

# From dream to design.

Bring concepts to life with multi-material 3D printing.



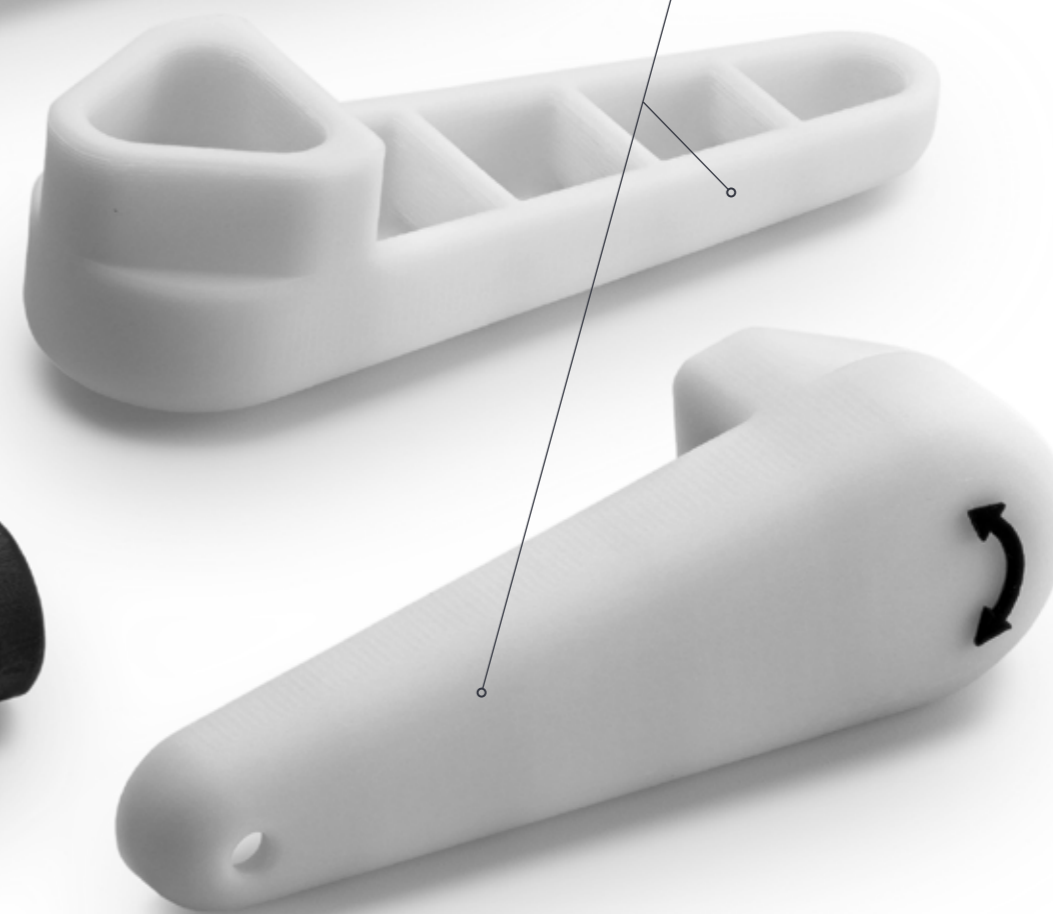
# Dreaming great designs.

Great designs don't just happen — they take a lot of effort, planning and imagination to achieve. From concept validation and design verification to testing functional performance, using models in each stage of the design process can revolutionize a designer's work. And 3D prototypes relieve the pain, hasten the process and extend financial benefits at each stage.

**Application:**  
Pivot connector  
**Materials:**  
DigitalABS+ and VeroBlack



**Application:**  
Gas tank handle  
**Materials:**  
DigitalABS+ and VeroBlack



**Application:**  
Assembly jig fixture  
**Materials:**  
Agilus30 Black™  
(soft touch) coating on  
a Vero (rigid) core



**Application:**  
Automotive door panel

**Materials:**  
DM Vero Black Plus and Vero PureWhite™



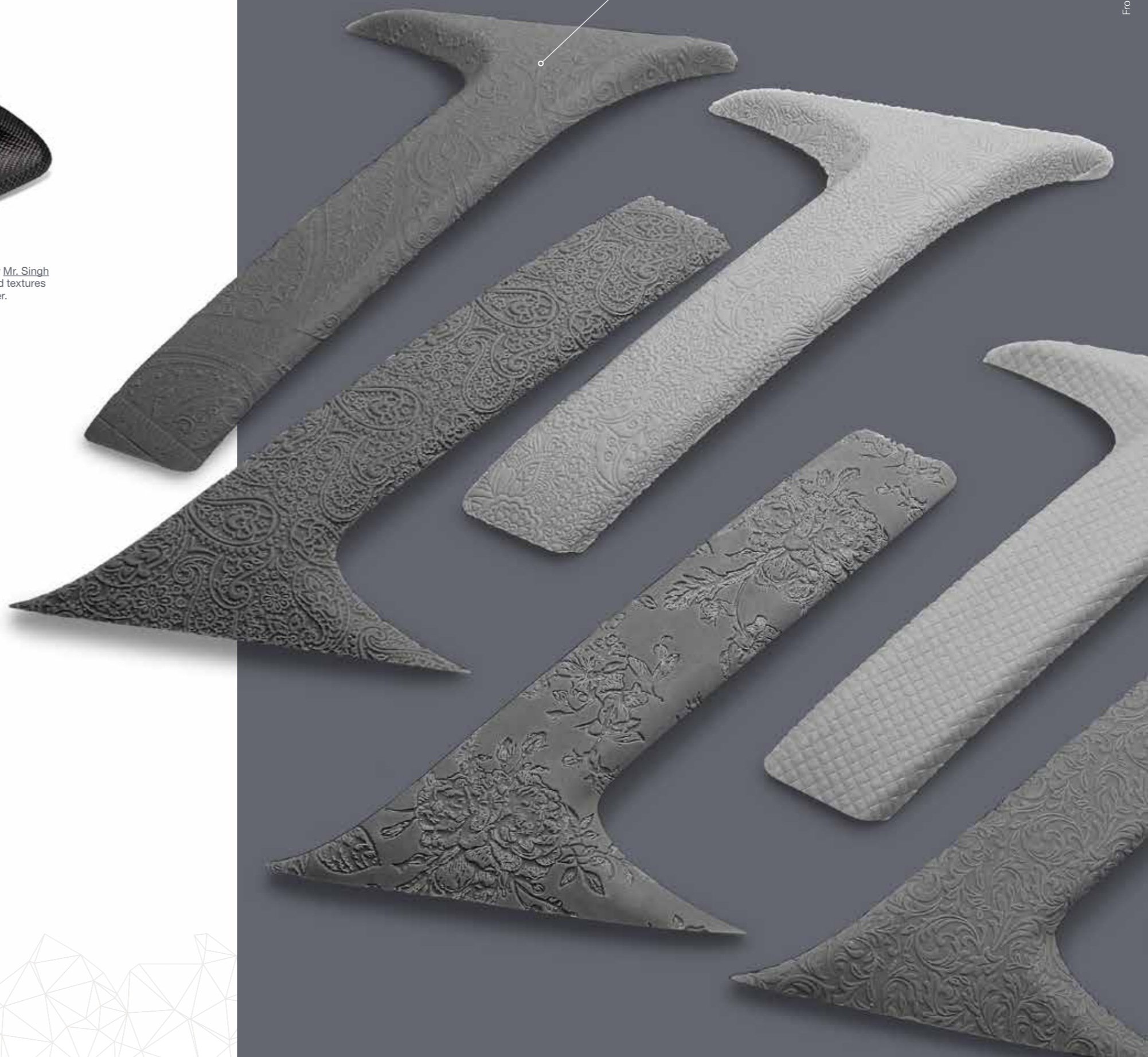
Initial form design by Mr. Singh with modification and textures added by Naftali Eder.

