

PILATUS AIRCRAFT LTD

ANNUAL REPORT 2019



PILATUS

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FACTS AND FIGURES

KEY FIGURES AT A GLANCE

TOTAL SALES



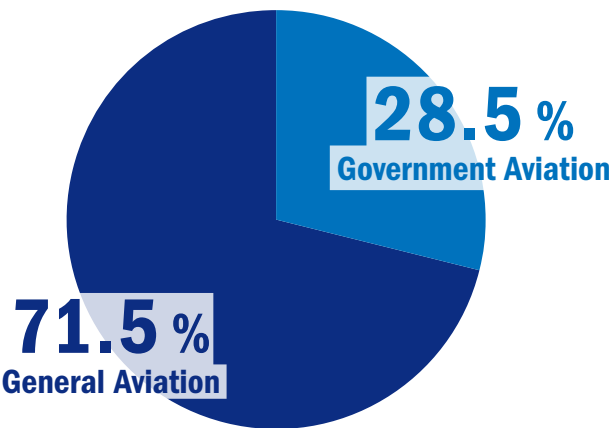
1,170 CHF million

EBIT

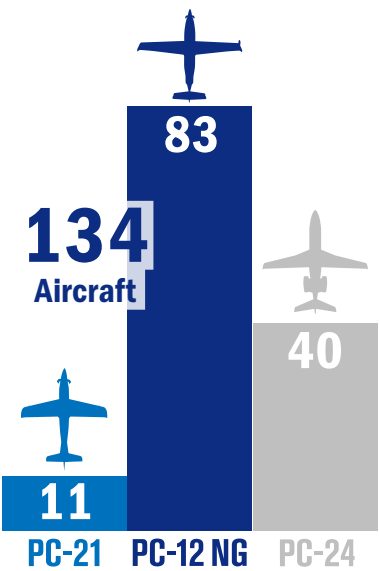


153 CHF million

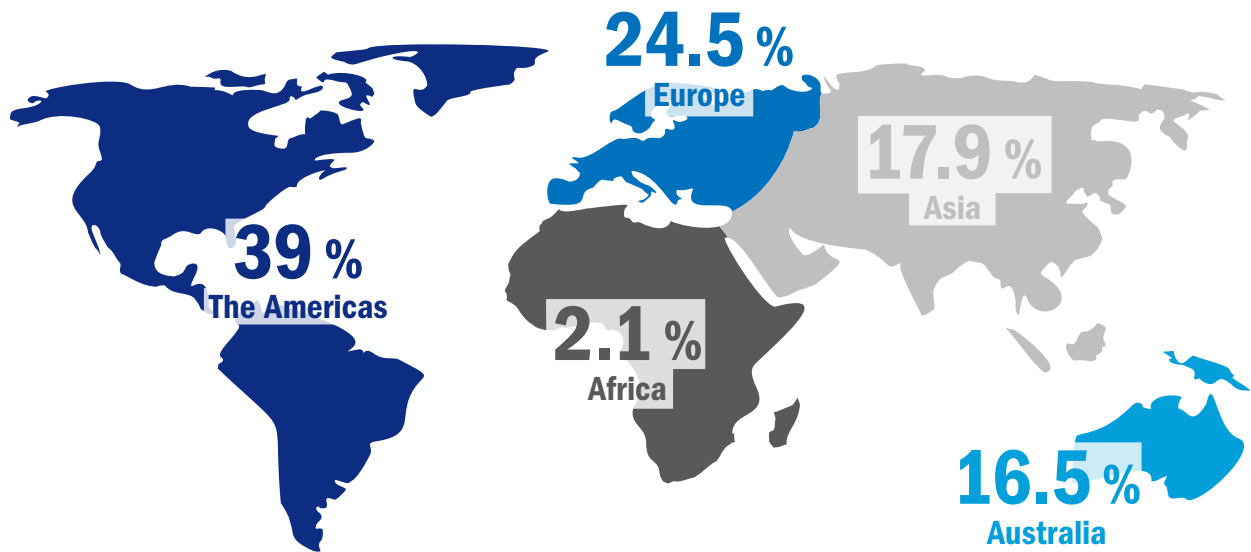
SALES BY BUSINESS UNITS



AIRCRAFT IN NET SALES



SALES BY REGION



ORDERS RECEIVED



1.1 CHF billion

ORDER BOOK VALUE



EMPLOYEES



16 %
Women

56
Nations

9.5
Years of service

54 %
in Production

139
Apprentices

93 %
in Switzerland

BOARD OF DIRECTORS' REPORT

PREPARED FOR TURBULENCE



In our 80-year company history, 2019 will be remembered as a very challenging business year. We successfully rolled out our most ambitious production programme ever, with 134 aircraft. We generated turnover in excess of one billion Swiss francs with an operating income of 153 million Swiss francs, and incoming orders totalled 1.1 billion Swiss francs – figures which should inspire confidence for the years ahead. But the current corona pandemic has caused severe turbulence and our chosen heading needs constantly to be adjusted on the basis of evolving facts. Adjusting route and altitude as required is something that every pilot does naturally. And so we presently find ourselves returning to the basics which every pilot learns from the first hour of instruction onwards – good airmanship! Aviate, navigate, communicate. In other words: keep the company under control, treat problems analytically and take fact-based action and, finally, communicate.

ONGOING DEVELOPMENT CONTINUES

We are committed to continuing product improvement to further reinforce the leader position we enjoy in our

market niches. We have successfully launched the PC-24 with 75 deliveries to date and demand is there. The elimination of teething problems has taken longer than expected, however, and this has impacted negatively on results. But we owe it to our customers! Which is why their feedback is so important. Together with our suppliers, who also have a contribution to make, our goal is to ensure that the PC-24 offers customers the same outstanding level of reliability as all our other aircraft. Certification for operations on grass runways, or on wet dirt and snow, was obtained at the end of January 2020, making the PC-24 the world's most flexible business jet ever. The PC-24 has proven that it can fly all the missions we initially promised to our customers.

Feedback in response to the PC-12 NGX, which was unveiled to the general public in autumn 2019, has been outstanding. According to a longstanding motto, we either do what we do properly – or we don't do it at all! Our continuing development of the PC-12 demonstrates our commitment to that sentiment. Our reputation is first-class, our customers have enormous confidence in us.



See how the first PC-24 of the Royal Flying Doctor Service of Australia lands on a rough field runway. pilatus-aircraft.com/videos

30°54'60"S | 135°18'33"E

