



## Going Dutch?

*Chris Long visits a number of aviation training organizations in the Netherlands and explores their philosophies and training practices.*

**F**ounded back in 1919, KLM (Koninklijke Luchtvaart Maatschappij), the national carrier of the Netherlands, has a proud history of pioneering aviation, exemplified by such ground-breaking initiatives as the establishment of the pre-second world war longest scheduled commercial flight, which operated between the Netherlands and what is now Indonesia. Time has moved on, and KLM with it. It is now part of the Air France/KLM partnership; however it still retains its own training philosophy and capability.

That philosophy is presently driven by Captain Herman Hello, VP B747-400 Unit and Training Facilities, Head of Training. He adopted this latter role in 2007, and immediately set about trying to foresee future training issues and challenges with a passion that no doubt matches the enthusiasm of his early predecessors. A primary task at the moment in KLM is the integration of three airlines. KLM, Martinair and KLM Cityhopper have separate AOCs, but in order to benefit by them all being in the KLM Group, their operations need to be coordinated. Part of that is to develop a career progression for all the pilots, eventually with choices of work patterns depending on the role of each of those airlines. That can require type conversions as those choices are made. Consequently the present task concentrates on this demand, together with recurrent training, and the short-term future will see more conversions. At the moment there are no openings for recent graduates from the ab initio schools.

Hello has some clear ideas on the merits of e-learning. There is a place for it, but he thinks that over-emphasis on this delivery format can lead to saturation in that virtual world. He believes that "a classic build-up in a conversion, existing of classroom sessions, ground school sessions in a fixed base, and in the end some FFS hours starting with a SFI and finishing with a TRI, is in my opinion not the best way to approach a conversion. Apart from ab-initio pilots, where we use our three student principle, we approach every pilot as able to fly an aircraft from day one. Thus our setup at the moment is; a couple of days self-study with the help of a CBT and the manuals, and starting from day one in a FFS with a full blown TRI. This enables us to stay at the minimum required level of 32 hours for a rating. As a further way of thinking we found that with this setup most pilots are competent after approximately nine sessions, suggesting that even less hours are possible." This works when one stays within a family

The KLM Training Facility in Amsterdam has nine FFS devices available. Image credit: KLM Training Facilities.

of aircraft of the same brand. Airbus is already using CCQ of course, and Boeing is currently working hard to get a shorter course approved by the FAA and EASA.

### CRM

Wanting to foster the specific safety culture with the airline, in 2008 he brought the delivery of CRM training back into the training team at Amsterdam, rather than leaving it to third party trainers. The CRM training is now carried out in-house by about 20 carefully selected and trained current flight deck crew.

As the flight deck tasks become increasingly automated, Hello notes that "I see an increasing awareness that core flying skills should not be underestimated, and therefore substantial training time should be focused on this. I prefer starting with a pure aircraft and adding complex features along the way. So starting to learn to fly the aircraft raw data and then switching on the flight director etc. Apart from technical development done by the aircraft manufacturers I see CRM as one of the last possibilities to increase aviation safety even further."

Naturally the regulatory requirements for recurrent training have to be met, but the pattern developed here is to cover all those and more in an annual total of five three and a half hour sessions. Hello has reduced the traditional four hours to this shorter time as he questions the effectiveness of the last half hour of training in the original mode. There is also interest in exploring just how much transfer of knowledge from experienced captains (10-15 years in the role) to lower time first officers can be achieved, perhaps using some gaming strategies? As a step in that direction, the fruits of the hard work in developing a wide range of scripted scenarios for these five sessions are now paying off. Working from a large library of such scenarios, the SFIs can cover many non-normal operations which address the vexed question of training to be able to have a reasoned reaction to an unscheduled and unusual event. This includes coping with multiple failures in challenging situations, as well as managing a situation when the captain is temporarily absent from the flight deck. This pattern will also be wrapped into compliance with the EASA Alternative Training and Qualification Programme (ATQP).

With a history dating back to 1946 and the original Link simulators, the KLM Training Facility at Amsterdam continues its primary task of responding to the training needs of the airlines in the KLM Group. Axel Colen, Director of Training Facilities at KLM, has some nine FFS devices available, and there is a full supporting infrastructure to deliver pilot training. These deliver more than 15,000 sessions a year, and run at a reliability of 99.5% to achieve a rate of over 90% uninterrupted sessions. This rate is reached by having an in-house-trained team of simulator technicians on call; Colen believes this is much more efficient than waiting for OEM specialists to respond.