## Where it all starts: concept validation.

Proof of concept modeling is a fundamental step in the development process. It allows the designer to go from drawing to actual visualization — bringing true innovation to life. For example, automotive designers and engineers gain the ability to design and test relatively large parts in different textures and patterns with increased efficiency and creativity. You can also watch your client's excitement unfold as they hold, touch and examine accurate models from all angles. Plus, see how a tangible prototype can facilitate the decision-making processes while lowering costs, increasing client buy-in, trust and confidence.

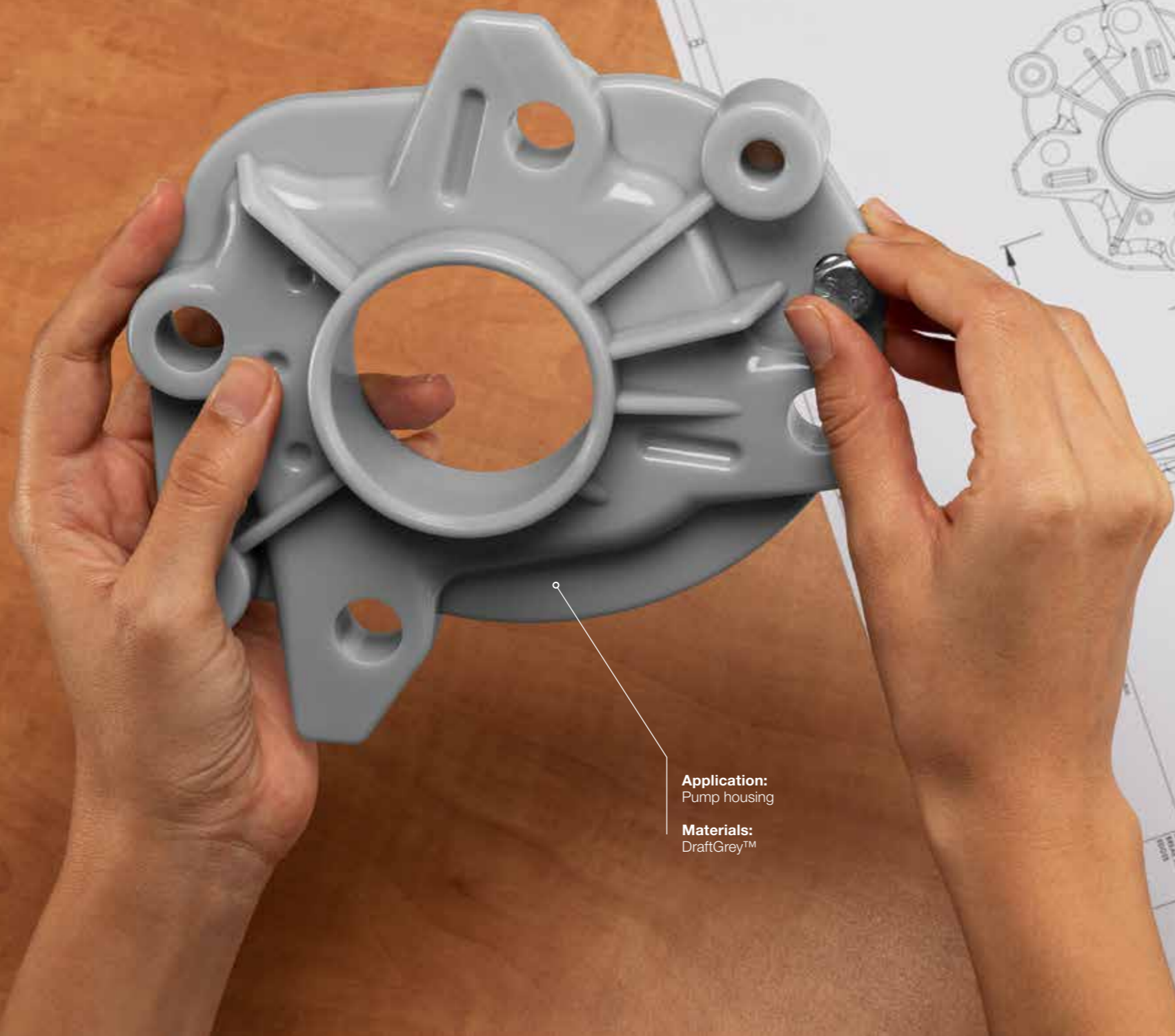
**Application:**  
Automotive door handle with  
interchanging patterns and textures

