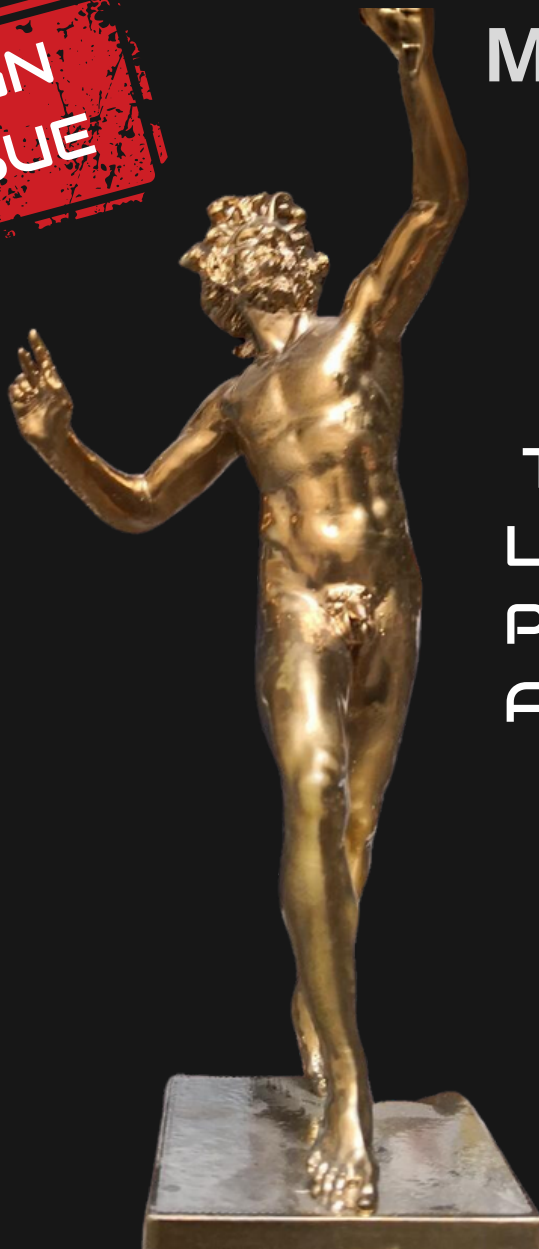


LARGE 3D PRINTING

INNOVATORS

MAGAZINE

ART & DESIGN
SPECIAL ISSUE



The Impact of
Large-Scale 3D
Printing on
Art and Artists



Bronze sculpting made easy
with Modix large 3D printers;
the case of Efes Bronze

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Dinosaurs Revived: Triebold's
jurassic journeys with Modix
Large 3D printers

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AMONG OUR VALUED CUSTOMERS

Aerospace



Automotive



Defense



Educational



Consumer Electronics



A SHOWCASE OF SUCCESS



BRONZE SCULPTING MADE EASY WITH MODIX LARGE 3D PRINTERS; THE CASE OF EFES BRONZE

COMPANY

Efes Bronze

WEBSITE

<https://efesbronze.com/tr>

VERTICAL

Art & Design
Manufacturing

APPLICATION

Artists
Art schools
Manufacturing companies

THE PRINTER

Modix BIG-60

THE COMPANY

Efes Bronze is a leader in the bronze sculpting art world, with pieces set in many countries around the world like horse sculptures, fountains, animal and wildlife models, men and women sculptures and more. The company is based in Turkey.

THE CHALLENGE

Creating a bronze sculpture involves a long and complex lost-wax casting process. In addition, printing large sculpture models in parts can be challenging because the parts must later be aligned precisely and the glue must be strong enough to hold the parts together.



THE SOLUTION AND OUTCOME

Efes Bronze is using the large print volume of the Modix BIG-60 to print large models (in large parts or in one piece), which are then glued together, covered with silicon in order to create the mold, filled with wax that later smoothed, detailed, and covered in plaster before finally being cast in bronze using the lost-wax technique.

In addition, the Modix BIG-60 printers are reliable and easy to use, which saves Efes Bronze time and money.

In conclusion, Efes Bronze is now able to create large, high-quality bronze sculptures with greater precision and accuracy, using the Modix BIG-60 printers.

“With Modix, our work has become easier and faster. This is how we run the printer: we print with PLA and while the bed temperature is 55 Celsius. The print layer is 0.3mm at the base, 0.2mm for the body parts and 0.1mm for the face. We use the 0.4mm nozzle and 7-8% infill. After 100-150 layers, we change the infill to 2-3% only. Some parts are 3 perimeters and some just 2.”

