

23. The Reunion

Gjalt Smit is handed a demoralized team that's convinced Philips has rigged up a special gallows to rid itself of them.

In the spring of 1984, forty-seven Philips employees have little to look forward to. They've been selected by Wim Troost to move to the company's new joint venture, ASM Lithographic Systems, on April 1. It's a dispirited group that's been saddled with a single employee from ASM International, seventeen unsellable machines, and a terrible image. Meanwhile, market leader GCA has hundreds of steppers on the market and runner-up Nikon is quickly gaining ground. ASML's market share? Zero percent.

Renowned market analyst Rick Ruddell proclaims the joint venture between ASM and Philips dead in the water. Ruddell is an expert on the lithography market. In the mid-seventies he tracked the rise of Perkin-Elmer, and he watched as in the early eighties the market leader came under pressure from GCA, which brought the first commercial wafer stepper to market in 1978. In 1981 semiconductor companies bought as many steppers from GCA as they did projection aligners from Perkin-Elmer and Canon.²

In the seventies Ruddell wrote admiringly about Natlab and the highly advanced stepper it developed in late 1973. He praised the pioneering Dutch spirit. But his enthusiasm vanished in the early eighties as GCA scored customer after customer and S&I just didn't seem to grasp the game.

Ruddell visited Eindhoven, but as the years passed, S&I's vision and plans grew fuzzier. As the American analyst became increasingly negative about the Dutch multinational, he praised Japan's up-and-coming Canon and Nikon. He published his conclusions in lengthy reports, well substantiated with statistics and analyses. In the early eighties he ripped the activities in Eindhoven to shreds. Ruddell kept repeating the same humiliating message: Philips doesn't know what it wants to do with its steppers.

In the Ruddell & Associates report for 1983, the Dutch company was a laughingstock. “Since Philips chose not to respond to our questionnaire, we shall attempt to provide what information that we have,” Ruddell wrote, referring to the first reports of a joint venture with ASM. He instantly put his finger on the problem: “Philips has never been able to ‘get off the dime’ and give this system the sales support that it deserved.” Then he got vicious: “Imagine, one of the largest corporations in the world was unable to take even the first steps that [Liechtenstein’s fledgling stepper manufacturer] Censor has accomplished. And the irony of it is that until very recently, Philips probably had the finest stepper in the world.”

Ruddell wryly concluded that it was no surprise, then, the Dutch company wasn’t able to “get their act together and come up with some response” to his survey and repeated phone calls. Then he hung Philips out to dry. He listed every question he asked the company. Beneath nearly all thirty-one of them was written “No comment.”

Ruddell’s observation was painful, but he was right. After Troost issued his 1979 edict to build a stepper with a hydraulic table, S&I’s engineers stubbornly kept working on an unsellable concept. S&I didn’t look outward, at competitors and customers, but poured all its energy into completing a machine no one was interested in having.

In 1982 S&I did deliver the technology to IBM, but no orders followed. Subsequent attempts to create joint ventures with Cobilt, Perkin-Elmer, and Varian ran aground. And all that while, Philips wasn’t investing in optical lithography. It wasn’t freeing up money for a sales division. For nearly two years, development at S&I was at an effective standstill.

* * *

The engineers that Philips has transferred to the joint venture are all too aware of their position. They’re the joke of the lithography market. No one is betting even a penny on their resurrection. No wonder ASML’s employees view their new home as a leveraged die-

out, a play on the term *leveraged buyout*: a spinoff created for the purpose of going bankrupt. It's how Philips has decided to shed its unnecessary baggage, they're all steadfastly convinced.

But then Troost organizes a meet-and-greet with Del Prado and Smit in the Bilderberg hotel. For Smit it's a veritable reunion. He encounters former colleagues such as Joop van Kessel and Ger Janssen, people with whom he got along well eight years ago in his time at S&I. A few years back he even tried to convince Van Kessel to come work for him.

When Smit climbs onto the podium and, full of fire and passion, tells the group he plans to conquer the world with their wafer stepper, his words are met with disbelief and skepticism. Then Van Kessel takes the stage. He knows Smit made quite a career for himself at ITT, and he knows the man from the time they did business for S&I together in Italy. Van Kessel knows that Smit's extremely talented. "You can trust Gjalt Smit," Van Kessel tells his peers. The mood after the meeting is more positive. Troost and the HR employee in attendance clap Van Kessel on the back. "Great work, Joop. You've done these people a huge favor."

Smit is also glad of Van Kessel's presence. They go way back. Smit knows this natural skeptic is a go-getter with a good feel for sales and an ability to lead others. Van Kessel will soon grow into Smit's most vital pillar of support.

* * *

After the meeting, Smit immediately contacts Van Kessel. He wants to know what's really going on. Van Kessel calls Richard George and Ger Janssen to join them, and the three men tell Smit a tale that confirms the rumors he heard at ITT. "Gjalt, not to burst your bubble, but we think you're crazy to come back here. You've agreed to run a hot mess. The staff don't want to be here; it's a catastrophe waiting to happen. The steppers are a bottomless pit. Philips just wants to be rid of them. This gig is dead in the water."

With just a few weeks left before the joint venture officially launches, its new CEO's understanding of the situation is growing

sharper. He's not enthused. Stepper development was on hold for years at S&I. There's a PAS 2000 gathering dust at IBM in Burlington; Philips has two more in Nijmegen and Hamburg. And that's it: no more have been sold. There are ten machinery manufacturers in the world focused on chip lithography. Philips ranks dead bottom on the list.

Cees Doesburg, Richard George, Herman van Heek, and Joop van Kessel are the stepper team's point men. Even before he officially starts work on April 1, Smit holds long talks with them—often deep into the night. They talk about their colleagues' resigned attitude, about customers, about competitors and missed opportunities. The conversation often turns emotional. Their new CEO turns out to have no clue about the semiconductor industry, which only heightens their belief that Smit's been hoodwinked. Janssen is always there with them, too. He's well versed in the lithography market and wrote business plan after business plan at S&I.

Smit says that De Kruiff, Del Prado, and Troost all promise they're going to pour money into the steppers, but no one believes him. "Gjalt, with all due respect, we've asked for money a hundred times over the last several years. Wim Troost was never able to get us even a cent. We've written many a business plan, and every one has been rejected."

It will take a lot of money to breathe new life into stepper development, they know. What's more, the entire industry is on the eve of a leap in technology. They don't even have customers for the PAS 2000, and they should really already be working on the next-generation stepper.

At the time there are seventeen PAS 2000 steppers, most of them still being assembled. George, Van Kessel, and Janssen are pessimistic about them. Van Kessel has managed to keep a lid on overproduction by making sure they only ordered parts for twenty PAS 2000 machines, not forty. Customers aren't lining up to buy systems with oil-based positioning tables, though there's still some hope that chip manufacturers will want to try out their superior alignment technology with an eye to buying a future stepper

with a different drive system. Against their better judgment, everyone's clinging to that superior, but unsellable, technology.

* * *

When the company launches, sixteen PAS 2000 wafer steppers are under construction and one PAS 2000 demo machine is standing on the S&I factory floor where ASML is temporarily located. These machines and other inventory are valued at \$1.8 million on opening day. As agreed, Philips deducts this amount from the \$2.1 million each founding partner has promised to invest in the joint venture. The company transfers three hundred thousand dollars to ASML's bank account on April 1, 1984. ASM transfers \$2.1 million a few days later.