**Materials:**  
DM Vero Black Plus and Vero PureWhite



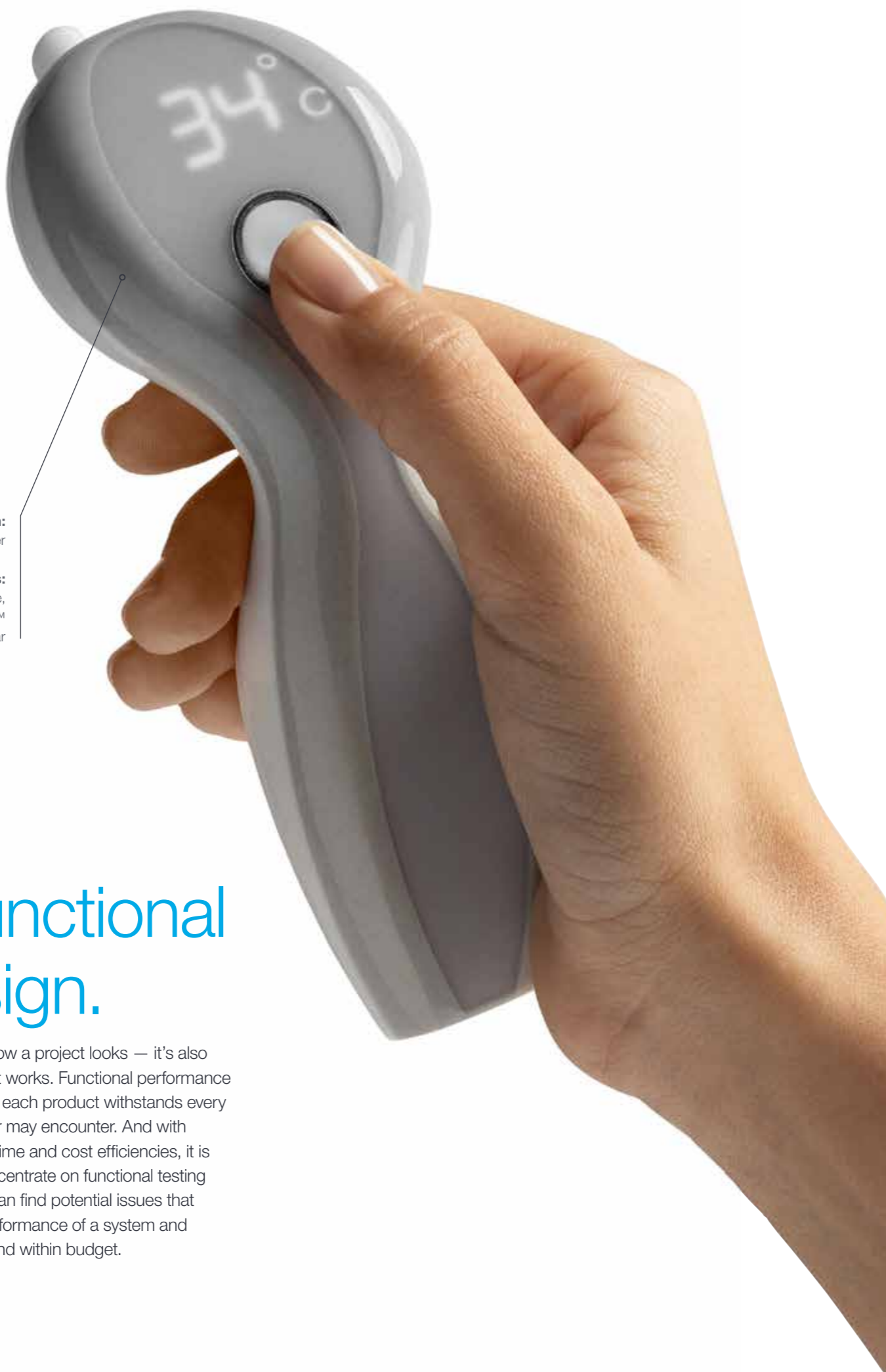
# Dedicated design verification.

While concept validation determines if you've selected the right design, design verification helps determine if you are building the design optimally. This key step enables the designer to spot flaws early in the process and consider design improvements that mitigate unnecessary costs down the road. This is a cost-efficient stage that ensures the final result represents their innovation and professional outcomes clients seek.



**Application:**  
Pump housing

**Materials:**  
DraftGrey™



**Application:**  
Digital thermometer

**Materials:**  
Vero PureWhite,  
VeroBlackPlus™  
and Vero Clear

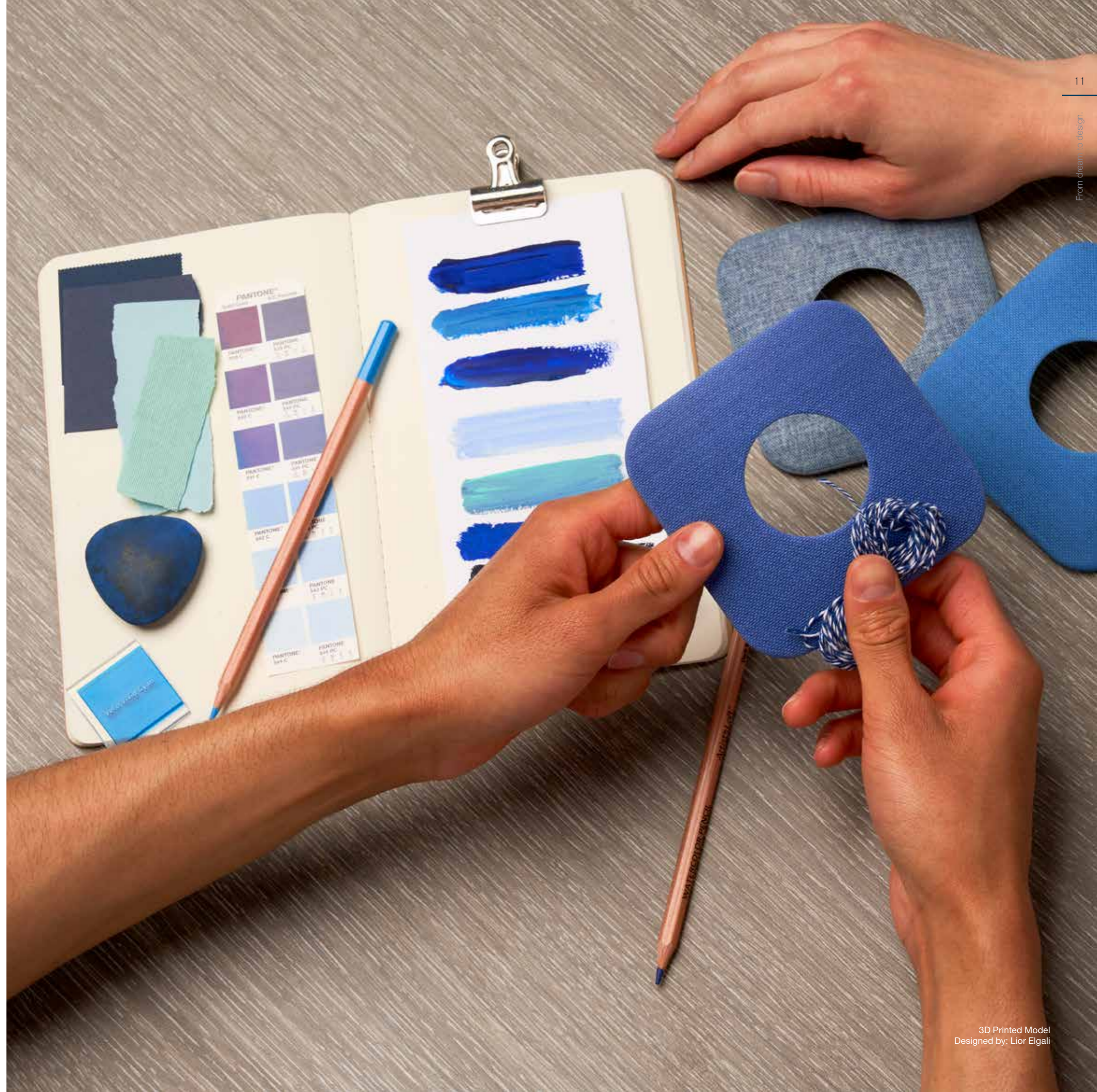
# Fully functional by design.