We nurture similar ambitions in the trainer aircraft market: here too we aim to satisfy our customers' ever stricter requirements. Through ongoing product improvement and virtual reality solutions, we assist air forces around the world in providing ever more efficient training to future pilots. The Spanish Air Force's decision – the Ejército del Aire – to purchase 24 PC-21s and simulators comes as further confirmation that our training system leads the market worldwide.

COMPETITIVE THROUGH INNOVATION

Lean and healthy operations necessarily involve efforts to reduce costs. We have committed ourselves to Switzerland as a production location and have commissioned another large production hall for partially automated manufacture of PC-24 structures. We aim to drive automation forward with further investments to place ourselves on an equal cost footing with low-wage countries within the next three years. We are currently in the process of rolling out lean manufacturing processes across the company to increase efficiency even further and reduce capital lockup. It will not be easy, but it is the only way to safeguard our commitment to Switzerland in the long term.

Throughout the past year we have also taken a close and careful look at topics that will occupy our attention in the future: product strategies, new technologies and production methods, digitalisation and our organisation, but also social, political and ecological challenges.

UNCERTAINTY IS THE WATCHWORD OF 2020

We started the new year with orders in hand worth two billion Swiss francs – not including the major order placed by the Spanish Air Force! But the corona crisis will undoubtedly leave traces and dampen perspectives which appeared promising earlier in the year. And yet we are determined, even in these difficult circumstances, to provide our customers with the best possible support to safeguard their flight operations. Irrespective of the crisis, we are erecting our own company building at the international airport in Adelaide, Australia, with private access to the runway. This will give us a base for maintenance and repair work so that we can provide even better service to our customers in Australia and New Zealand.

LEGISLATIVE CONFUSION PUTS JOBS IN JEOPARDY

In 2019, the Swiss government took legal action against us for alleged deficiencies in notification procedures. We were accused of not declaring service work performed by our technicians at customer sites. That is simply not the Pilatus way. We note with satisfaction the Federal Prosecutor's decision to close the criminal investigation subsequent to finding there was no fault on our part. At the same time, we feel strongly that all involved must find a way of providing the Swiss labour market with clear, reliable laws and regulations. Regulatory uncertainties are fatal for Swiss entrepreneurs and job security.

If our country is unable to guarantee fair export terms for a value-driven company, allowing our competitors to walk away with fleet contracts because we are not regarded as reliable, then things are likely to be difficult for business operators in Switzerland. Who would buy an aircraft, or any other product for that matter, if the manufacturer cannot provide assurance of on-site repairs should they be required? No one!

