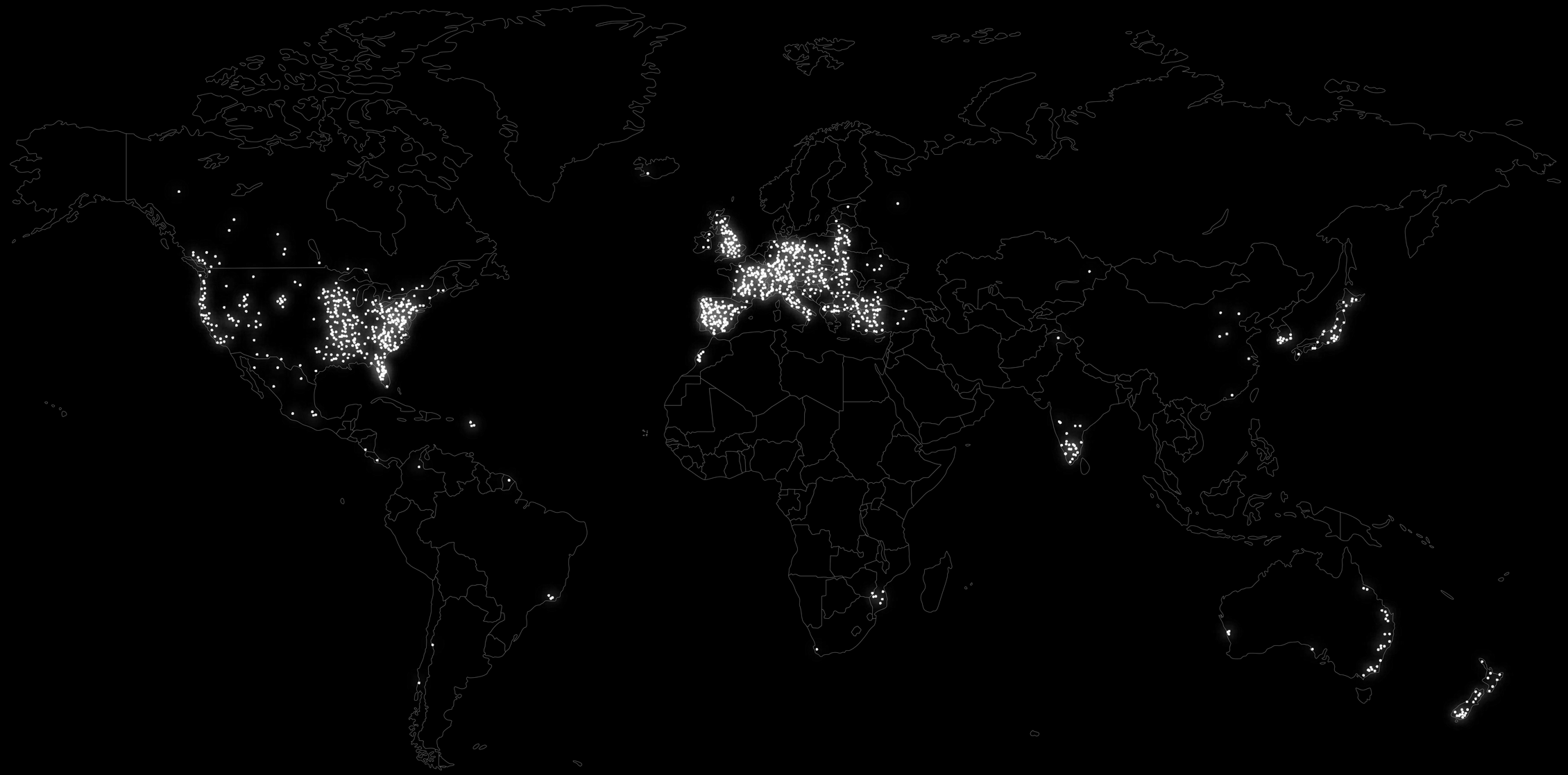
Markforged

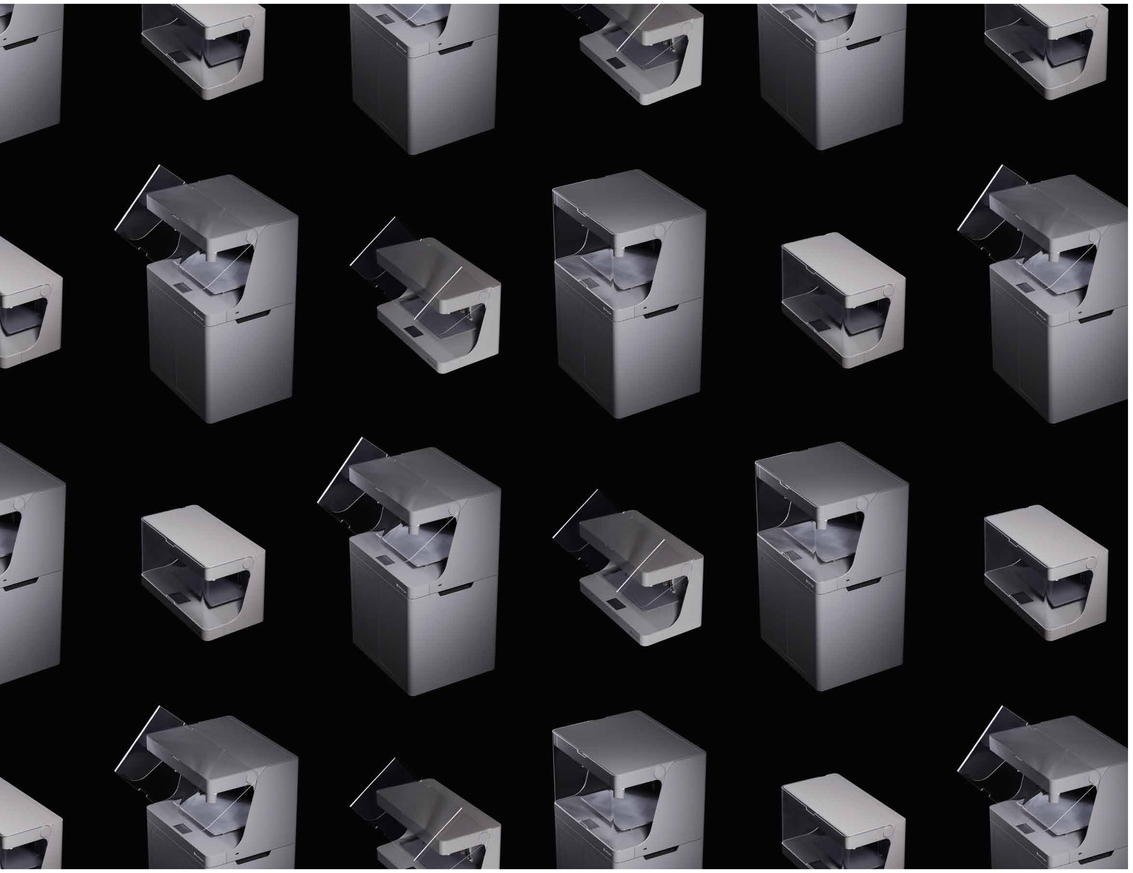
The Digital Forge™

Built for Today — Designed for Tomorrow



“It’s allowed us to scale our business without scaling our resource base.”

ERIC MERTZ
PRESIDENT AND CEO, CALDWELL



Built for Today — Designed for Tomorrow

The Digital Forge is the intuitive additive manufacturing platform powering modern manufacturers. It consists of hardware, software, and materials developed to seamlessly get you from design to functional part.

Deliver Value Today

The Digital Forge saves you money from day one by enabling you to get parts in hand faster, cheaper, and with less labor. It achieves ROI quickly and continues producing value for its adopters.