Design is not only about how a project looks — it's also about whether the product works. Functional performance testing aims to ensure that each product withstands every possible condition the user may encounter. And with 3D modeling's shortened time and cost efficiencies, it is easier and cheaper to concentrate on functional testing opportunities. Designers can find potential issues that could affect the overall performance of a system and improve them quickly — and within budget.



# Start redesigning the realms of possibility.

Draw inspiration from designers who have embraced texture, transparency, color and more with PolyJet™ technology and explore the nearly endless possibilities of multi-material, full-color 3D printing.

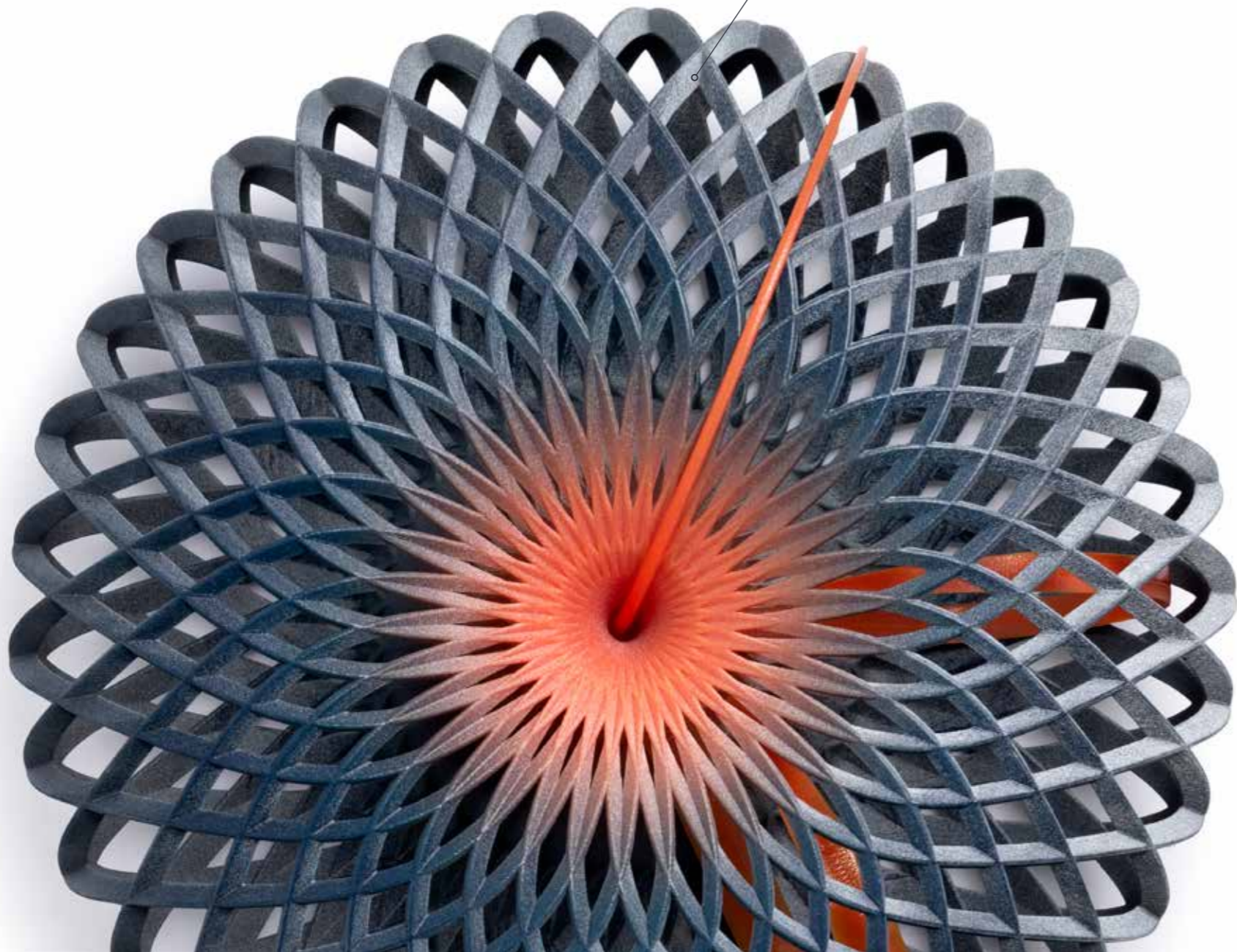


# Geometry of time.

Capturing the complexities of geometry and the intricacies of time, this dynamic clock design was transformed from imagination to reality with multi-material 3D printing.

**Application:**  
Functioning prototype

**Materials:**  
VeroVivid™, SUP706B™



**Application:**  
Consumer product prototype

**Materials:**  
VeroUltraClear™, VeroVivid,  
Vero PureWhite



Clear reflector

Text labels

Grip texture



# Shining a light on realism.

Incorporating texture, realistic detailing and PANTONE® color matching, this flashlight was 3D printed in four easy-to-assemble parts with perfect accuracy and tolerances.



**Application:**  
Product redesign

**Materials:**  
VeroUltraClear, VeroVivid,  
Vero PureWhite

# An easy arrangement.

Mimicking the appearance of blown glass and featuring individual tubes to help a person create the perfect botanical arrangement, this vase is a prime example of how 3D printing can be used to reinvent a common household item.





**Application:**  
Mechanical  
assemblies

**Materials:**  
VeroUltraClear,  
VeroVivid,  
Vero PureWhite,  
VeroBlackPlus™

# The design of engineering.

Housing a complex system of colorful gears and mechanisms in a clear casing allowed for part differentiation, observation and handling without the risk of damage. These motor and gear box assemblies were also created in a single 3D print.






KeyShot® material render swatches



# Seeing renders in reality.

Innovating at the speed of trends requires fast design. These 3D printed eyewear prototypes were used to quickly explore combinations of color and texture as well as test wearability before landing on the final, trendsetting look.

 Find out how other designers use color, textures and patterns in fashion.


**Application:**  
CMF Prototype  
**Materials:**  
VeroFlexVivid™, VeroBlackPlus



Designed by: Lior Elgali

# Encircled in color.

When it comes to any accessory, look, fit and feel are critical. And by 3D printing a wearable prototype, design details like size, shape and color combinations can all be tested to create that perfect statement piece.

 See how color can change the way you 3D print.