But I shall not finish on a gloomy note. We work very hard. We earn a decent amount. We have sufficient financial resources to fund future projects and investment in training for our employees. We are also capable of paying our shareholders a fair dividend. We are debt-free and have the full support of our shareholders for our overall strategy. We shall do everything possible to see that things continue in the same way despite the difficult conditions. The bees which star in the story which accompanies this Annual Report make excellent role models: hard-working, intelligent, excellent communicators, incredibly efficient, with a clear organisation and flat hierarchies. But let us also bear in mind that eternal compromise is not the only solution. Bees can sting in defence if necessary – like Pilatus!

Oscar J. Schwenk
Chairman



46°41'3"N | 8°22'44"E

EXECUTIVE MANAGEMENT REPORT

MORE KNOW-HOW, BETTER TEAMWORK



2019 saw us achieve many of our goals, whilst also adding to our acquired know-how and improving teamwork. The new shop floor management concept has quickly delivered benefits. Applied to day-to-day problems in our operations areas – Logistics, Production and Assembly – it provides a rapid means of identifying solutions. In a very short time, these areas have succeeded in reaching agreements and setting priorities at the appropriate levels. As a result, we have dramatically reduced the volume of missing materials, optimised processes and taken some of the workload off our management. The strong sense of cohesion between employees and the additional know-how acquired from the acceleration of PC-24 series production represent

a gain in experience which will impact positively on the entire product range. Besides meeting the financial and operational objectives of the 2019 financial year, this huge step forward in development is the greatest source of satisfaction for me.

PC-21 ORDER FROM SPAIN

The PC-21 order from Spain signed at the end of January 2020 marked the achievement of an important goal. A trainer contract is vital to ensure optimum use of capacity across every area in the company – and now we have it! Spain is the ninth air force customer to opt for the PC-21 and Pilatus is delighted to have won a new customer with a high impact in terms of image.

Over the past year, competition in both business units has become tangibly more intense: aggressive competitors motivate our efforts to become even fitter. With that in mind, we have accelerated the transition towards greater digitalisation. Our processes are extremely complex and the requirements are very high: every year, we produce over two million components involving 67,000 production orders. Progress is driven by systems innovations, energy and patience in abundance. Those are the attributes which ensure each and every component ends up in the right place at the right time, in the required quality.

CUSTOMER-DRIVEN INNOVATION

There were several highlights in 2019, including our 80th birthday on 16 December. We paused briefly, for a small celebration only, preferring to keep our eyes on the future of our business, which is currently in great shape. Success lends you wings, but may also lead to poor decisions and sluggishness. We therefore take a very keen interest in new technologies to ensure we can always offer the best and most innovative product on the market in our particular niche. The successful launch of the PC-12 NGX last autumn underlined the importance of that strategy: in the space of just three months, we have taken many PC-12 NGX orders. Such an incredible mark of customer confidence in the PC-12 is extremely

encouraging. It also shows, once again, that the market demands constant innovation. We can deliver that, and stand for products and services never seen before: the PC-12 NGX comes – for the first time ever in a turboprop – with an electronic propeller and engine control system, plus automatic thrust adjustment.

The PC-12 is a continuing success story: one of the highlights was without doubt the delivery of the 1,700th PC-12, which took place in November. It was handed over to Jetfly, the largest European fleet operator with over 40 PC-12s. Last year also saw us hand over the 50th PC-24 to a customer in Kentucky, USA. We also convinced prestigious new customers such as Volkswagen and KSA, Sweden's national air ambulance organisation, of the advantages of the PC-24 – all important milestones in the young PC-24 programme.

Winning the award for best customer service in the single-engine turboprop category is a source of satisfaction and another of my personal highlights. This is the 18th time in a row that the award goes to Pilatus. That puts the onus on us and motivates us to strive to be best in class in the PC-24 category, too – in an entirely different league!

FOCUSING ON THE ENVIRONMENT

We have become more diversified in our approach to market development, with new customers in Sweden, China and Spain. Production has been stepped up and conformity has improved. That, in turn, is a source of increased staff satisfaction. We are well equipped to meet the challenges ahead in line with developing circumstances.

For the first time in the history of the company, we built and delivered 134 aircraft. Quite some feat with the resources available! Ongoing optimisation therefore remains a constant goal. I would like to cite the new Structure Assembly Hall at our headquarters in Stans as an example – a timber construction project with an impact which radiates far beyond the region. The move is now complete and all workplaces are fully functional. The hall accommodates over 100 people, providing a new, central workplace with substantial ecological benefits. The production process now takes place entirely under one roof, with no lengthy transport operations. The new, fully automatic C-frame riveting system delivers increased efficiency. We were honoured to win the “Swiss Manufacturing Award 2019” for this project, which confirms us in our strategy of promoting Switzerland as a place of vision, action and vocational training.