Serdar Eraol, Owner of Efes Bronze

HARNESSING THE POWER OF THE MODIX 3D PRINTER IN THE ART OF KIM FARKAS



THE CREATOR

Kim Farkas, France

VERTICAL

Art & Design, Lighting,
Sculpting

APPLICATION

Sculpting, Lighting fixtures,
Artistic Elements

PRINTER

BIG-120Z, Griffin print head +
Super Volcano

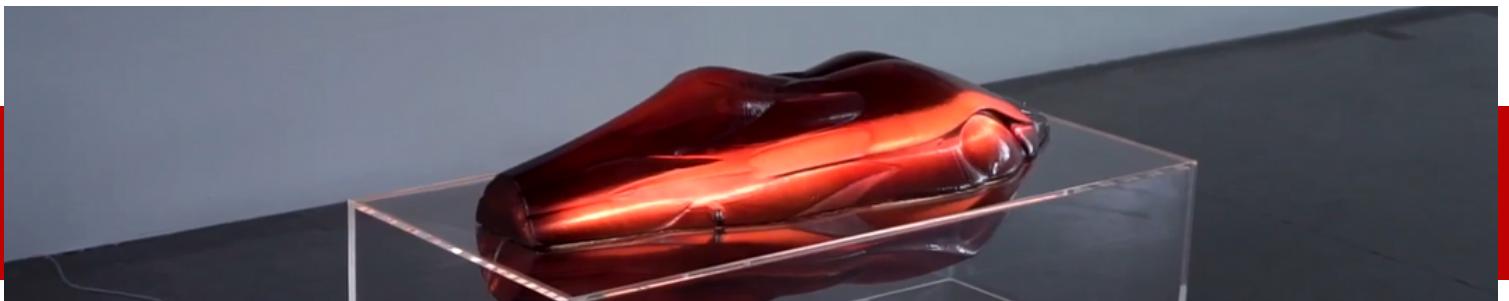
THE ARTISTS

Kim Farkas, a noted French artist and graduate of Beaux-Arts de Paris, melds traditional mold-making with contemporary 3D printing. Initiating with a 15x15 Printrbot in 2013, Kim's dedication to innovation is evident.

"I always wanted to change the shapes before even making multiple pulls and ended up making new one-use molds," he shares. With a profound interest in fablab/maker culture, Kim's artistry resonates throughout Europe.

THE CHALLENGE

Kim Farkas, in his signature art pieces, crafts large tubular shells that are subsequently layered and coated. Yet, with his earlier printers, he was bound by a 30x30x40cm build volume, compelling him to assemble up to eight distinct parts. Each assembly posed its unique challenges, from file preparation to the assembly process itself. "I constantly had to think about the build volume which limited my possibilities," the artist reflects.



"With Modix, we can explore designs, textures and finishes. Size is not an issue."

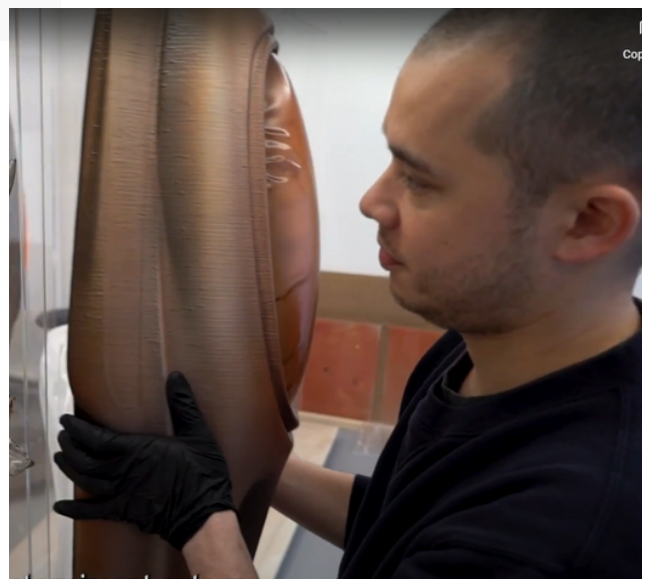
THE SOLUTION AND OUTCOME

Utilizing the Modix 3D printer, specifically the 120Z model equipped with the Griffin printhead and SuperVolcano, Kim Farkas has experienced a significant transformation in his artistic process. This high-performance printer has not only empowered him to create larger structures in fewer pieces, but also enhanced the efficiency of his work through faster extrusion and the ability to create thicker walls. Kim particularly values the ability to use vase mode with nearly 2mm perimeters, a crucial feature for his transparent pieces that require a strong perimeter to support the large build volume.

