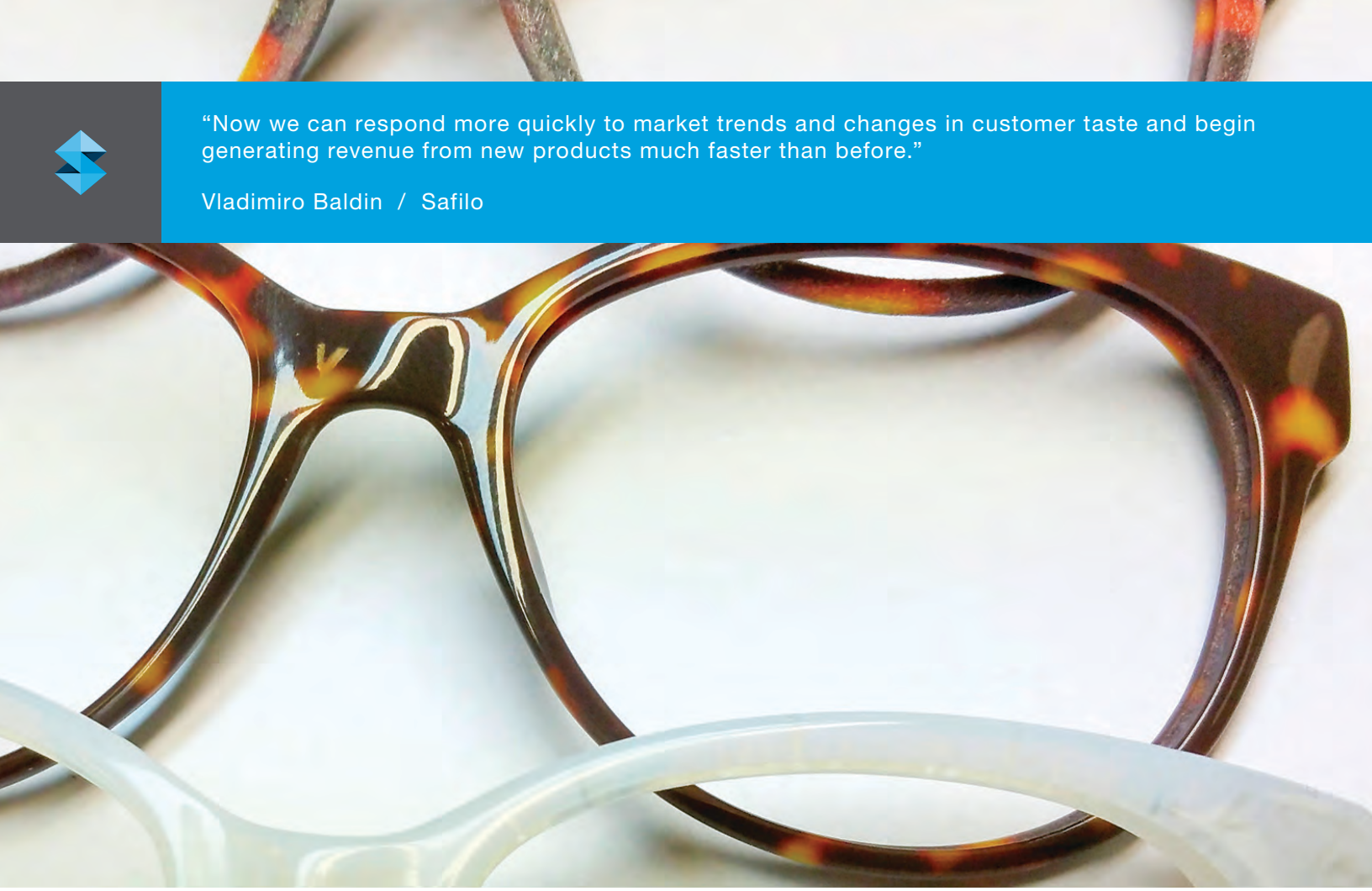

> “Now we can respond more quickly to market trends and changes in customer taste and begin generating revenue from new products much faster than before.”
>
> Vladimiro Baldin / Safilo

Safilo now produces eyewear frame prototypes in colors and textures that match the production frames.