OUR SUCCESS BENEFITS EVERYONE

Our business success provides us with the best means of thanking our employees. For the past 25 years, they have shared directly in our financial success via the EBIT revenue-sharing model. As in previous years, our employees worked extremely hard throughout 2019 and will receive a sum equivalent to approximately 1.5 the monthly salary under our profit-sharing scheme.

Our success would not be possible without our customers, partners and suppliers, who have confidence in us and grow along with us. Teamwork is the key to greater flexibility and intelligence – in short, it is a vital part of being better all round! Following several years in the climb, we reached a stable cruising altitude in 2019. Like many others, we have been impacted by the severe and unforeseen turbulence caused by the coronavirus. Notwithstanding, I remain confident that Pilatus will end this challenging flight with a clean landing.



Markus Bucher
Chief Executive Officer



INDUSTRY AND ORDER AS GUIDING PRINCIPLES

Knowing that a bee must visit up to 10,000 flowering plants to produce a single gram of honey, a colony of approximately 50,000 bees will visit many millions of plants over its lifetime. And there is so much more to do as well! Cleaning, renovating and disposing of waste, for example. But how is such a busy world organised?

Well, strict order and a simple hierarchy are the hallmarks of a successful beehive. There is one queen, and one queen only, and no intermediate management levels. Yet the process of allocating tasks amongst the bees functions very well due to an instinctive understanding that survival depends on each bee doing its fair share of the mountain of work. The queen is nothing without workers to protect and nurture her. For she must devote herself to the important job of laying eggs for the colony. The opposite is also true: the colony cannot survive without a queen. The eternal pressure to survive means no one has any choice in the matter. So opportunistic behaviour – sending others to the front or playing defensive to block others in their actions – is simply not a good option for survival. Despite the presence of a queen, bees are very independent creatures, but they all pull together and pool their energy when the situation requires. The success of “Enterprise Honey Bee” depends on hard work and shared effort. It’s busy as a beehive here, as we would say!





36°6'49"N | 115°10'44"W

BUSINESS UNIT GENERAL AVIATION

GROWING WITH THE MARKET

Our share in the global business aircraft market continues to grow – as confirmed by the encouraging results for 2019. Our two flagship aircraft make us a strong player on the market, and we continue to enjoy a high level of customer confidence. That confidence has been earned over years and indeed decades. Confidence does not simply fall into one's lap, nothing comes free. The lesson to take away is that we must not become complacent despite excellent feedback worldwide. And certainly not if we are to successfully meet the exceptionally difficult challenges of 2020.

THE PC-24 FLIES WORLDWIDE

The PC-24 market rollout is a success, and the development phase is now well behind us. In 2019, we more than doubled the number of deliveries made in 2018: from 18 to 40 PC-24s. This great achievement which took us from prototype to series production cost a great deal in terms of work and expense, but our efforts were well worthwhile. Following delivery of the first PC-24 to South America, to a Chilean business customer in August 2019, the PC-24 now flies on every continent.

In May 2019 we re-opened the PC-24 order book after analysis of initial customer feedback, including the Royal Flying Doctor Service of Australia's report on a total of more than 1,000 hours in flight. The order book had previously been closed for five years. We quickly sold a large number of delivery slots. No wonder – retailing at a basic price of USD around 10.7 million, the PC-24 comes with good standard equipment combined with a unique mix of speed, range, generous cabin size and the ability to use short unpaved runways. All of which distinguishes it as a very special crystal indeed.

MARKET LAUNCH AS MEDEVAC AIRCRAFT IN EUROPE

Customers operating in the air ambulance niche segment were quick to recognise the many advantages of the PC-24, all of which make it an ideal mission aircraft: the "Kommunalförbundet Svenskt Ambulansflyg" (KSA), the Swedish air ambulance organisation, is the latest example, having opted for six PC-24s in fully equipped medevac configuration following a professional selection procedure and intensive negotiations. These PC-24s will provide aeromedical care across Sweden's 21 provinces from 2021. KSA is the first Europe-based air ambulance

“ Pilatus is and has always been an amazing model for success! AirSmart has exclusively operated Pilatus airframes for over 15 years throughout the Americas, Canada, and Caribbean. The safety, reliability and cost predictability have enabled us to become the fastest growing Pilatus operator in the Western United States. With the addition of our PC-24, jet customers can now access locations from Burning Man to small islands in the Puget Sound, with almost any cargo they can imagine. From charter operations to flexible ownership programmes and management of Pilatus airframes for private owners, Pilatus has guaranteed AirSmart's success with Swiss quality products, training and support.