Drive Competitive Advantage Tomorrow

The Digital Forge gives you an advantage over your competitors. Develop and manufacture products faster, mitigate unplanned downtime, and build a more efficient and flexible manufacturing process.

Software

Markforged software seamlessly integrates 3D printing into your workflow, providing control and visibility on a secure platform.

+

Hardware

Precision-engineered hardware provides reliable, repeatable results.

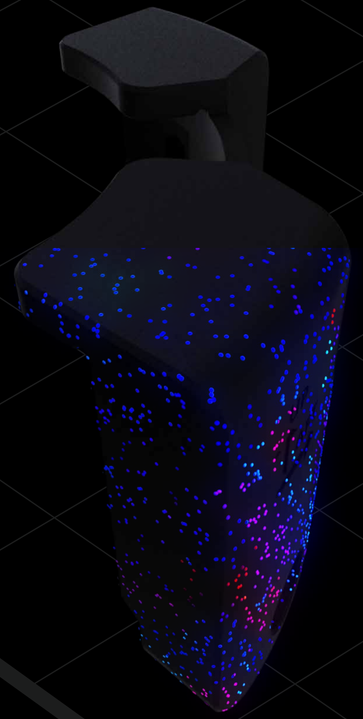
+

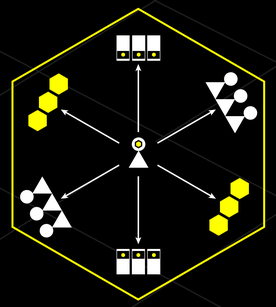
Materials

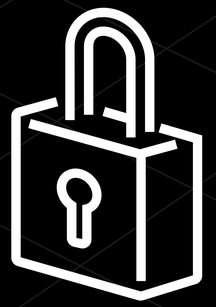
Industrial grade materials let you print a wide variety of robust parts.