The Modix 120Z has effectively liberated Kim from the constraints of previous machinery, allowing him to approach his art with a newfound focus on creativity and expression, treating each piece more akin to a drawing. The reliability of the Modix printer stands out, serving as a dependable tool that complements and enhances his creative journey.

Looking ahead, Kim is excited about the potential future enhancements to his setup, given the open platform of the Modix 120Z. He anticipates the possibility of upgrading with new parts and technologies, ensuring his artistic practice continues to evolve and thrive.

In summary, the Modix 120Z has simplified Kim's workflow by reducing the need for assembly and also provided him with a reliable and upgradable tool, allowing him to delve deeper into his artistry and explore new creative horizons.



"With Modix, I can easily make a very small model or a large model. I can produce a chess-size piece or I can produce state-of-the-art furniture or just experiment with new ideas. All with the same machine. This is an infinite way of doing things."



THE IMPACT OF LARGE-SCALE 3D PRINTING ON ART AND ARTISTS

**Patrick Laroche, a leading French sculptor:
"3D Printing is a whole new and exciting dimension for the modern artists"**

THE ARTIST

Patrick Laroche is a world renowned artist, sculptor and furniture designer. Laroche is well known for his famous extremely large sized vegetables, painted in vivid chrome colors and is recognized for his unique ability to turn ordinary daily objects into a magnificent celebration of colors and shapes. He has a deep understanding of traditional sculpting techniques, but he is also always interested in exploring new technologies to combine in his art and designs.

THE CHALLENGE

Laroche and his team's challenge was to produce outstanding and unique designs for various displays, and in parallel, to adapt and embrace 3D technologies and techniques to become a vital working tool for artists.

Laroche aimed to leverage the potential of modern technologies to amplify his artistic capabilities. His goals included exploring the integration of new techniques, such as digital modeling, 3D scanning, and printing, while maintaining the artistic integrity and handcrafted essence that defined his sculptures. He envisioned a harmonious blend of the ancient and the contemporary.

"3D printing has become a crucial part of our daily routine. We can preserve our handmade artwork for future reference and use it in a digital format. For many years, 2D 'flat' artists could preserve and copy their work easily by making photocopies and using other printing techniques. Finally, thanks to 3D scanning and 3D printing, sculptors can enjoy the same benefits of commercialization and archiving", Mr.Laroche says.

***"3D printing has become a crucial part of our daily routine.
We can preserve our handmade artwork for future reference
and use in a digital format.***

Patrick Laroche

ARTIST

Patrick Laroche, France

WEBSITE

www.patricklarochesculpteur.com

VERTICAL

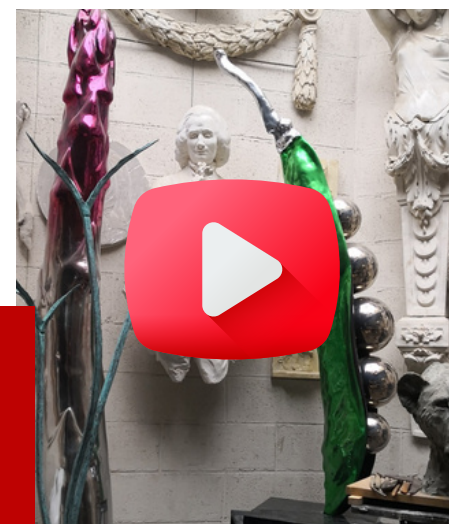
Art & Design

APPLICATION

Sculpting, Artistic Elements

PRINTER

Modix BIG-60



"With Modix, I can easily make a very small model or a large model. I can produce a chess-size piece or I can produce state of the art furniture or just experiment with new ideas. All with the same machine. This is an infinite way of doing things."

Patrick Laroche

THE SOLUTION & OUTCOME

The studio purchased Modix BIG-60. The workshop has implemented working with the Modix BIG-60. After the objects are scanned or prepared with dedicated 3D printing software, the team uses the printer to execute the models and designs. These can be prototypes, casts for molds or the actual sculptures themselves. Most importantly, the models created can be scanned and then preserved for any future need.

