The outlook for growth in the aviation sector is extraordinary. The manufacturers’ forecasts vary a bit, but there seems to be a broad consensus that the airline fleet will at least double over the next 20 years. Boeing expects the fleet size in the Asia-Pacific region to triple in 20 years. The Middle East fleet is expected to grow at an annual rate of 7 percent, which means that it will double in just 10 years. Growth is projected everywhere.

This is very exciting, but the challenge for safety professionals will be to make sure this growth does not outpace the availability of qualified pilots and mechanics around the world.

The leading edge of this global challenge will be faced in Asia. The Centre for Asia Pacific Aviation estimates that by 2010, India will have about 225 domestic aircraft, which could lead to a shortage of about 1,500 to 2,000 pilots and more than 1,000 mechanics. Pilot shortages are already affecting the global marketplace. China is recruiting pilots from as far away as Brazil, and hiring in the Middle East has impacted the pilot pools in Africa, Indonesia and elsewhere.

This is an important problem; but for many of us in Europe and the United States, it is a tough one to relate to. I grew up in a time and place where three moon landings and X-ray vision couldn’t guarantee you a job flying a turboprop. It was a world where airline captains had a lifestyle that made doctors and lawyers jealous. Intellectually, I know that era is long gone; but that history makes it difficult to acknowledge today’s reality.

Today, it is not unusual for a pilot from the developing world to drift from region to region on a series of wet-lease agreements and contracts just to make a marginal living. It should not be a surprise that there is no army of new pilots begging to follow in their footsteps.

Recruiting mechanics is also difficult. Smart youngsters can make a good living managing computer networks in Beijing or writing software in Bangalore, India. There just isn’t much motivation to learn how to troubleshoot airplanes on a deserted ramp in the middle of the night.

We are a capable and creative industry that has learned a lot about safety in the last 20 years. We know how to deal with safety threats; we do it every day. The difference is that the growing shortage of skilled personnel is a threat that none of us can address alone. It is time for us to work together to address the problem. The only question is whether we face the problem honestly now or wait for the accidents to occur.

We have tools in place now, like flight operational quality assurance (FOQA), that could provide an early warning when expansion of an airline exceeds the capability of its people. We must look at the tools we have in our hands and consider how to apply them to this fundamental problem.