Rick C. Williams, CEO AirSmart, Las Vegas

organisation to choose Pilatus – a good and important signal which confirms our belief that there is great potential in this market niche.

Some two-thirds of our customers sign up for the PC-24 CrystalCare™ Programme, which has proved even more popular than originally thought. This innovative service package offers an all-round service which is highly appreciated by our customers. The programme covers all planned and unplanned maintenance work, interventions by our technical staff, consumables and wear parts such as tyres and brakes.

But some aspects remain less than excellent. As with every new development, the PC-24 Super Versatile Jet requires our full support as well as that of our worldwide service network. We need to make further improvement to the aircraft reliability and still have some way to go before we get to where we want to be. Naturally, that has had an impact on costs. We are making good progress with expanding production capacity and building up our worldwide network of service centres, but we want to become more efficient in this area.

LATEST GENERATION OF THE PC-12

Last year also saw us celebrate several successes with the PC-12, our other business aircraft. We delivered no fewer than 83 PC-12 NGs, which we regard as a good performance. We were extremely proud to hand over the 1,700th PC-12 to Jetfly Aviation in November – a company which has invested a great deal in the PC-12. It is no surprise that Maxime Bouchard, Managing Director of Jetfly Aviation, travelled to Stans to collect the 1,700th PC-12 in person. This PC-12 has now joined the fleet of 40 other aircraft which the company operates under its fractional ownership programme.

The figures for this best-selling single-engine turboprop are excellent: the PC-12 fleet leader has already flown over 34,000 hours and the PC-12 with the most landings has over 46,000.

Demand for this single-engine turboprop from Switzerland remains high. Interest is spread across several market segments: private companies, fractional ownership programmes, charter companies, medevac missions and other special assignments. PC-12 customers also include Bernie Ecclestone, the Formula One pioneer, and Dion Weisler, former CEO of Hewlett-Packard. Our single-engine turboprop is regarded as the most versatile in the world and can depend on a loyal following.



46°58'31"N | 8°22'51"E



43°43'39"N | 102°29'10"W

Pilatus set the course for the future long ago: the latest version of the world's best single will come onto the market in 2020. The fundamentally revised version of the PC-12, the PC-12 NGX, caused a lot of excitement at its first appearance. The aircraft made a spectacular debut at the unveiling event held in October 2019 at the NBAA-BACE, the world's largest trade fair for business aircraft. We sold no fewer than three aircraft on the first day of this major event in Las Vegas – and business has continued in the same vein ever since.

The PC-12 NGX is the world's most modern, most versatile single-engine turboprop with several enhancements over its predecessor: an improved engine, smarter avionics and an entirely redesigned cabin with larger windows. The new PT6E-67XP engine by Pratt & Whitney Canada is particularly impressive: its electronic propeller and engine control system is a world first in this market segment.

SUBDUED OUTLOOK FOR 2020

Notwithstanding healthy order books we must assume that we will see a sharp deterioration in the market for our civilian products. And yet we shall continue to work on product improvements, simplifying work processes through digitalisation in preparation for the renewed upturn when it comes.

The PC-24 launch phase is now well and truly behind us. Our goal now is to continue to increase reliability through various product improvements. We aim to justify the many initial investments and structure our global organisation more effectively for what is still a relatively small and widely dispersed fleet – without lowering our sights in terms of quality.

The new company building currently under construction in Adelaide, Australia, is a powerful symbol. It will be complete and ready for occupation this year.

MASTER COMMUNICATORS

Bee organisation is based on a very clever system of communication. A single colony can cover an area of up to 155 square miles (400 square kilometres). Scout and searcher bees set up an information network across fields and woods, a network which contains a wealth of detail about position, distance and the nectar and pollen situation of potential food sources depending on the time of day.

This information is exchanged on a sort of dance floor arranged at the entrance to the hive on the central honeycombs. As they dance, the bees' bodies vibrate at a frequency of 270 hertz and the honeycombs transmit these vibrations to the entire colony. This saves both time and energy, with the bees able to pick up information about the latest pollen and nectar situation as they return to the hive. Almost simultaneously, the bees also taste and smell actual nectar samples. A circular dance indicates a source of food not far away, a wagging dance means further away. The dance also provides information about direction. The queen bee secretes a pheromone which reassures the colony she is indeed inside the hive. Bees have a very fine sense of smell designed to detect these signals. It keeps the messages flowing. Just the right amount of targeted information – that's how bees communicate!