"With Modix, we can explore designs, textures and finishes, Size is not an issue.", says Laroche.



"I have completely converted and attempted just to push the boundary in what's possible in the additive manufacturing space to increase the amount of precision that I can apply to these prosthetics. At every level it's improved my practice, there's no question. It is a revolution."



FAST AND COST-EFFECTIVE SPECIAL EFFECTS PROPS FOR THE FILM INDUSTRY

THE CREATOR

Shawn Hicks is a special effects artist based in Ireland. He has worked on a variety of films. In his work, Hicks often uses Modix BIG-60 version 1f or many years now to create special props and sets.

THE CHALLENGE

Hicks was working on a film that required a large, detailed cannon. He was searching for an efficient, inexpensive and fast solution in order to create it and at the same time best express his creativity. Another challenge was that this canon needed to demonstrate a fire.

THE SOLUTION

Hicks decided to use a Modix 3D printer, and was able to create a large, detailed cannon object. The final cannon was in 5'2" length and was made up of 12 pieces. He was very happy with the results of his project, creating it in a timely manner, and at cost-effective expenses.

The fire effect you can see in the video was created by inserting a metal tube into the 3d printed cannon and the use of fireworks in order to create the desired effect.

"Everything fits nicely" says Hicks."It took 108 total print hours (the printer ran day and night). I used Formfab recycled PLA for most of the print. I used a 0.8 ruby nozzle and a 0.4 layer height on detailed parts with a 0.44 layer height on long tube sections. The temperature was at 225oC and speed was always on fast. The 2.5 kg rolls were a great success. I was getting approximately 30hr of print time between roll changes. The finished print was a success".

THE CREATOR

Shawn Hicks

VERTICAL

Film Industry

APPLICATION

Special effects props and sets
Prototyping and concept modeling
Costume design

THE PRINTER

Modix BIG-60 version 1





HOW 3D PRINTING IS REVOLUTIONIZING CUSTOM WOODWORKING; THE SQUID WORKS STUDIO CASE STUDY

THE COMPANY

Squid Works Studio is a custom woodworking company specializing in restoring and creating unique pieces of furniture. The company is owned and operated by Shawn Hicks, a longtime shipwright with a passion for woodworking.

THE CHALLENGE

Shawn Hicks, the owner of Squid Works, needed a way to create architectural components quickly and easily. He also wanted to be able to create custom designs that were not available off-the-shelf. Part of this effort, bending wood for round corners with boiling water is a time-consuming process and not very pleasant work.



THE SOLUTION AND OUTCOME

Shawn decided to use a Modix BIG-60 V1 3D printer to create his architectural components. The Modix BIG-60 is a large-format 3D printer that is capable of printing complex objects with high accuracy. This allowed Shawn to create custom designs that were not available off-the-shelf. The Modix BIG-60 is also a fast printer, which allowed Shawn to create his architectural components quickly.

In addition to these benefits, 3D printing has also allowed Hicks to save a significant amount of money and time. This has allowed him to reinvest in his business and expand his offerings.

Overall, 3D printing has been a major boon for Hicks's business. It has allowed him to create high-quality, custom furniture that is both affordable and sustainable. It has also allowed him to save time and money, which he can then reinvest in his business.

COMPANY

Squid Works Studio

VERTICAL

Art design

APPLICATION

Architectural
Interior design

THE PRINTER

Modix BIG-60 V1 3D printer



Learn more about how 3D printing can help you to revolutionize your custom woodworking business at www.modix3d.com

3D PRINTING SERVICE FOR ARCHITECTURAL MODELING AND ART

Modix
Large Scale 3D Printers

Tony3D: “Our BIG-60 V1, reliable since 2017 for daily architectural modeling”

COMPANY

Tony3D

WEBSITE

www.tony3d.net

VERTICALS

Modeling, Architecture ,Art

APPLICATION

Production of tailored final goods

THE PRINTER

BIG-60 V1 upgraded to V2.