**Application:**  
User testing, exact-match marketing model

**Materials:**  
VeroVivid, VeroUltraClear

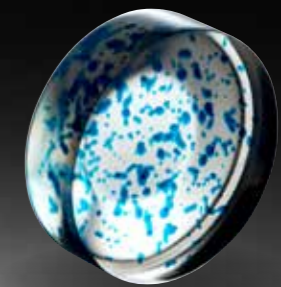
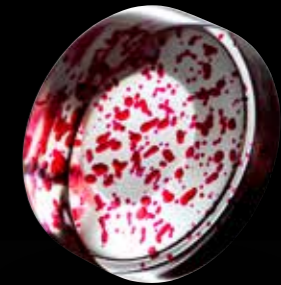
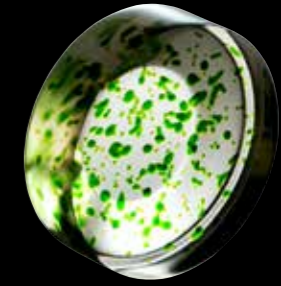
# Featured in lights.

When designing lighting, using glass in the early design stages is not always possible. So to achieve optimum illumination, 3D printing and transparent materials are key for concept and aesthetic exploration.



**Application:**  
Lighting Model

**Materials:**  
Vero PureWhite,  
VeroVivid,  
VeroUltraClear





# A functional point of view.

Does form still follow function in the world of product design or do aesthetics matter more? With multi-material 3D printing, it was possible to design for both aesthetics and usability through the exploration of color, shape and function of this on-the-go camera case.

▶ Learn how 3D printed prototypes fuel faster design decisions.


**Application:**  
Functional prototype

**Materials:**  
VeroUltraClear,  
VeroCyanV™,  
Vero PureWhite,  
VeroBlackPlus,  
Digital ABS™,  
Agilus30 Black



# Still life.

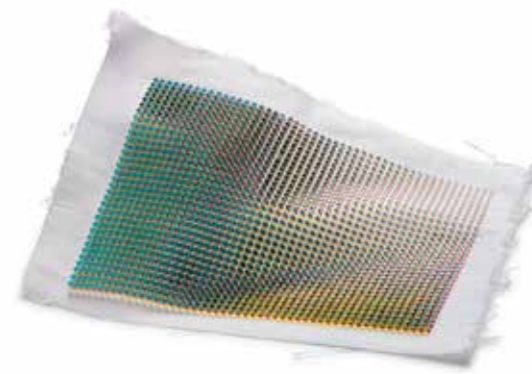
Transparent 3D printing materials allow enough light to pass through so that objects, colors, textures and fragile details safely contained within can be seen clearly. They can also be used to simulate glass or test functionality and aesthetics.

 Discover other inspiring and impossible 3D materials.

**Application:**  
Delicate, detailed models

**Materials:**  
VeroUltraClear, VeroVivid,  
Vero PureWhite, VeroBlackPlus





**Application:**  
Art and fashion

**Materials:**  
VeroUltraClear,  
VeroVivid,  
Vero PureWhite,  
VeroBlackPlus,  
Custom VoxelPrint  
materials

# Inspired by natural design.

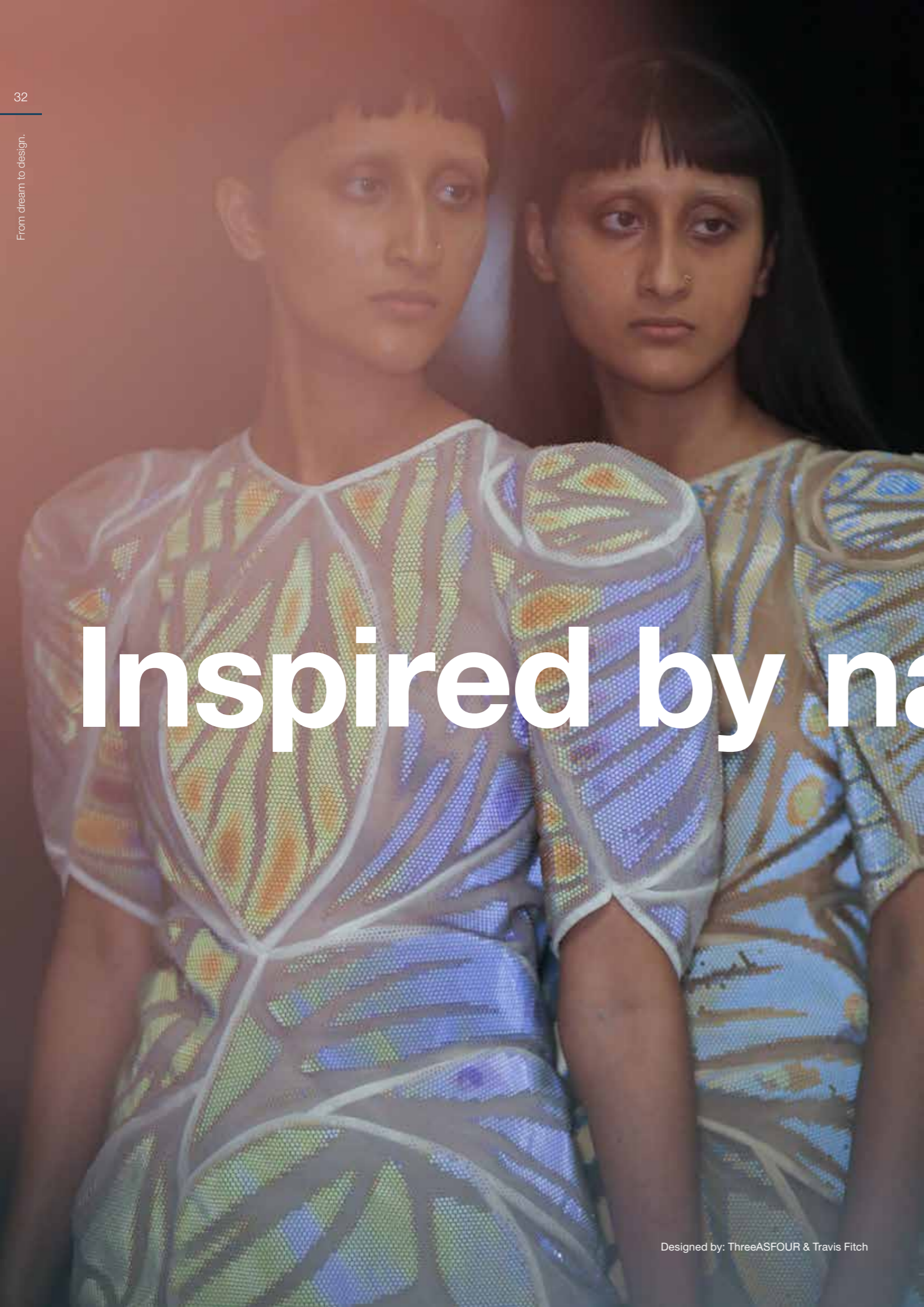
In a design inspired by the microscopic colors and light filtering of an insect's wings, photopolymers were 3D printed directly onto fabric in a first-of-its-kind approach. A reminder that innovation is limited only by imagination.