« The acquisition of a factory-new aircraft marked a first in the history of the Swiss Federal Air Transport Service. The new PC-24, registration T-786, was handed over to the Swiss Air Force in January 2019. The pilots were quick to appreciate the state-of-the-art cockpit. The outstanding workmanship inherent in the airframe and the high-quality interior were also immediately evident on first contact with the aircraft – pure Swissness! The Air Transport Service can now fly the steep approach into Lugano. The very short runway also allows the PC-24 to show off another of its major strengths – its short take-off and landing credentials. The motivated workforce at Pilatus is always pleased to help identify effective solutions to allow customers to use this jet in any number of versatile ways.

Major Hansueli Bänziger, Technical Pilot PC-24 Swiss Air Force



46°42'45"N | 8°45'30"E

BUSINESS UNIT GOVERNMENT AVIATION

MORE TRAINING SYSTEMS IN USE

We have an eventful year behind us, during which we worked very hard to properly prepare ourselves for upcoming business deals. We will reap the benefits of this in the years to come.

EXPANSION IN GLOBAL PC-21 FLEET

In November 2019, we delivered the final of 49 PC-21s ordered by the Royal Australian Air Force. With the arrival of the last three PC-21s in Sale, Victoria, the Pilatus PC-9 fleet operated by the Australian Air Force was officially taken out of service after three decades of use. The “Roulettes”, the national aerobatics team, has also transferred from the PC-9 to the PC-21. The first public show with the new PC-21s took place in October 2019 at the team's base in Cook, Australia. Cook also happens to be where everything first started 49 years ago, when the Royal Australian Army Aviation put the first Pilatus aircraft into service – a Pilatus Porter PC-6.

We also delivered final PC-21s to France and Jordan. The French Air Force now operates a total of 17 PC-21s. We ferried the last two aircraft to the base at Cognac early in 2019. The last two PC-21s for Jordan were also delivered in April 2019, a whole four months earlier than planned. The Royal Jordanian Air Force now counts 12 PC-21s amongst its ranks.

The worldwide PC-21 fleet grew to 211 in 2019. That is an impressive figure and proof of both quality and enduring market demand. Our PC-21s are used by air forces in Switzerland, Singapore, the United Arab Emirates, Saudi Arabia, Qatar, Jordan, Australia and France, and will soon exceed the quarter-million hour mark.

CUSTOMER SERVICE BUSINESS DEVELOPING WELL

The PC-21 is the world's most modern training aircraft with proven dependability and constantly high reliability in all areas of use. All performance indicators confirm the PC-21's high operating availability and safety.

Provision of support and maintenance for customer aircraft under clearly defined agreements is a key pillar of business for us. We attach great importance to nurturing good personal relationships as a means of remaining in close contact with our customers: that way, we hear about any problems immediately and can react without delay. Our customers appreciate that, and it is one of the reasons for the constant sales growth in performance-based support agreements – a very positive trend for us.

PC-21 IN NORTH AMERICA FOR THE FIRST TIME

We witnessed a premier in July 2019 when a PC-21 landed in North America for the first time after a long ferry flight. After departing from Stans, the aircraft flew a total of 17 hours to reach Moose Jaw in Canada to participate in the Saskatchewan Airshow. After a 14-year break, the airshow was back at this air force base, and the Pilatus stand with PC-21 proved a magnet for the public – much to our delight. The Royal Canadian Air Force is considering renewing its training platform, providing the motivation for us to take our Next Generation Trainer this far overseas. The PC-21 successfully demonstrated its exceptional characteristics as a training aircraft.

ONGOING MODERNISATION PROGRAMMES AND INNOVATION

One could be forgiven for thinking that Pilatus only operates far from home – not so! Last year, for example, we were kept very busy with civil certification of the PC-21 in connection with the Swiss Air Force's value retention programme. This was achieved through close teamwork between armasuisse, the military procurement organisation, the Swiss Air Force and Pilatus, and can certainly be described as an important milestone. The PC-21 configuration update reflects the latest enhancements to production standards. It provides the Swiss Air Force with state-of-the-art benefits which were not available when the PC-21 was first made over a decade ago. Pilatus accompanies and supports all aircraft over their entire lifecycle, delivering clear added value for the customer.

The same applies to the PC-7: we put 13 PC-7s operated by the Royal Netherlands Air Force through an update last year and these are now equipped with an ultra-modern cockpit. This assignment, to overhaul the air force trainer aircraft, was successfully completed within the prescribed timeframe and budget.

We presented an innovative new product at the Dubai Airshow in 2019 in the form of a virtual-reality solution. It will offer our customers new opportunities for pilot training and aircraft maintenance. The customers response was extremely enthusiastic!