THE COMPANY:

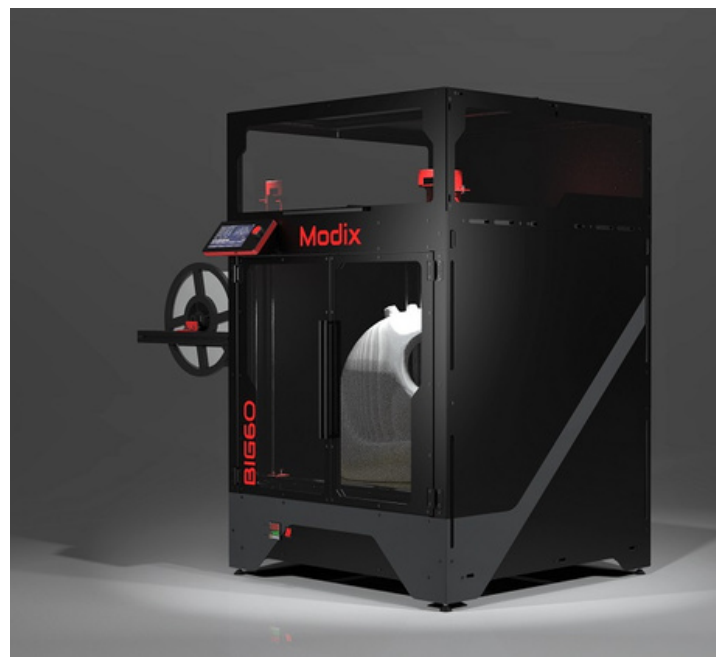
Tony3D.net is a 3D printing service company located in Israel focused mainly on printing highly detailed architecture models and other industrial modeling services.

THE CHALLENGE

Tony3D.net was facing a number of challenges in creating architecture and art models. First, the company was limited by the size of the models that it could print with its existing 3D printers. Second, the company was spending a lot of time and money on manual labor needed to connect smaller parts into bigger models when needed.

THE SOLUTION AND OUTCOME

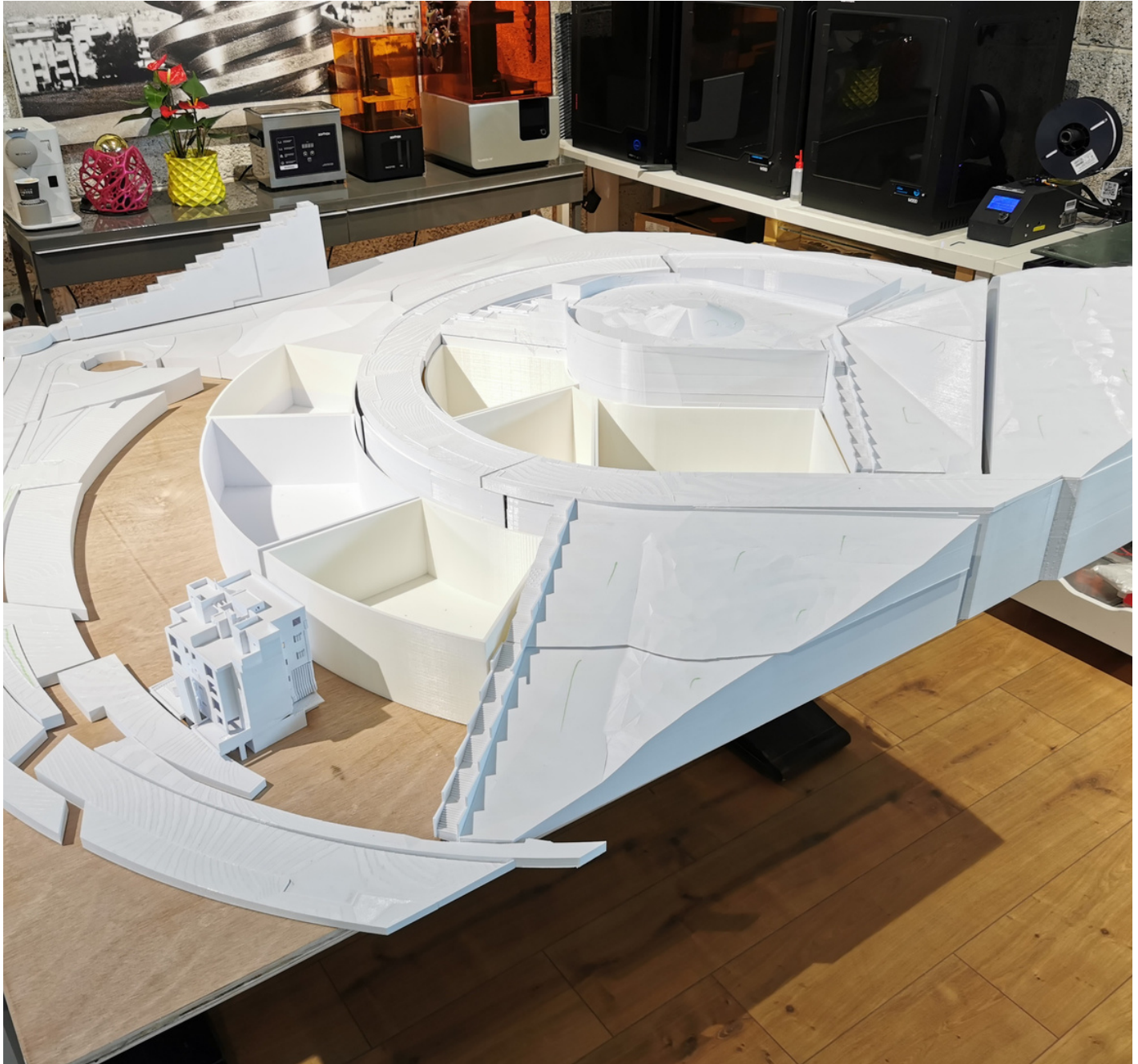
During 2017 Tony3D.net decided to invest in a Modix BIG-60 V1 3D printer. The Modix BIG-60 is a large-format 3D printer that can print models up to 600 X 600 X 660 mm (XYZ). Modix BIG-60 allowed Tony3D.net to create larger and more complex models than ever before. Additionally, due to the generous size of the printer, Tony3D team could print the models in one piece and did not have to spend time gluing smaller pieces together and performing additional post processing labor demanding tasks. This freed up Tony3D.net's employees to focus on other tasks, such as designing new models and interacting with customers. Thanks to Modix BIG-60 printer capabilities, for example, the company created topographic models of neighborhoods in sizes of 2.5 meters by 2.5 meters using fewer parts, giant art sculptures, and more. Over time, Tony3D has upgraded its BIG-60 to version 2, which allowed them to extend the lifetime of the machine, enjoy new features and as a result this machine is still printing on a daily basis.