The Digital Forge Platform — Powered by Eiger™ Software

Markforged offers a simple, smart, scalable additive manufacturing platform designed to seamlessly fit into your operation. Eiger software is built for scale — delivering a single user-experience, digital part repository, and fleet management across the entire Markforged portfolio.







Blacksmith

Blacksmith for X7™, the first component of Markforged's autonomous manufacturing vision, enables closed loop laser inspection and analysis of 3D printed parts.

+ Get laser-verified accurate parts out of your printer
+ Integrate inspection into your AM workflow with a single click
+ Print predictable parts across your global fleet

Eiger™ Fleet

Scale smarter — faster. Eiger Fleet enables users to manage distributed manufacturing operations on an enterprise and global scale with increased efficiency and insight.

+ Connect Markforged 3D printing solutions to enterprise systems through APIs
+ Easily track and manage key performance indicators (KPIs) fleet wide
+ Manage users, roles and data with a powerful and secure interface.

Built Secure

The Digital Forge platform is secure, scalable, and easily managed, featuring:

+ ISO 27001 Certification
+ Built in data encryption for your parts and prints.
+ Software is available in both secure online and offline versions.
+ STIG Compliant Operating System for strict government standards

Composite 3D Printers

Markforged has manufactured and distributed best-in-class industrial and desktop composite printers built around Continuous Fiber Reinforcement (CFR) since 2014 — with more than 12,000 in the field today.

Carbon Fiber Strength

Only Markforged offers CFR:
a groundbreaking technology designed to fabricate parts as strong as and capable of replacing machined aluminum today.

Accurate and Reliable

Markforged composite 3D printers reliably yield accurate parts with excellent surface finish. Their precision-machined hardware, advanced sensors, and unique software drive first-class customer results.

Built for Functional Requirements

Whatever your functional requirements — flame resistance, chemical resistance, energy absorbance, precision, or speed — our composite printers have an industrial material or print mode capable of fabricating a functional part for you.

FX20

The FX20 is Markforged's new flagship 3D printer — a machine that brings The Digital Forge platform and Continuous Fiber Reinforcement technology to a new realm of parts, problems, and industries. Designed to tackle some of the most demanding manufacturing industries — aerospace, automotive, defense — it is ULTEM™ capable, bigger, faster, and more sophisticated than any of our other 3D printers. Whether your needs are tooling, prototypes, or production parts, the FX20 is ready for the big leagues.

TOC

Metal X™ System

The Metal X system is an accessible, end-to-end 3D printing solution for delivering metal parts, next day. Metal X is affordable at 5-10 times less than other metal 3D printers. And it requires no dedicated operator or powder management system and minimal PPE. With it you can fabricate functional industrial-grade metal parts for a wide variety of industrial applications and material requirements.

Safe and Accessible

All in, a Markforged Metal X system costs 5-10 times less than other metal 3D printing systems. It requires no dedicated operator or powder management system and minimal PPE.

Wide Material Variety

From stainless steels to copper, the Metal X enables you to fabricate functional metal parts for a wide variety of industrial applications and material requirements.

Designed for Great Part Quality

The Metal X is purpose-built for great part quality and a seamless user experience. Markforged combines great software, materials research, and a 5th-generation motion system to deliver industrial-grade parts repeatably.