 Watch the Chro-Morpho Collection come to life.







# Inspired by natural design.

Designed by: ThreeASFOUR & Travis Fitch



# The full package.

Create more than a thing — create an experience. Using multi-material 3D printing, this packaging design demonstrated how the right mix of colors, parts and graphics could be used to create the ideal unboxing experience.

▶ Watch the unboxing of this true-to-scale packaging model.



**Application:**  
Packaging

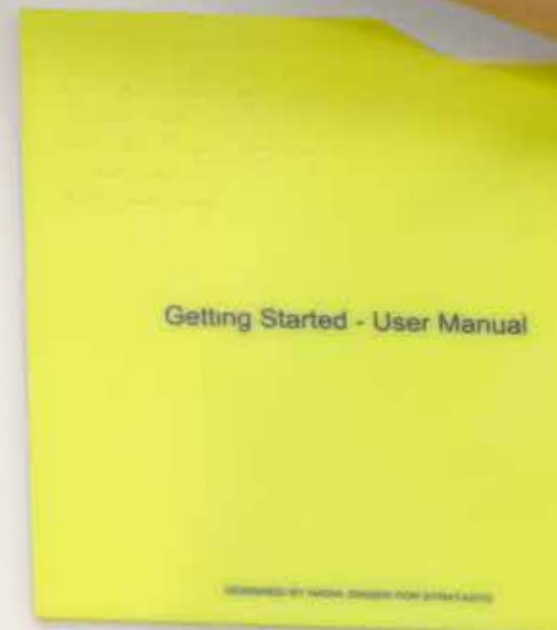
**Materials:**  
VeroUltraClear,  
VeroVivid,  
Vero PureWhite



Text


Graphics

Thin and flat parts



# Flexible listening.

Create designs that respond to touch. Using multi-material 3D printing, this earbud case prototype was designed to test real-life functionality and explore elements of flexibility.

 Discover how you can make your prototypes flex.



**Application:**  
Prototype

**Materials:**  
VeroVivid,  
Vero PureWhite,  
VeroBlackPlus,  
Agilus30 Black





# Ideas of note.

Just imagine what you could make. Bound by no design limits, these notebook covers explore CMF and the creative possibilities of multi-material 3D printing including color, transparency and texture.



**Application:**  
Creative capability

**Materials:**  
VeroUltraClear, VeroVivid,  
Vero PureWhite, VeroBlackPlus,  
Agilus30 Black, Digital ABS

# The shift in evolution.

From concept to end result, design is an evolution of stages. This gear shifter prototype demonstrates the 3D printing process from fast draft, single-material concept to exploring leather textures, woodgrains and stitched details and selecting a final design.

Find out how other designers use color, textures and patterns in fashion.



1

Concept model



2

Sketch model



3

3-color model



4

Final, full-color model

**Application:**  
Automotive interior trim design

**Materials:**  
DraftGrey, VeroUltraClear, VeroVivid,  
Vero PureWhite, VeroBlackPlus, Agilus30™




Design inspiration sample

# Printed, not carved.

Natural, realistic textures are not only possible — they're simple. Easily mistaken as a handcrafted toy, this toy car is a prime example of how 3D printing can be used to mimic the look and texture of real wood.



 See how easy it is to go from render to print.

