

## Mosaic Manufacturing takes major step to bringing 3D printing to the factory floor as they begin shipping Array and Element Products

On October 16th, Mosaic will begin shipping the first production Array products to customers in North America. Shortly after, beginning November 16th, Mosaic will begin shipping their Element and Element HT 3D Printers.



*Two Mosaic Array units with 4x Element printers each, robotic gantry system, and storage carts.  
[All images available here](#)*

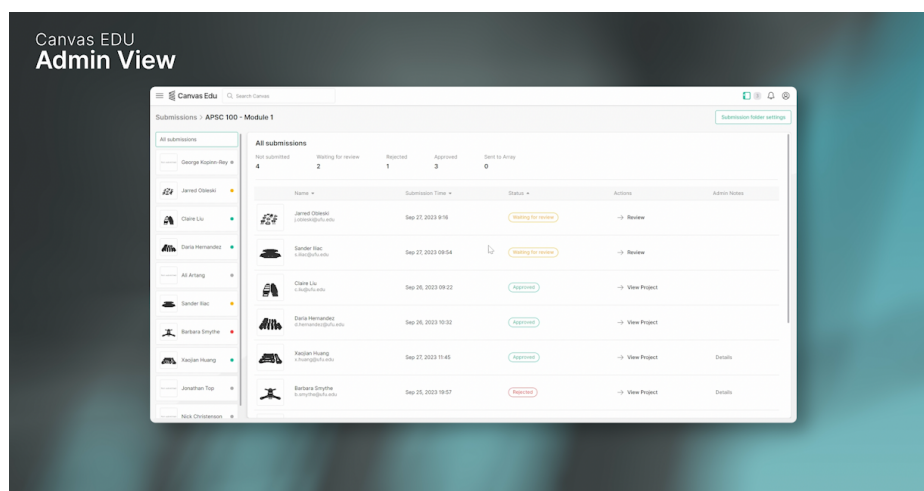
The shipping of Array marks a significant step in unlocking distributed, digital, on demand manufacturing of polymer parts at scale. Array is the first system on the market able to print thousands of polymer parts on site without operator intervention. This means lower lead times for manufacturers (and customers), as well as more flexibility and resiliency in supply chains. Array will allow companies to reshore their polymer supply chain, upskill their teams, and build next generation manufacturing capacity to ensure they are ahead of the curve for years to come.

Made in Canada, Array is the first fully automated polymer 3D printing system available to the industrial market. Array's patented automation technologies includes bed changeover, material automation, AI powered monitoring, and software operation automation. Each Array includes 4 Element or Element HT 3D printers, and starts at \$79,999 USD.



*Each Element inside of Array comes equipped with a large build volume, and individually temperature controlled chambers. This means users can print high temperature materials on one Element, and in parallel, low temperature materials on another.*

Each Element 3D printer has a 14"x14"x14" (355mm x 355mm x 355mm) build volume, and comes with the option of adding a heated chamber and high temperature hot end in order to print PEEK, PEKK and PEI materials. This heated chamber also helps produce stronger parts printed in ABS, Nylon, and PC. Element / HT also comes equipped with Mosaic's reusable Material Pods, which track filament usage, type, and monitor humidity and temperature inside the pod for Mosaic or 3rd party materials.



*Overview of Mosaic's Canvas Edu platform, created to enable educational institutions to manage their printing workflows for thousands of students.*

Mosaic's Canvas software platform acts as the user's control center for Array. Canvas allows users to slice parts, manage print queues, and keep track of completed builds.



Users can collaborate with Canvas teams to share files and run prints for team members. Canvas Edu (Education) allows educational institutions to manage thousands of student submissions in a simple and automated manner.

The first production units of Array and Element are being shipped after a six month customer pilot program was completed in order to ensure product stability and reliability. This pilot included the shipping of 4 Array units, and over 40 Element / HT printers. These pilots were completed across companies in the manufacturing, education and healthcare industries. In order to document their experiences, Mosaic is releasing 3 case studies on how these pilot organizations adopted Array and Element in their workflows (linked and detailed below).