TOC

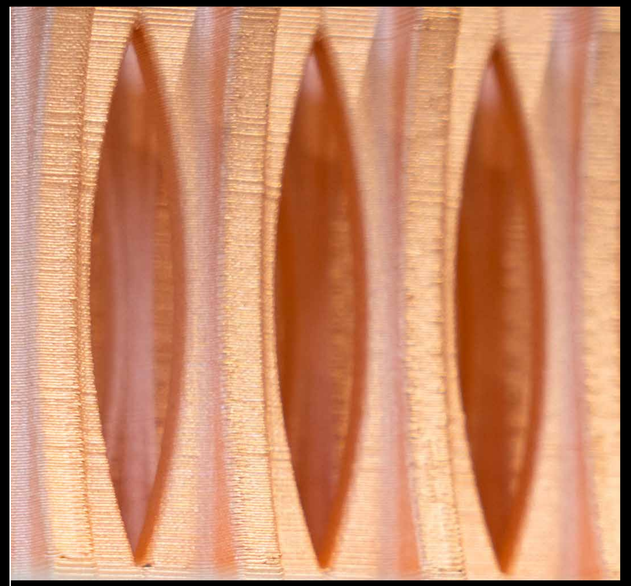
Materials — Classes

Composite Base Materials

+ Onyx™
+ Onyx FR™ (UL94 V0 Rated)
+ Onyx ESD™ (ESD Safe)
+ Nylon
+ ULTEM™ 9085

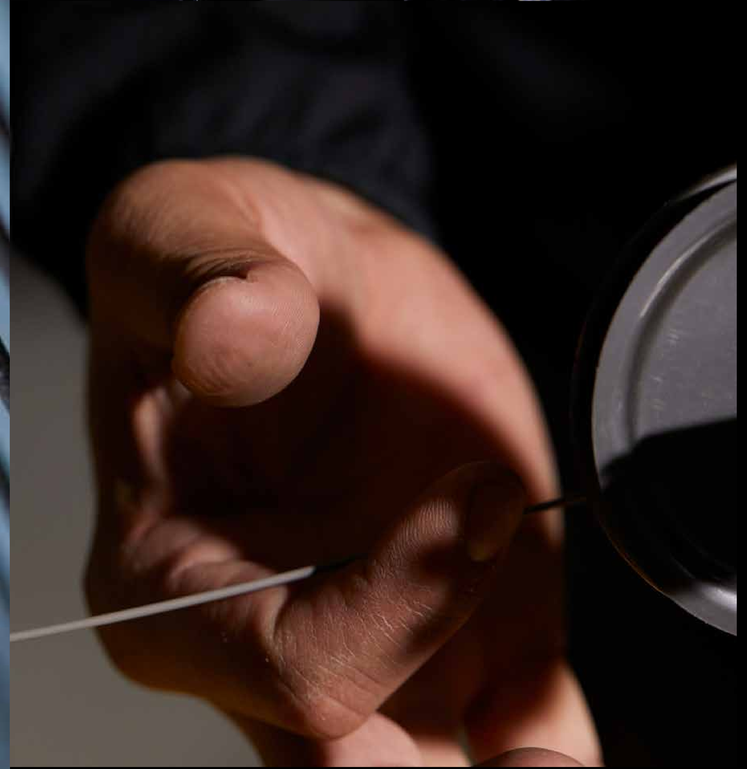
Continuous Fibers

+ Carbon Fiber (standard and ULTEM™)
+ Carbon Fiber FR
+ Fiberglass
+ HSHT Fiberglass
+ Aramid Fiber (Kevlar®)



Metal Materials

+ 17-4PH Stainless Steel
+ Inconel 625
+ Pure Copper
+ H13 Tool Steel
+ A2 and D2 Tool Steel



Industrial Grade Properties

All Markforged materials are designed to be used in manufacturing environments — and some are engineered to satisfy specific part requirements including FST compliance, ESD safety, and hardness.

Continuous Material Development

Markforged continually develops, tests, and launches new materials to enable you to solve more and harder manufacturing problems with The Digital Forge platform.

Traceability

Select Markforged materials — Onyx FR-A™ and Carbon Fiber FR-A — establish lot-level material traceability and pass the test suite necessary for aerospace use under 14 CFR 25.853 for most 3D-printable parts. These materials are purpose built for requirements of controlled industries and are undergoing NCAMP qualification

Optimizing Your Investment

A student works with Markforged X7 printers at Print City, a modern digital manufacturing facility on the Manchester Metropolitan University campus.

Markforged University

Markforged courses are designed to build and strengthen critical additive skills beyond printer operation. Courses are available both onsite and online and students can emerge as Markforged Certified Additive Experts (MCAE).

Solution Support

Markforged operates a worldwide network of channel and ecosystem partners. They, working with the Markforged customer success team, provide both remote and “boots on the ground” support for proof of concepts, installations, and technical support.

The Digital Forge Is Designed for

Engineers

+ Add a powerful tool to your manufacturing toolkit.
+ Get functional parts in hand for less.

Manufacturers

+ Build more efficient manufacturing processes.
+ Reduce the inertia in your manufacturing operation.

Leaders

+ Drive competitive advantage and become an industry leader.
+ Embrace a connected manufacturing ecosystem.

Innovators and Educators

+ Experiment with new materials and technologies.
+ Get on the bleeding edge of manufacturing technology.

“Being able to get finished products to market more quickly will keep us on the forefront of the industry.”

ZACH SWEITZER
PRODUCT DEVELOPMENT MANAGER,
SHUKLA MEDICAL


Markforged