**Application:**  
Render-to-print model

**Materials:**  
VeroVivid



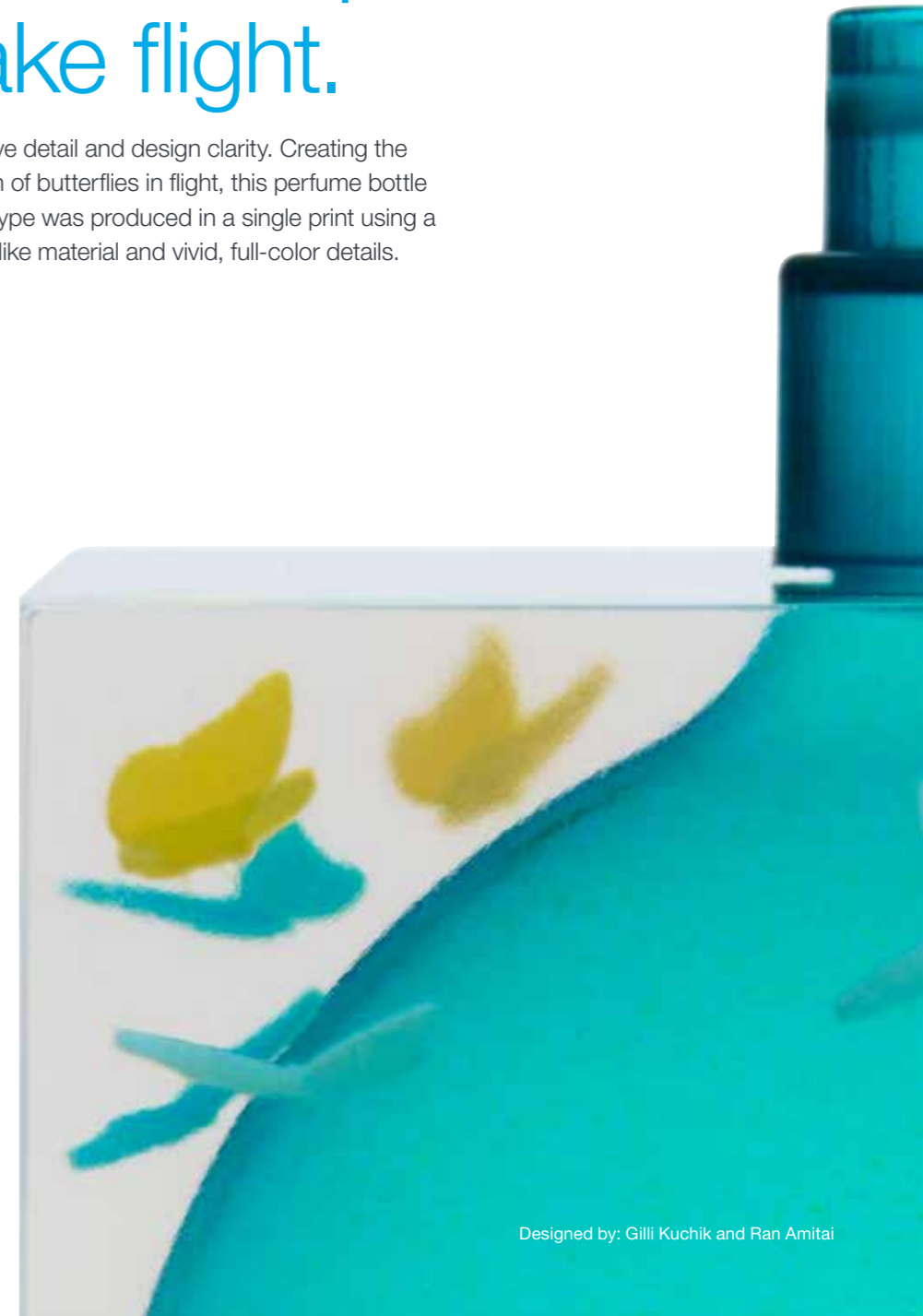


**Application:**  
Concept model

**Materials:**  
VeroUltraClear, VeroVivid,  
VeroBlackPlus, Vero PureWhite

# Let concepts take flight.

Achieve detail and design clarity. Creating the illusion of butterflies in flight, this perfume bottle prototype was produced in a single print using a glass-like material and vivid, full-color details.






