Dream Team. Alfred Yoakim, mastermind and veteran director of the Nespresso Research & Development Department transforms dreams into reality. Tucked away in Paudex, Switzerland, he and his international team draw up the plans for some of the most innovative coffee machines imaginable. Have a peek behind the scenes of the Nespresso dream factory.
At R&D, each idea contributes to a further step in the development of Nespresso’s future – and the future of coffee.


For the past 20 years, Nespresso has been on a quest for the best coffee beans, the most ingenious design ideas and the most refined machine technology – an adventurous journey, whose success has guaranteed the best possible variety and satisfaction for coffee lovers the world over.

While Nespresso Green Coffee Experts tour the world in search of the finest green coffee beans, in Paudex, near Lausanne, the centre of attention is all on the machine which performs the wondrous task of giving these beans their liquid form. What are the specifications for optimum water pressure? How do you capture the fleeting moment when the freshly roasted beans release the best of their delicate aroma, without losing a hint of their valuable flavour? Who can guarantee that the technical requirements are implemented in such a way as to create a convincing fusion of aesthetics and taste experience?

Behind closed doors, well protected from the public eye, and operating under a pledge of secrecy, the Nespresso Research & Development Department in Paudex has been a hive of activity for a good 10 years now. It is here that ideas are conceived, and tended like highly sensitive plants. Only at the end of their development do they become the word on everyone’s lips – especially the lips of those who enjoy coffee of the finest quality.

This is a hot bed of ideas: ingenious designs, which are eventually transformed into the clear lines of the Nespresso coffee machines, ideas which culminate in the quintessential Espresso, Lungo or Latte Macchiato. The initiators of these ideas go about their extraordinary tasks in a friendly, collegial atmosphere under the guidance of Alfred Yoakim. It takes anything between 18 months and 10 years for a newly adapted, state-of-the-art coffee machine to make it from the drawing board out of the building. The small team is rarely lacking in humour as they swap flashes of genius in this creative atmosphere.

"Sometimes the best ideas occur just in passing. Then everything goes so fast that there’s no need for formal meetings," laughs Anissa C., Alfred Yoakim’s assistant. "Unofficially, I’m everyone’s assistant, because here we’re all in demand. We work together very creatively, on a non-hierarchical level. I think of it as a big family."
As she speaks, Alfred Yoakim hurries by. She waves at him, smiling, "Alfred has two sides to him: sometimes he's totally absorbed, and sometimes he just won't stop joking around. He is an artist, and sometimes he's on another planet. He's open to any kind of questions or problems in his team." she looks after him thoughtfully. "We have a lot of respect for him. In general, there’s an atmosphere of respect here. It goes so far that some of us are friends outside of work. Apart from that, there’s a productive exchange taking place here because we are an international team. I myself am Algerian, Alfred is Lebanese, and there are also people from Vietnam, Canada and France, not to mention Switzerland.”

**How can you work so seriously with so much cheerfulness?**

"The nice thing is, that there’s a strong sense of enthusiasm in the team. Everyone’s easily inspired. You rarely hear “No, but…” More often it’s “Yes, why not!” At the Research & Development Department, Alfred Yoakim leads the investigation into the ideal coffee machine. Alongside engineers and technicians, press and public relations experts, product managers, electricians and mechanics also form part of the team. First of all, a concept is devised. Then the first prototypes are assembled. During a test phase, these prototypes are further developed and reconstructed, and sometimes discarded, or put on hold until their time comes.

Virtual coffee machines are initially drawn using 3-D computer programmes, the first visible manifestation of many brilliant ideas, which often originate from a purely technical or mechanical starting point. "Thanks to the latest computer technology, I can often solve complicated problems right here on the screen," enthuses engineer and project manager Alexandre K. "At the same time, Minh Q. can get to work on the first models in the laboratory next door." "We often build several new prototypes," explains electrician Minh Q., "because the construction process often leads to new solutions."

The production phase is a complex and long-term affair. Often the teams alternate – sometimes in front of the machines, sometimes behind the machines, and sometimes in collaboration with the marketing team – to come up with new concepts. Alexandre P is highly motivated. He has been junior project manager for one and a half years in the Nespresso Research & Development Department. A trained engineer, he is responsible for revising the first ideas to find a proof of concept, which shortly afterwards will become a basic concept.
to be developed into a more tangible form in the Marketing Department. "Of course the starting point for designs is based on technical requirements. Then we develop blueprints that we will use as a basis for the collaboration with our colleagues from other departments at Nespresso."

Paudex is where the latest ideas for the newest coffee machines become reality, and are subsequently prepared for the first test runs with potential consumers. Together with his team of specialists, Alfred Yoakim constructs the first models, which sometimes go in to serial production in no time at all. Many models, produced by Cédric P under the strictest safety regulations, remain in the test stage.

Fabien A., industrial designer, is bursting with energy and ideas. He has been working with Nespresso R&D for six years. In his work, he concentrates on giving the prototypes the physical form and material qualities that make reference to the basic feasibility of the machines. His designs form the point of departure for Swiss designer Antoine Cahen, who gives the prototypes their final shape. "My work is extremely forward-looking and anticipatory. I deal with practically everything which could be possible in this sector in the future," emphasizes Fabien. As he speaks, you can practically see the ideas coming out of his head. "Pinpointing every conceivable possibility, which eventually could become reality in the future – that’s the aim of my work. Sometimes it takes three years of theoretical experimentation to get to where the ideas are today." His operational research ends in cooperation with designer Antoine Cahen: "When we get to that stage, Antoine Cahen gives the machines their typical style, a kind of architecture, if you like, and we go through the concept that has been agreed on together."

Once the machine has left Paudex, having received its new face and signature design, it takes no longer than 18 months to go into production. But by then, the Nespresso Research & Development Department will have long moved on, back to the drawing board – and into the future!