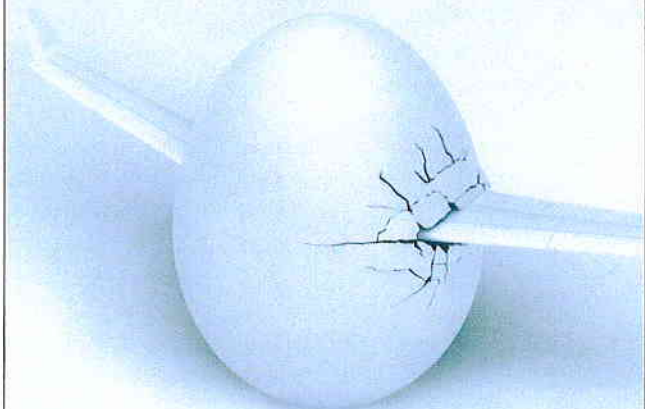
With a total of 12,000 flight crew (flight deck and cabin crew) there is also a large training task for safety training. In supporting the full range of aircraft fleets operated by KLM there are door trainers, slide trainers and fire fighting training equipment available on site. Pool drills are carried out at a nearby facility. One initiative which is gathering pace is using the output of some of the KLM training team who are continually creating multi-media based virtual platforms to exactly mirror the working environment of cabin crews.

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### Ab Initio Pilot Training

A subsidiary within the KLM Group is the KLM Flight Academy, based at Groningen Airport Eelde. This was originally started in 1946 as Rijks Luchtvaartschool (Governmental Aviation Training Institute) to supply the mother airline with pilots. Consequently it shares with KLM the philosophy of quality in training, and even though the airline is not presently taking in young pilots the school continues, having adjusted its intake from 150 a year to 60. In keeping with its airline roots there is a stringent selection process for the private individuals who make up its student base.

Cees Dorland, marketing manager, is keen to point out that this has proved to be extremely effective, with a record of a 97% pass rate for the two year course. Once that selection is complete a loan (underwritten by the Guarantee Fund of the academy in case of no-blame failure) can be provided by a bank. This Guarantee Fund also takes over the interest of the loan if the student has not found employment in the cockpit a year after graduation.

The theoretical training is carried out in the Netherlands, and the practical course is carried out at the CAE facility in Phoenix, Arizona, where CAE instructors trained in KLM Flight Academy procedures and standards carry out the flight training. It is during this phase that the close ties with the airline really come into play. One of the other critical drivers in Hello's anticipation of training needs (this was prior to ICATEE recommendations) was to sign up for upset recovery training as a fundamental part of the ab initio course. Aviation Professional Solutions (APS), also based in Phoenix, provide a robust three day course in Upset Recovery Training. The whole ab initio training package finishes with a type rating to prepare the student as immediately employable. He should then only need Line Orientated Experience (LOE) to become a revenue-earning pilot. Although there can be no job guarantee, students benefit by the quality reputation and are being placed with both European and global airlines.

### Selection

Passion in aviation is easy to find in the



Netherlands. When Dick Verburg followed the efforts of his son to start the long path to a commercial pilot's licence, he noted the lack of trustworthy information on how to accomplish that. In particular, he believed that the lack of selection process to guide would-be pilots (and their parents) led to questionable practices within some areas of the industry. Prospective students were persuaded to pay out large sums of money to get a start in an industry for which they were not suited. Not one to sit still, Verburg brought his skills as a software engineer to develop an effective selection tool and process. Working with a former British Airways pilot, Robin Acton, a selection tool, Compass, was developed. This, together with interviews and career advice, formed the basis of a new company European Pilot Selection and Training (EPST).

The underlying philosophy was that a sound business could be made by providing honest, unbiased assessment and advice to prospective pilots. A bank loan can then be arranged, underwritten by EPST, and if the student cannot get a job within a year of graduating, then EPST will pay the interest on the loan until the student gets an operational flying job. What Verburg did then was to link that to a trusted training provider, in this case the (then) Oxford Aviation Academy (now CAE Oxford Aviation Academy).