Mosaic developed Array as a solution to overcome the scaling issues associated with traditional print farms. Mosaic's multi-material technology has been used for almost a decade to support print farms around the world. Working closely with industry leaders, it was clear that the lack of automation and purpose built solutions meant for production, were leading to significant amounts of labor to operate and maintain farms of individual printers. Scaling with traditional 3D printers did not work for these customers, and costs were much higher than anticipated. Array sets a new standard for the lowest and most predictable production costs at scale with a plug-n-play production platform.

Mosaic's initial production run for Array and Element are over 80% sold, with all units set to go out before the end of 2023. With the shipping of their Array and Element product line, Mosaic takes a significant step towards their mission of bringing 3D printing to the factory floor at scale.

You can find the in-depth Array Product Video here: [Link](#)

## Case Studies

### Avid



*Avid team member, Connor Reddington, removing finished parts from the Array storage cart.*

[Avid Case Study Link \(Unlisted, to be published Oct 16\)](#)

*Avid, A Lubrizol company, is a design engineering firm that was looking for a cost effective way to offer their clientele new capabilities in additive manufacturing. Array offered an automated solution that helps keep their team focused on building the best client experience, while also offering an FFF solution that produces high quality parts in any number of colors or material types.*



## IDeATe Lab

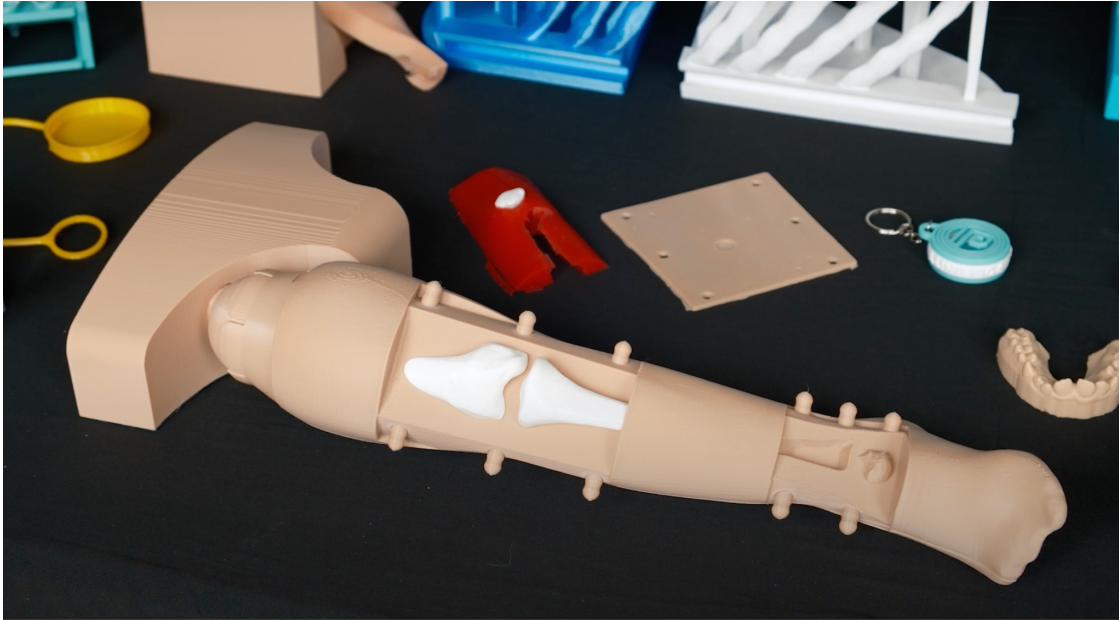


*Cody Soska, Technical Specialist with IDeATe, inspecting a finished part from Array.*

*IDeATe is a cross-faculty network offering students a number of minor degree programs with a focus on interactive design, engineering, and advanced technology - with emphasis on fabrication. Array offers them a cost effective, automated printing solution that gives course instructors a print volume that meets the needs of over 10 programs-worth of student work.*

*If you would like to include this case study in any press coverage, please email [chris@mosaicmfg.com](mailto:chris@mosaicmfg.com) and we will send this over for your reference when it is completed.*

PolyUnity Tech Inc.



