



Peter Ireland

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Enjoy *all* the flavors

Some people move between industry and academic research settings to be able to have their cake and eat it, too. At certain times, they want the sharp focus required in an industry setting. At other times, they want the creative liberty to explore exciting ideas. In Peter Ireland's case, his career has allowed him to enjoy all the flavors.

Peter Ireland was an academic researcher at the University of Oxford, engaged most of the time in Rolls-Royce applied aerospace research. When changes in his department spurred him to look for new opportunities, he asked colleagues at other

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universities and at Rolls-Royce for job leads. He heard about a few academic jobs, applied for them, and received offers. But then his contact at Rolls-Royce told him about an opening for a research specialist.

He applied and joined the fellowship program at Rolls-Royce. “It was one of the best things I ever did, because it gave me experience in industry that I would not have seen as an academic,” says Ireland.

Rolls-Royce offers a fellowship track for those with a technical background to progress in their career. That was appealing. But the key benefit of working at Rolls-Royce was the intense focus—a level that's hard to replicate in academia. “It's sometimes more difficult in academia to see that you're working toward a single goal,” he says.

Ireland also appreciated the sheer number of technical experts in his field who worked at Rolls-Royce. While it is also possible to talk with experts at Oxford, there were many more of them at Rolls-Royce. “Just to experience the scientific focus with which a company like Rolls-Royce engages in its activities is exciting,” he says.

Ireland found the intellectual activity at Rolls-Royce comparable to academia. “The work in industry is different from the academic work at Oxford, but the technical problems are just as difficult,” says Ireland. The aerospace engineering culture is equally open in both settings. “One of the great strengths of this well-known aerospace company is that they encourage debate all the time because that's how you get a bunch of engineers to design something very, very difficult and make it safe,” he says.

After he had been at Rolls-Royce for about four years, Ireland received a call from a senior colleague at Oxford about an opportunity to lead the Oxford Thermofluids Institute. The position would lead a renowned, world-class group that works with Rolls-Royce. It was too good an opportunity to ignore. “I probably would never have considered leaving Rolls-Royce except to go to the job that I eventually got,” he says.

Lessons learned at Rolls-Royce bolstered his new position at Oxford. “Having worked with Rolls-Royce and having

understood a little bit about how the aerospace sector is wired, and having a good network within Rolls-Royce, was important,” he says. He now had intimate knowledge of the company's research practices and how it worked with the government and the aerospace sector.

Ireland observes significant differences between academic and industry cultures but sees advantages on both sides. “The advantage of industry without any doubt is its focus,” he says.

“You understand what the (company) is trying to do.” Academic work is less tangible. “The top objective of the university would be to make excellent contributions in research and teaching, and we all fully understand those goals,” he explains. But university research leaves faculty with more freedom to define their ambitions and think creatively.

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Ireland incorporates the positive aspects of both cultures into the Oxford Thermofluids Institute. A Trent 1000 jet engine from the Boeing 787 Dreamliner hangs from the ceiling of his laboratory. The artifact is a reminder that everything he does in his lab is about delivering those engines' solutions. “Sometimes it's nice to focus and deliver specific things,” he says. “That has all sorts of advantages and is a lot of fun.

But, he adds, sometimes it's nice to say, “you know what, if we did this, this, and this, then that might work. Let's have a go at it. And there's much more chance to do that as an academic.”

Job security has never been a concern, but Ireland notes that the aerospace industry today is laying off workers due to the pandemic's economic impact. Losing a faculty position because it is no longer needed “doesn't happen so often in the

UK,” he says, “so there's a perception that (academia) is safer than industry.” Nor was compensation much of an issue for him because salary levels are comparable. But for those who progress to the highest levels in industry, it is more common to have a higher salary than in academia.

Ireland's advice to young professionals:

- **Consider how your CV is building and your readiness** to apply for a promotion or move to another institution.
- **Have conversations with experienced colleagues** “who have no agenda other than to just tell you how they did it and how things are different.”
- **Don't be afraid to work hard**—to solve a problem or do something that's really difficult.

For mid-career professionals, his advice is to follow your heart.

“In the end, you just have to decide to do it,” he says. Along the way, don't underestimate the power of your networks. “There are good people that will help you without any malice or agenda,” he says.

Colleagues at the highest levels at both Rolls-Royce and Oxford welcomed the experience Ireland gained from both institutions; in fact, Rolls-Royce gifted the retired Trent 1000 engine to the Oxford Thermofluids Institute lab. “It's very much to the credit of Rolls-Royce and Oxford that they took risks, employing me from a slightly strange, creative trajectory,” he says.



Peter Ireland and a Rolls Royce jet engine.