Tony3D.net is now able to offer its customers a wider range of 3D models, including large-format models, complex models, and models with a high level of detail. The company has also been able to reduce turnaround times and improve its customer satisfaction.

The Modix BIG-60 has been a valuable asset for Tony3D.net. The printer has helped the company to overcome a number of challenges and grow its business.

If you are a 3D printing company that is looking to create large-format models, the Modix BIG-60 is a great option.



“I have been using modix3d printers since the first model, and I am extremely satisfied”, says Mr. Arik Yusupov, Tony3D’s CEO. “Firstly, the cost-effectiveness of using the printers is excellent. Secondly, the reliability level is very high, and thirdly, it allows us to create especially large models. If used correctly, it is an excellent solution. I highly recommend Modix’s printers.”



PRESERVING HISTORY IN FULL SCALE; FLOATSCANS INNOVATIVE 3D SCANNER

THE COMPANY

FloatScans is an Amsterdam-based 3D scanning startup. The company has developed a unique, human sized 3D scanner that captures an objects' geometry, color and interaction with light, and creates a new dimension for digital experiences and real-world realism. The company provides endless new interactive stories, by digitally preserving art relics and historical items for future generations. Its main clients are museums, private collectors, and auction houses.

THE CHALLENGE

FloatScans faces a dual set of challenges where large-scale 3D printing proves indispensable:

- The 3D scanners are deployed in varied physical locations, each with unique requirements for space, positioning, and size. Consequently, scanner parts are custom-made using Modix machines to optimize their functionality.
- The artifacts to be replicated often match human dimensions. This necessitates a printer with substantial build capabilities for rendering such relics and replicas.

