

ASML and High Tech NL Young Professionals in search of a new future

Every day is a challenge!

ASML in Veldhoven is a high-tech company that everyone is looking at. No wonder. Although it was started only about 30 years ago, ASML now employs more than 13,000 people all over the world and it has a turnover of €5.3 billion in 2013. Dr. Ir. Rob Hartman, Director Strategic Technology Program, had just waved goodbye to the Minister of Social Affairs and Employment, Mr Lodewijk Asscher, when he welcomed a group of 35 Young Professionals. They were ready for an instructive visit.

ASML

It's all about figures

An enthusiastic team of Young ASML had spent quite some time preparing for this visit which took place at Thursday June the 12th. Together with High Tech NL they set up the visit but it was up to Young ASML to work out the details. Some of them never miss a company visit organized by High Tech NL, which is why they were already very familiar with the type of visitors, their fields of interest and their eagerness to work in interactive sessions. They were ready for it! And so was Mr Rob Hartman. He welcomed his guests in the auditorium and presented the company to them. It seems to be all about figures. ASML started its activities back in 1984 with only 31 employees. Now 13,000 people work for ASML. The turnover was €1.2 million euro back then, and now it was €5.3 billion in 2013. The yearly investment by



An instructive visit

the former Philips Natlab activity was €5 million; now it is €1 billion. Nowadays, ASML serves 12 large customers. About 25% of the sales are done in the USA, 75% in Asia.

Should we continue? Mr Hartman explained Moore's law which predicted in 1965 that data speed and chip capacity would double every two years. Gordon Moore from Intel turned out to be right! This requires chips that are faster, cheaper and more energy efficient. This is what ASML offers the world by designing and manufacturing the most advanced wafer stepper systems. ASML's expertise is Lithography, the critical stage in chip making.



Mr Rob Hartman "About figures and success"

About Lithography

Photolithography projects a picture of an electronic circuit onto a light-sensitive layer on the silicon wafer. It uses ultraviolet light to shrink complex circuit patterns and print microchips with features as small as 27 nanometers (1 nm = 1 millionth of a millimetre)

at an incredible speed. This makes lithography the most advanced, costly and demanding technology in the chip making industry. ASML is continuously doing research & development to improve existing systems and to develop new technologies. As Mr Hartman said: "We don't know exactly what the technological boundaries are of these improvements but it is challenging and fun to work on them. So, if you are looking for a next career step...". One of the members of Young ASML added later that, indeed, every day is a challenge. That is what high-tech industry is about!



Witnessing a James Bond set?

Then it was time for a guided company tour. The Young ASML members were our guides. As we expected, some places seemed like the set of the latest James Bond movie. We saw ultraclean rooms with high-tech equipment in them and people walking around like robots dressed in white suits, unrecognizable even to their relatives. Nevertheless, we got a very good idea about the characteristics of a system integrator. ASML only produces 10% of the equipment themselves; 90% is produced by high-tech suppliers. This emphasized the culture of open innovation in which a wide range of suppliers play an important role. Open innovation seems to be the key to speeding up development and staying ahead in a global playing field. This also seems to be a unique selling point of the Dutch high-tech industry which can be a player in niche markets or a global leader in certain applications.

Thinking business

Roy Scholte, one of the Young ASML Professionals, presented the interactive case. Nothing lasts forever. ASML's market may run out of steam in the long run, perhaps in 15 years. So the question is: Can ASML expand current technologies or can ASML's

capabilities be used for new products? Four teams were formed and every team started to do a brainstorming session. These broad questions could not be answered that easily. We could have even spent a whole weekend working them out. Nevertheless, with some support from ASML colleagues, the teams were able to



Getting inspired by the future of ASML

define creative approaches. This challenge asked a question that not only applies to ASML but which should be answered every day in every company. It was an instructive part of the visit when the spokesmen of each team presented their findings. The findings were discussed enthusiastically. These discussions did not stop even when we had a drink to conclude this company visit, which proves again that "thinking business" is inspiring and a challenge for every technical engineer.

Thank you ASML and thank you Young ASML! We would like to meet you all again on October 8th at the Technical University in Eindhoven where we will get to know about eight interesting knowledge- and research institutes.

June 17th, 2014

Jos van Erp
Program Director High Tech NL