The present Managing Director of EPST, Eric Duijkers, says that the statistics speak for themselves. Over the 15 years of operation some 600 students have passed the selection process; only 36 have not completed the course, and in only one case was that because of failure in the flying phase. EPST have expanded the training base to include training beyond the initial licence issue, and provide MCC/Jet Foundation Course. Following on from the underlying philosophy that students are being trained for a job, these courses require that students maintain the (uniform) dress standards that would be required in an airline and also, and there is great emphasis on this part, behaviour and punctuality are an integral part of the course. Turn up late once and you are warned that a second late show will have you re-coursed by three months (so the effect would be to be three months late on the job market - a major incentive). The carrot is that, if they do not get a job immediately then EPST will continue to job-peek for them only if they attend a (free) recurrent training session in

EPST provides honest and unbiased assessment to prospective pilots.

Image credit: European Pilot Selection and Training.

the simulator once a month. This ensures that the quality is maintained right up to the time that they are employed.

### TRTO

In 2006 four simulator specialists saw an opportunity to set up simulator operations and a TRTO at Amsterdam Schiphol Airport. One of the original players, Robin Pijnaker, Director Sales and Marketing, Flight Simulation Company BV (FSC), says that initially it was scaled at four simulators, however they have rapidly expanded the business to fit 12 simulators into the Amsterdam facility, with three more in an operation in Dallas, USA.

Pijnaker attributes the success to several factors. It is easily accessible to many of the smaller airlines who don't want to establish their own training set up, as it is to airlines in the CIS countries. Most of all, however, Pijnaker credits the rapid growth to the quality of the training provided. The pool of instructors draws not only from the Netherlands, but also from nearby Belgium, Germany, the UK and others. The instructors are current or recently retired from airline operation, and there is an active standardisation process.

Airlines are recognising that whilst a few crews might fail there is overall benefit if standards are maintained and there is a level of assurance that the competency levels of their crews is set high. Given the level of training demand FSC is happy to accept the overspill from other major quality-driven players such as Lufthansa, Airbus, Finnair and others. Pijnaker sees the future as one of organic growth, but with perhaps the establishment of small satellite operations designed to bring the training closer to customers. This would still benefit from the small customer-focussed team at Schiphol, where direct and trusted relationships with the customer are so highly valued.

### Manufacturers

The Netherlands has a strong basis of research in the industry, and several training device manufacturers have been established over the years. In an extension of the training system he set up at EPST, Verburg created Multi Pilot Simulations (MPS), which builds flight training



devices. He has aimed at a specific market to supply low cost fixed base trainers for MPL/MCC and airline preparation course. There are not only generic devices but, as an advanced option, an FTD for the Boeing 737NG and Airbus A320 series. Initially MPS used replica frames for the cockpit, but now recycled real aircraft cockpits form the basis of the devices, modified to take an instructor station and the MPS software based on the actual aircraft manufacturers' performance data to accurately reproduce the characteristics. The goal is to price these very competitively so that good quality training can be delivered at lower cost and therefore, perhaps, to facilitate an increased amount of training to boost competency.

Another local manufacturer, Sim-Industries, was bought by the US firm Lockheed Martin in November 2011. Frank Uit den Bogaard, CEO of Sim-Industries explains that the synergies between the two companies are based on the enormous global reach of the Lockheed Martin infrastructure and the well established FFS manufacturing competencies of the Amsterdam firm. He states that "as the largest aviation training provider in the world" (referring to the military training heritage of the US company) the time is right for Lockheed Martin to address the enormous global demand for training as highlighted also by such authorities as the Boeing and Airbus Market Outlooks. As Lockheed Martin applies its resources to become a major player in the commercial pilot training market the possibilities are breathtaking. It could well be that the industry will see a fundamental change in the scale of available training in the near future.

### New Perspective

One constant which has been noted in the Netherlands has echoes in parts of the world where aviation has been long-established. This is that the new generation of pilots are still primarily aspiring to join the national flag carrier of their home team. The movement of current pilots to the regions where growth is strongest makes it obvious that the lifetime career of any new pilot will be played out on the larger global stage. The industry needs to be aware of this, and must educate and encourage new entries right at the start that they will need that larger view.

The Netherlands has a vibrant and active aviation training industry, right across the span of disciplines, and is a net exporter both of training and the devices which support it – an excellent position on which it plans to continue to build. **cat**

FSC's Robin Pijnaker, at the company's Amsterdam facility  
Image credit: Flight Simulation Company BV.