COMPANY

FloatScans, The Netherlands

VERTICAL

Mechanical , Engineering
Creative Industry & Arts.
Product development

APPLICATION

3D Scanning, Digital
Inventory, Prototyping,
Art & Design

THE PRINTER

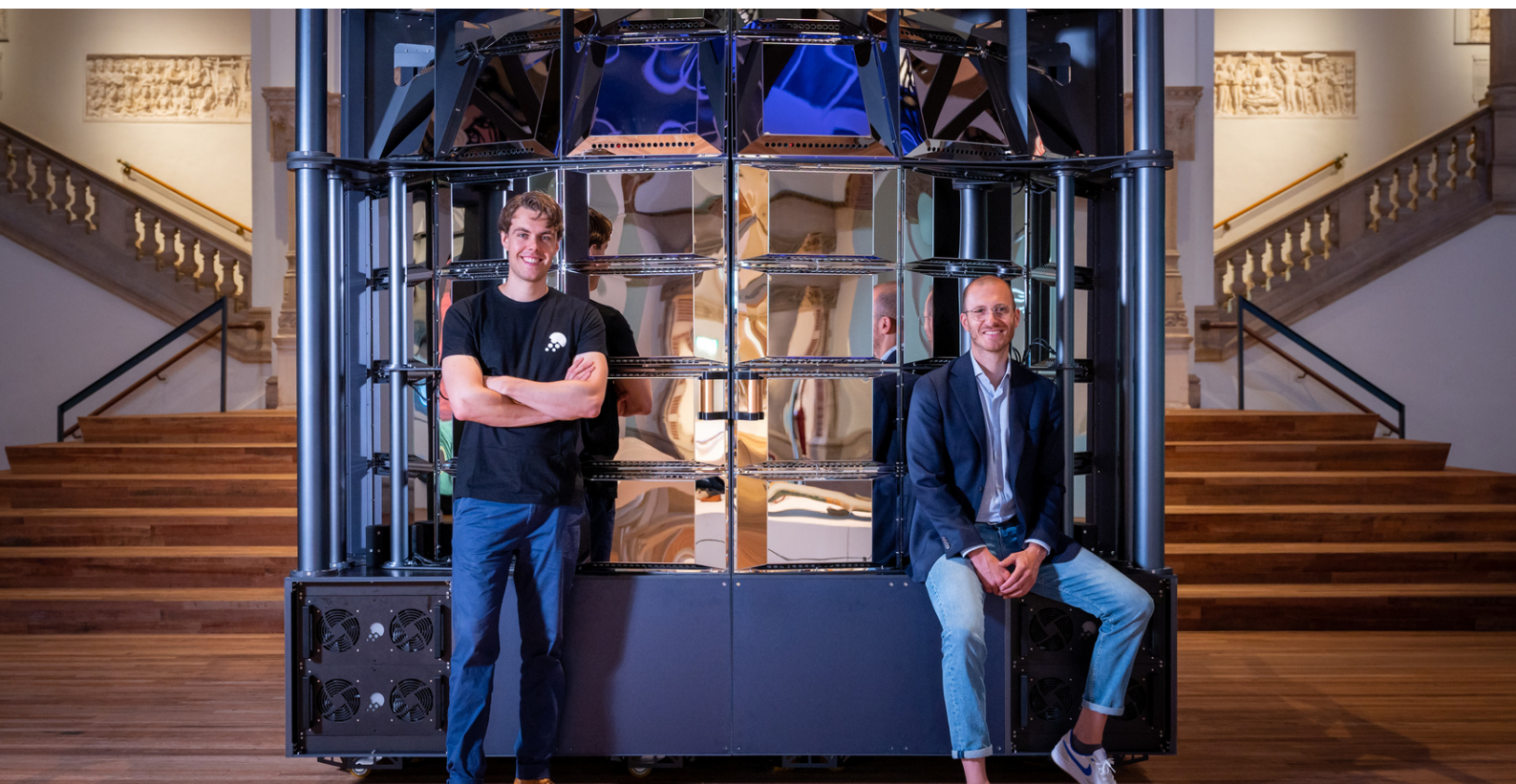
BIG-60, Big Meter

THE SOLUTIONS AND OUTCOME

FloatScans invested in both the Modix BIG-60 and Big Meter printers to meet these challenges. The company employs these machines for:

1. Engineering and fabricating essential components of their 3D scanners, sometimes producing parts as large as 600 millimeters.
2. Producing a variety of smaller parts in larger quantities, such as unique cable management solutions or hooks.
3. Creating life-sized or larger-than-life relics and sculptures, thereby diversifying its business offerings and accepting more projects.

Max Roest, CEO of the company ,explains the prototyping advantages of using Modix 3D: "For prototyping - we went as far as skipping a manufacturing stage. For example, we'll need to create a new housing for some complex components, which is pretty difficult. Typically, we would create a first version to see how the tolerances work, and if the components actually fit nicely or we need some adaptations or some margins - we just change it. With Modix, prototyping reduced turnaround time - sometimes within a day - we got a new version in the hands of the engineer. In terms of material we don't even need to make metal parts. The PLA prints already give enough structural rigidity to hold stuff in place. The plastic part is more than sufficient for us to work with".



“With Modix, prototyping reduced turnaround time - sometimes within a day - we got a new version in the hands of the engineer. In terms of material we don't even need to make metal parts” says Max Roest, FloatScans’ CEO.