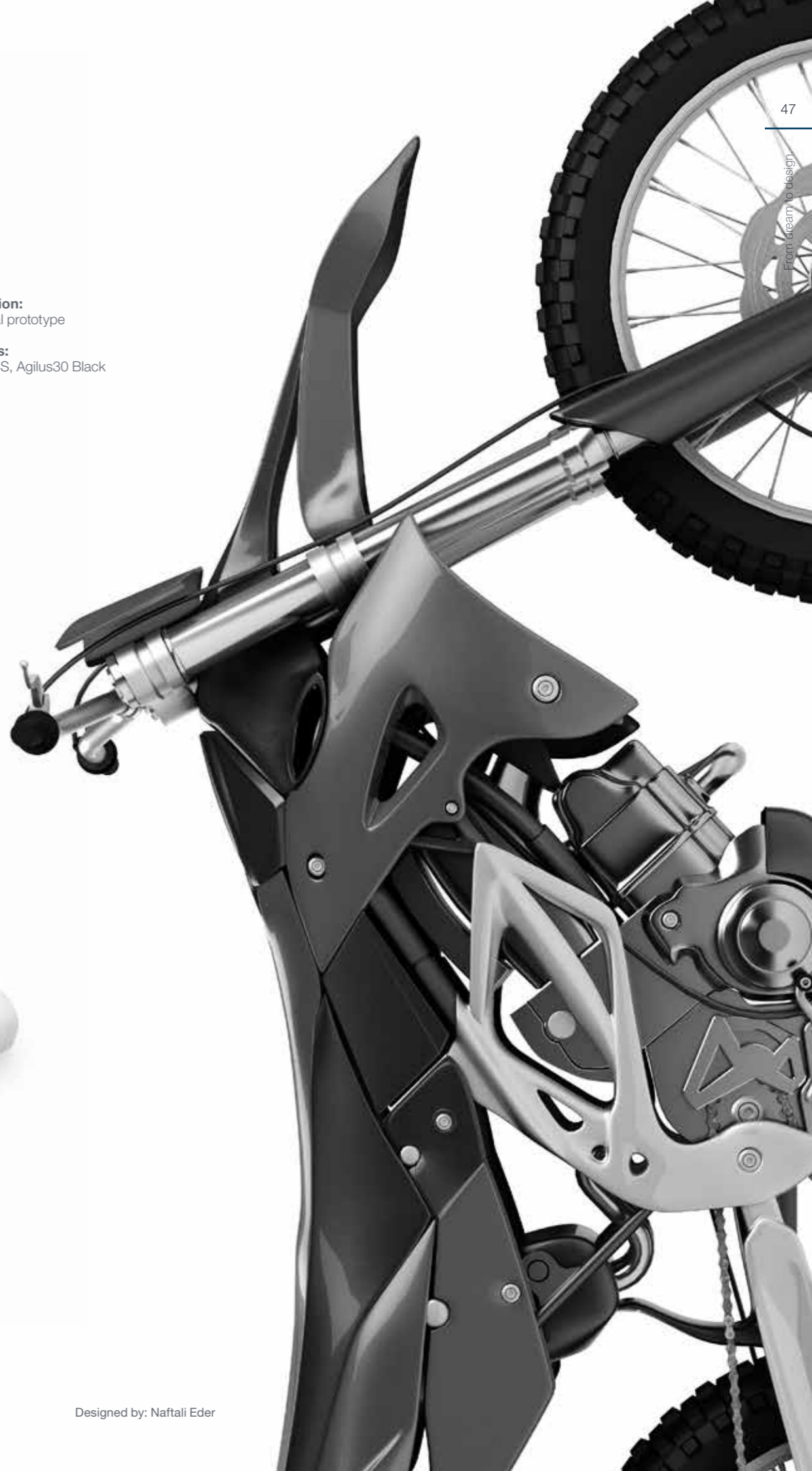
**Application:**  
Functional prototype

**Materials:**  
Digital ABS, Agilus30 Black

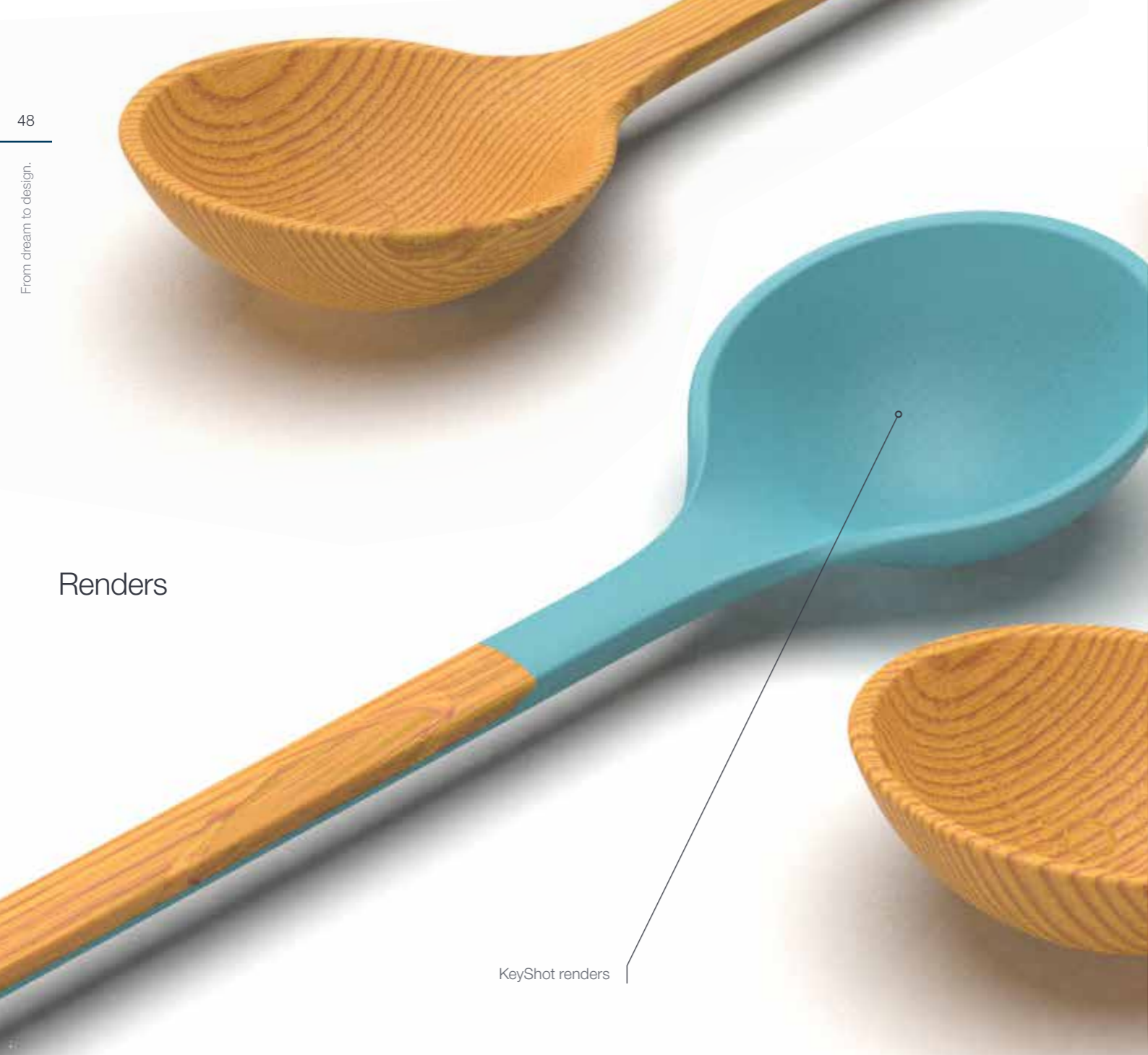
## Hit the throttle.

The ability to make faster decisions drives design forward. Replicating the look and feel of rubber, these throttle assembly prototypes were used to rapidly test strength, durability, flexibility and grip before landing on a final design.

 Find out how you can create flexible, rubber-like designs.







Renders

KeyShot renders

# Serving up color.

It's all about achieving the right balance of design elements. Taking this serving spoon from render to print was the ideal way to test out the functionality, vivid color combinations and wood grain patterns that would be featured in the final product.

 Watch how you can refine your designs faster.



Full-color 3D prints

3D printed reality

**Application:**  
Render-to-print prototype

**Materials:**  
VeroVivid

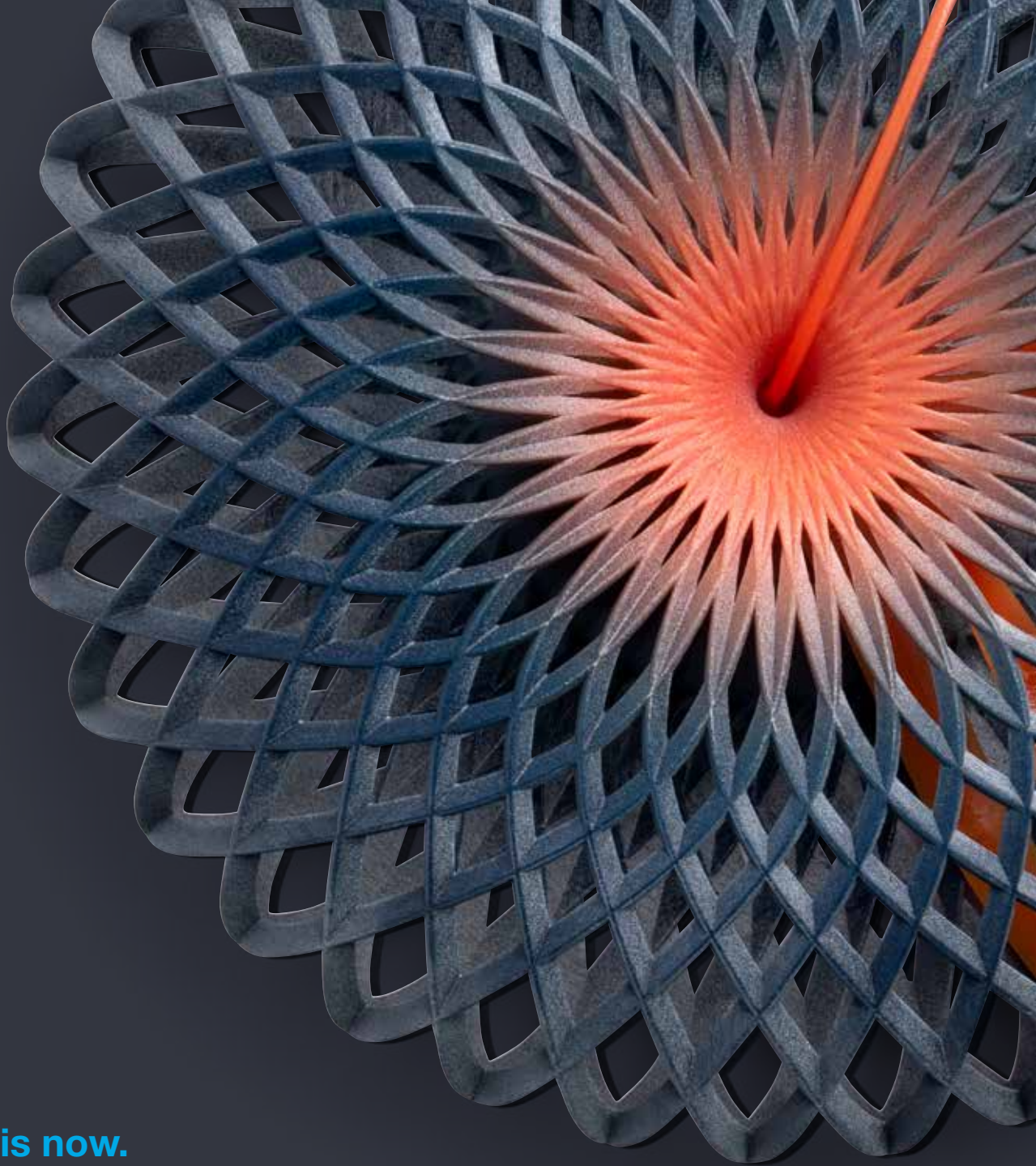
Designed by: Nadia Zinger Wagshall

# Imagine, innovate, create with PolyJet 3D printing technology.

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with the J8™ Series.



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