*A multi-part medical reference model printed by PolyUnity on Element.*

[PolyUnity Case Study Video](#)

*PolyUnity Tech Inc. has been leading the charge in employing additive manufacturing to help improve lives and healthcare outcomes. They first founded the MUNMed3D Network to address a need for 3D printing in remote healthcare facilities across Newfoundland. From there, they recognized the benefits of establishing a wider network of remote and automated 3D printing across the country and beyond. Expanding on that idea has been their mission ever since.*

## About Us

Founded in 2014, Mosaic Manufacturing offers a variety of 3D printing solutions. Mosaic's flagship product, Array, is a high volume print system designed to bring 3D printing to the factory floor. By leveraging unique software and automation features, with Array, Mosaic aims to unlock novel applications for production scale 3D printing across a wide range of industries.

## Product Descriptions

### Array

Array is a high volume print system designed to bring 3D printing to the manufacturing floor. Array features 4 Element or Element HT 3D printers, and is built with an integrated robotics system for automated bed changing, material handling, and remote file management. By removing manual user touch points in the printing process, Array allows one operator to run the equivalent of approximately 250 3D printers. Array supports a wide variety of print materials including ABS, CF Nylon, PETG, PEEK, PEKK, and PEI 9085.

### Element

Element is an industrial grade FFF printer, enhanced with Mosaic's patented multi-material technology. Element is focused on creating high quality parts, with a simple user interface, and reliable operation. Element is able to support up to 8 materials in a single part and features a large and versatile 14"x14"x14" (355mm x 355mm x 355mm) build volume.

Element is available in a high temperature model (Element HT), which features a heated chamber and a hot end that can withstand up to 500°C.

## Quotes

### Customer Quotes

*"Array really automates 3D printing by making it a hands off procedure, I can send a print from my computer at home and not have to come into the office at 9pm - the parts are just sitting there ready for me the next day"*

-Connor Reddington, Avid, a Lubrizol Company

*"Material Pods (Element) close the loop on the automation side by allowing us to run prints un-interrupted, we can start the next print automatically, we can do multiple colors. It really opens up a lot of opportunities for creative design."*

-Connor Reddington, Avid, a Lubrizol Company

*"Students at all levels of education should have access to an Array. It is essential if we're encouraging STEM education, design engineering thinking, prototyping, iteration - students should have a reliable 3D printer to make parts in the volumes they need."*

-Cody Soksa, Technical Specialist at IDeATe



*"Array is going to change the face of STEM Education. For the price point, an Elementary school could easily buy this machine - giving 10 year olds the opportunity to make and build something that lives in their mind. That's so valuable"*

-Cody Soksa, Technical Specialist at IDeATe

## Company Quotes

*"Mosaic's mission is to bring 3D printing to the factory floor at scale. These successful deployments mark an exciting step in our journey as we ramp up scale significantly for 2024 and beyond"*

-Mitch Debora, Mosaic Co-founder and CEO

*"Until now, the use of 3D printing at scale has been blocked by high part costs and challenges scaling capacity. With Array's range of automation features designed for production volumes, it is exciting to see a wide range of companies reevaluate and move forward with additive manufacturing at scale. "*

- Mitch Debora, Mosaic Co-founder and CEO

*"Array has set a new standard for the lowest and most predictable production 3D printing costs at scale with a plug-n-play production platform. The pace of adoption around the world is exciting and will help usher in a new generation of green, nimble, and onshore production".*

- Mitch Debora, Mosaic Co-founder and CEO

## Assets

[Google Drive](#), including

[Case Study Images](#)

[Product Images](#)

[Spec Sheets](#)

[Logos](#)

[Avid Case Study](#)

[PolyUnity Case Study](#)

[Array Product Video](#)

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