CASE STUDY

Seeing is Believing

STRATASYS SOFTWARE ALLOWS EYEWEAR DESIGNERS TO PRINT IN 3D STRAIGHT FROM ADOBE

Safilo is the second-largest producer of eyewear in the world. Known for stellar craftsmanship and superior design dating back to 1878, the Italian company distributes sunglasses, sports eyewear and frames for prescription lenses to more than 90,000 stores in 130 countries. With a large portfolio encompassing a variety of brands linked to different market segments and covering the entire spectrum of eyewear, Safilo’s continued success depends heavily on a streamlined design workflow.

Safilo’s high standards for style, creativity, functionality and quality demand accurate and realistic prototypes throughout the design process. The large number of frames produced by the company also means speed and efficiency are just as critical to its prototyping success.

Insightful Design

“Nowadays, additive manufacturing is more and more appreciated by designers because they can easily express their creativity. Therefore we are investing in finding a solution that can provide a real final look quickly and simply,” said Luca Bordin, 3D modeling specialist at Safilo.

In the past, a designer created new concepts in 2D using Adobe Illustrator. The detailed 3D geometry for the frame was then defined using CATIA computer-aided design software and exported into an STL file. The prototype was 3D printed without color, and then sent to an outside contractor who added paint. Printing the frame on the Stratasys 3D Printer takes about three hours, whereas an additional one day is needed for the contractor to complete the secondary processing.

Now with the Stratasys Creative Colors™ Software, powered by Adobe 3D Color Print Engine, Safilo can produce prototypes with color gradients and graphic textures with the same level of accuracy and realism – in-house on its Objet260 Connex3™ 3D Printer – without secondary processing.

“Safilo is best in class in the eyewear industry, renowned for its craftsmanship, while at the same time always looking for innovative solutions,” said Vladimiro Baldin, Chief Product Design and Creation Officer at Safilo.

“The ability to print prototypes with the same color and texture as the finished product has significantly increased our speed in developing new eyeglass frames. Now, using the Objet260 Connex3 3D Printer with Stratasys Creative Colors Software, we can push creative boundaries even further, quickly responding to market trends and reducing our prototyping cycle from two days to just three hours.”

Vision for Success

In the new workflow, the concept is still defined in Adobe Illustrator, and the 3D geometry in CATIA. But now Safilo designers bring the STL from CATIA directly into Adobe Photoshop and apply their own color textures. The result is a 3D PDF that tells the whole story, geometric and graphic.

The 3D PDF file is inserted into a tray, positioned properly and scaled to proper dimensions. The Stratasys Creative Colors Software presents a realistic 3D print preview, with color. The Connex3 3D Printer then prints the parts by jetting three materials simultaneously to match the intended finished product. Printing still takes about three hours, but now when printing is complete, the prototype is finished, saving the one day previously required to add color designs.

“This new system greatly shortens times, improves communication with the designers and gives a better sense of the finished product,” adds Daniel Tomasin, prototype area coordinator. “The ability to quickly produce glasses in different colored designs also lets us prototype multiple designs at once and always choose the best option.”

The simplified, smarter process has not only saved Safilo time, but has opened the door to more creative freedom.

The ability of the Objet500 Connex3 3D printer to reproduce colorful designs is limited only by the designer’s imagination.

Eliminating the need for secondary operations carried out by external suppliers saves one day on each prototype, helping Safilo get products to market faster.

METHOD	TIME
Old workflow (Handmade prototype)	15 hours to develop + 3 hours finishing = 18 hours
New workflow (Printed prototype)	3 hours to print + 3 hours finishing = 6 hours
Savings	12 hours 66%