INITIAL AND ONGOING TRAINING ARE KEY ISSUES

The Pilatus Training Centre in Stans set a new benchmark with 106 courses completed. One-third of these courses focused on providing Pilatus employees with a greater understanding and awareness of our aircraft and their systems. Pilots of Pilatus aircraft around the world also constitute a key target group: the number of pilots who underwent training in 2019 rose by an impressive 35 percent compared to the previous year.

In line with our goal of providing efficient pilot training, Pilatus products also include complementary ground-based training systems. In addition to PC-21 aircraft, Pilatus also delivered own-brand simulators to Australia and France. In Bulgaria, we supplied a simulator for the PC-9 M Training System plus a computer-assisted training room for ten pilots.



38°38'55"S | 143°4'15"E



46°55'8"N | 8°34'1"E

READY FOR NEW HORIZONS

We remain confident about 2020 despite the global economic crisis. The agreement with the Spanish Air Force has been finally signed in January 2020. The Ejército del Aire is the third European air force to opt for our PC-21. The 24 single-engine turboprop trainers will replace the Casa C-101 jet trainer used in Spain since 1980. The order covers a fully integrated training system to include, in addition to the PC-21 aircraft, Pilatus developed and produced simulators plus spare parts and logistics support.

For years, the market players believed that single-engine turboprops could never replace jet trainers. We have proved the exact opposite with our PC-21. The trend looks set to continue. We are currently working on our future successes and are optimistic.

This year, the Finnish Air Force proudly celebrates ten years of operation with its fleet of PC-12 NG liaison aircraft. Our activities in Scandinavia and the Nordic European region are well supported by the PC-12's effectiveness and multirole capability in assisting our troops and friends at home and abroad. We highly endorse the support provided by Pilatus and look forward to flying this efficient, versatile aircraft for decades to come.

Major General Pasi Jokinen, Commander Finnish Air Force





BEES ARE FLEXIBLE DECISION MAKERS

Bees are always thinking about where to fly to next. So, is that decision left to the queen? No, because that would interfere with the most important rule of the hive: flexibility. Nor does the majority decide for or against options.

Bees are not addicted to consensus, nor are they interested in unsatisfactory compromise! But bees are by no means dumb, so they turn to scout bees for help. Scouts leave the hive to investigate the various feed sites proposed on the dance floor. New teams form all the time, and fly off to investigate each new proposal. Scouts returning from options which do not score highly enough to make it into the next round of decision-making fly off again to investigate other, more promising sources of food. Leaving the hive without knowing more about these alternatives is both courageous and risky, but the scouts have total confidence in the teamwork of the hive as a whole. That's how bees weigh up the factors and make an informed decision – a great example of efficiency at its best!

OPERATIONS

INTERDISCIPLINARY COOPERATION

Under Operations we group together reports from different areas, i.e. Research & Development, Manufacturing, Assembly, Supply Chain & ICT, Quality and Environment. Success on the sales front generates requirements which have to be organised internally to our usual high standards of quality. And not only that: suppliers and various stakeholders must grow with us so that we can be sure of meeting demand in the future, and to the complete satisfaction of our customers.

DEVELOPMENT DEPARTMENT FOCUSES ON THE PC-12 NGX

There was a highlight in Research & Development in mid-October 2019 with certification of the PC-12 NGX by the European Union Aviation Safety Agency (EASA) and the Federal Aviation Administration (FAA). The unveiling of the latest generation of the PC-12, the PC-12 NGX, marked the completion of five years of development work: modernised avionics, new cockpit, new cabin, new seats, larger cabin windows, state-of-the-art technology and, a novelty in the single-engine turboprop segment – an electronic propeller and engine control system.

The PC-24 was certified for operations on dry sand and gravel in 2018. An extensive post-certification test campaign was carried out in 2019 to have the Super Versatile Jet certified for use on rough field runways and under other conditions. All PC-24s may now also use wet and snow-packed unpaved runways, including grass. Various other product improvements designed to

deliver added benefit for the customer were also made. They include, for example, an avionics upgrade and a retrofit option for cold-weather operations. Further optimisations and new options are currently under development, the corresponding certification is expected in 2020.

Technology studies have also delivered further progress: we have made significant advances in production technologies based on fibre composites and additive production processes across all our aircraft types. This year, too, we intend to improve our products on a continuous basis to ensure our customers enjoy the most dependable, most up-to-date solutions at all times. Studies for new aircraft systems and production technologies will be driven forward at the same time.

SUBSTANTIAL REDUCTION IN PRODUCTION BACKLOGS IN MANUFACTURING

We have reduced production backlogs in Manufacturing by over 70 percent. That is an outstanding result, and is due to excellent teamwork between Assembly, Logistics and Manufacturing. Such a positive development also impacts positively on our employees, and their high degree of commitment indicates that further potential for improvement remains to be exploited. Overarching measures have been implemented, the concept and schedule for additional quality inspections – or “quality gates” as they are known – have been drafted, seamless coordination of deadlines with Assembly have been finalised and lean concepts are being rolled out.



