

CASE STUDY: In the Search for Perfection, Every Last Detail Counts

The secret to the perfect cup of espresso lies in the right mix of air, water and coffee. What seems like child's play to a skilled Italian barista is, in fact, a fine art learned through long experience. However, since few people fill hundreds of tiny cups with the rich, precious brew on a daily basis in their own kitchens, it's hardly surprising that they lack practice, and the taste of their beloved espresso—brewed at home—can vary from one cup to the next.

"We were the first company in Switzerland to have a machine like this. We wanted to build our models quickly and easily, and we chose a Dimension 3D printer because it met all our expectations and lay within the price range we had set for ourselves."

Cristian Jarisch
Engineer with Nestlé Nespresso R&D
Lausanne, Switzerland



To solve this problem, innovative engineers at Nestlé Nespresso S.A. in Switzerland invented a small capsule over 20 years ago, which can be filled with just the right portion of coffee. Under the leadership of Alfred Yoakim, Nespresso has been continuously improving the coffee capsule and its machines since 1986.

Perfection down to the very last detail

In developing its capsule and coffee machine systems, Nespresso also modernized its development processes. In 2003, the Research and Development department paid a visit to the EuroMold trade show in Frankfurt and subsequently decided to buy a Dimension 3D printer. By 2003, Nespresso engineers had already taken the classic route of outsourcing model making projects to external firms. "This was a very time-consuming process. We sometimes had to wait several weeks for our models and might come up with new ideas, details and changes in the meantime that would make our products even more innovative. However, this also meant that the models under construction were already out of date." With the Dimension 3D printer, they can now carry out the most minor, yet potentially promising change to a detail in just a few hours. This is an advantage that the innovative Nestlé Nespresso company can no longer live without.

Alfred Yoakim sees design as an important part of everyday life. "The coffee machine is one of the first objects that many people deal with in the morning. It is certainly one of the most frequently used objects in the kitchen." As far as Yoakim is concerned, ongoing product development and improvement will therefore remain important priorities in the future



The fact that the company will continue to work with innovative partners like Dimension in the future is a foregone conclusion for the market leader from Switzerland.



Thanks to cooperation with De' Longhi, Krups, Siemens, Turmix, König and Miele in the manufacture of coffee machines, Nespresso currently has 5 model series on the market. They brew the same quality of espresso, lungo, cappuccino and caffè latte every time at the touch of a button and make life just a little bit better with 12 different varieties of Grand Cru coffee.

An essential tool for everyone on the design team.

Dimension 3D printing can help you quickly fine tune designs and cut weeks – even months – from your development schedule. Now you can test form, fit and function and explore as many design iterations as you like – over your network, right from your desktop.



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