***DINOSAURS REVIVED:
TRIEBOLD'S
JURASSIC JOURNEYS
WITH MODIX LARGE
3D PRINTERS***

THE COMPANY

Triebold Paleontology, Inc. (TPI) has been a beacon in the world of paleontology for over 30 years. They specialize in providing fossil skeletons, skeleton casts, and a plethora of paleontological and exhibit-related services to global institutions, including museums and universities. Founded by Mike Triebold, TPI is renowned for its world-class skeletons and its collaborations with major institutions, which allow them to offer some of the most unique cast fossil skeletons available.

THE CHALLENGE

Printing large and intricate fossil specimens in a manner that maintains their authenticity and detail has always been a challenge. Traditional methods, which involved printing fossils in smaller sections followed by reassembly, were time-consuming and often lacked the desired precision.

THE COMPANY

Triebold Paleontology, Inc.

WEBSITE

www.trieboldpaleontology.com

VERTICALS

Museum Exhibitions and Displays
Educational Institutions
Research and Development
Cultural and Historical Preservation

APPLICATIONS

Fossil Replication
Interactive Exhibits
Academic Tools
Restoration Projects
Merchandising

PRINTER

Modix BIG Meter

THE SOLUTION AND OUTCOME

To overcome these challenges, Triebold Paleontology employed the Modix BIG Meter 3D printer. This printer, with its extensive build volume, enabled Triebold Paleontology to print vast fossils in their entirety, removing the need for segmented printing and subsequent assembly. Their success was vividly captured in a timelapse video of a Duckbill Sacrum being printed. The Modix team's unwavering support ensured that any challenges, especially those related to printing organic shapes, were promptly addressed.



"Triebold Paleontology, Inc. has very much appreciated the Modix BIG Meter for its cost and build volume. It has also allowed us to print HUGE fossils whole, which previously we had to print in small sections and reassemble. Most importantly, the Modix team has been promptly responsive to the various problems that we encounter when printing organic shapes and has worked closely and generously with us to ensure we can keep producing",
Evan Sonnenberg, Triebold Paleontology

ANCIENT NEEDLES, MODERN MAGIC: 3D-PRINTING ACUPUNCTURE'S OLD WISDOM AT HONG KONG MUSEUM.

THE COMPANY

The Hong Kong Museum of Medical Sciences, established in 1996 in the historic Old Pathological Institute, is dedicated to educating the public on the evolution of both traditional Chinese and Western medicine. As a research and preservation hub, the museum emphasizes Hong Kong's medical history and its battles against infectious diseases. In collaboration with the Acuman Project, the museum merges the ancient wisdom of Chinese medicine with modern technology, underscoring its commitment to preserving and highlighting the profound history and practices of medical sciences.



THE ORGANIZATION

The Hong Kong Museum of
Medical Sciences

THE PRINTER

Modix BIG-60 V2 and V3 3D

VERTICAL

Museum and Exhibition Design
Education
Medical Research
Cultural Preservation
Technology and Innovation

APPLICATION

Artifact Restoration
Interactive Exhibits
Medical Training
Research and Development
Cultural Events

THE CHALLENGES

The museum aimed to create a detailed and realistic representation of acupuncture points and techniques for professional studies. The challenge lay in ensuring the precision, scale, and authenticity of these restorations, especially for the 3D Acu-man acupuncture model, which was intended to be a 1:1 scale representation.

THE SOLUTION AND OUTCOME

To address this challenge, the museum employed the Modix Big-60 V2 and V3 3D printers, known for their precision and large-scale capabilities. These printers successfully brought the 3D Acu-man model to life, resulting in a life-sized, detailed copper acupuncture model. The 3D Acu-man Exhibition, held at the Madam Ku Kei Kwan Priscilla Gallery, won the Grand Prize in the HKIE Innovation Award 2021 and was extended due to its immense success.

THE SOCIAL IMPACT

The 1:1 scale 3D Acu-man model has had a profound social impact. It has provided technology experts, students of ancient Chinese medicine professionals, as well as the general public with a tangible, detailed representation of acupuncture points and techniques. This blend of ancient knowledge and modern technology has not only served as an educational tool but has also bridged the gap between traditional practices and contemporary understanding. The project has benefited countless individuals, promoting error-free learning and a deeper appreciation for the intricacies of Chinese medicine.

Modix

Large Scale 3D Printers

