

The Future of Research and Development in the Digital Printing Industry

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In recent years many large corporations have moved away from doing all R&D in vertically integrated organizations within the corporation to a model in which only selected critical or 'core' R&D is done in more or less the traditional way and the rest is done by some other model, including:

- Acquiring technology
- Industry / academic partnerships
- R&D partnerships
- R&D outsourcing
- Globalization (R&D in lower cost geographies)
- "Open Innovation" processes

Given the very challenging global economic environment today, this trend will probably continue or even accelerate.

Within this trend digital printing and the digital printing industry itself have matured to a large extent. Most of the base technologies have been developed and largely optimized over the past 30 years. We have witnessed new technology coming of age and thereby enabling major transitions from analog copying to digital printing, and from black and white to color. Meanwhile printquality, reliability and print speeds have increased dramatically and costlevels per print have come down significantly.

Many segments of the digital printing market have commoditized, with many players competing for the favour of customers that seem to be more and more interested in costs only. In many cases competing on specs that once drove the industry forward such as speed or printquality doesn't pay off anymore. Printing companies tend to adress this commoditization and price fighting in different ways. Driving technology and new printers up-market to ever increasing higher speeds and printvolumes is one way, looking for recognized added value is another.

Apart from commoditization there is the digitization trend itself that once pushed the printing industry forward, but now threatens its very existence. Paper documents will be more and more replaced by their digital counterparts. This can be seen in all of the 4 phases in the document lifecycle: creation, distribution,

use and archive. While creation is already almost completely digital, archiving and distribution is quickly moving in the same direction. And in the use phase of documents, we see a fast rise of e-readers and displays challenging the need for hardcopy.

In the light of the above, what are the challenges that lie ahead and what technology breakthroughs will enable the next major transitions in the printing industry? What are appropriate models and options for corporate R&D to adress these challenges? How does a corporation choose what R&D to keep in-house and what to apply some other model to? And last but not least, how can technology developed for digital printing be successfully leveraged to enable new applications to create growth with new business opportunities outside the domain of 'printing on paper'?

During the keynote the author will discuss the above mentioned questions and present his personal views on what will shape the future of Research and Development within the digital printing industry.

Author Biography

Marcel Slot is Vice President of Development at R&D of Océ-Technologies B.V. in the Netherlands. After studying physics at Twente University of Technology, he joined Océ 19 years ago. He was involved in technology and product development for 14 years as a project leader. His professional focus has been directed towards electrophotography as well as inkjet printing process technology and material science. Before he was appointed Vice President of Development he was director of a Research department for 3 years. During this time he started founding Océ's Inkjet Application Center on the High Tech Campus Eindhoven, aiming to develop and exploit new business opportunities with inkjet technology within an open innovation setting.

He is 42 yrs old, is married, has two daughters and lives in a small farmhouse in a village near the headquarters of the Océ group.