Pilatus' headquarters in Stans, Switzerland

In the new Structure Assembly Hall we have successfully merged structure assembly operations under one roof with approval from the Swiss Federal Office of Civil Aviation (FOCA). The new C-frame riveting system has been extensively tested and is now used in production operations. The new wing milling machine is also in operation, following integration with existing processes.

The new hall is a further contribution to Switzerland as a manufacturing location. Our efforts in this direction were recognised with the "Swiss Manufacturing Award 2019". In contrast to an image widely held by the general public whereby more and more production operations are transferred outside Switzerland, Pilatus

has shown on several occasions, notably via the new Structure Assembly Hall, that it is still possible to run successful production operations in Switzerland and ensure jobs for the local population.

A glance at the figures is interesting: in 2019, over 580 employees and 92 apprentices completed a total of 817,870 production hours. They included some 274,620 machine hours with over 67,000 production orders for in excess of 2.05 million components. Some production orders are outsourced to external suppliers: this equates to orders worth around 50 million Swiss francs. Of those, approximately 65 percent go to Swiss businesses.



New Structure Assembly Hall in Switzerland

PRODUCTION GOALS MET IN ASSEMBLY

Our Assembly employees worked under huge pressure in 2019. We note with satisfaction that the production programme was met in full thanks to first-class teamwork. With 40 PC-24s – produced and delivered – under its belt, the team managed to double the production volume compared to 2018. At the same time, process optimisation ensured a substantial reduction in the number of assembly hours required per aircraft. The PC-12 assembly line also transitioned to the new PC-12 NGX at the end of the year.

The maintenance team in Stans handled a substantially higher number of PC-24s than initially planned – a performance which we owe essentially to the flexibility of all concerned. The financial contribution from maintenance orders in Stans was above average compared to previous years and significantly exceeded the budget.

In 2020 we must show ourselves capable of reacting flexibly to what is an extremely challenging market environment, adjusting production capacity to foreseeable sales volumes. In doing so, we must also take care to safeguard our ability to supply the market as soon as the economic situation improves. That is a delicate balancing act which calls for calculated entrepreneurial risk-taking and can only be achieved with a flexible workforce.

OPTIMISATION OF PROCESSES AND SYSTEMS IN SUPPLY CHAIN MANAGEMENT

2019 also delivered some impressive results in procurement-related areas: we placed 26,000 orders with over 1,500 suppliers on every continent, for example. The year brought substantial improvements to supplier loyalty, achieved through closer partnerships with our key suppliers.

In Logistics, we launched new processes with automatic storage systems in 2019. The new roll-over store, the automatic small parts store, the vertical shuttle and the first driverless transport system in the Structure Assembly Hall have been seamlessly integrated within the existing processes to facilitate a more efficient manner of working. Supply chains must be made more stable so that they do not impact negatively on operations. The key to achieving higher added value lies in sustained, continuous improvement in the areas of standardisation, digitalisation and lean manufacturing.

In the logistics process, we have increased picking positions to 920,000, up seven percent on 2018. This improvement was supported by incoming goods operations, with optimised resources and lead times. Materials are now in storage no later than the day after delivery. Consolidation of external warehouses also plays a role: we have reduced the six external warehouses to one storage location. Over the coming year we plan to roll out further logistics-related improvements to increase efficiency.

The supply chain has been severely impacted by the corona crisis. Many suppliers have had to curb or temporarily discontinue production, posing a significant challenge to our procurement operations. We face a situation in which we must ensure materials are available for production programmes currently underway whilst also adjusting order volumes to a reduced production programme in the future – without creating supply shortages or increasing our capital commitment.

In ICT, we have revised and redesigned the application for electronic production instructions, thereby establishing the prerequisite condition for a follow-on project to focus on electronic work instructions in assembly operations. We are on the brink of implementing the concept and rolling out SAP S/4HANA plus an information security management system. We aim to drive IT security forward at group level. We also plan to implement a concept to link in production installations in Manufacturing.

PROCESS-ORIENTED THINKING AND DIRECTING

Official approvals and certifications are all part and parcel of developing, manufacturing and maintaining aircraft. Thanks to our regular and professional contact with the competent authorities and certification centres we successfully extended all our approvals and certifications over the past year. In line with the Pilatus Class, our commitment to quality is deeply anchored across the entire company. We also passed the ISO 14001 audit of our environmental management system without any non-conformance issues.

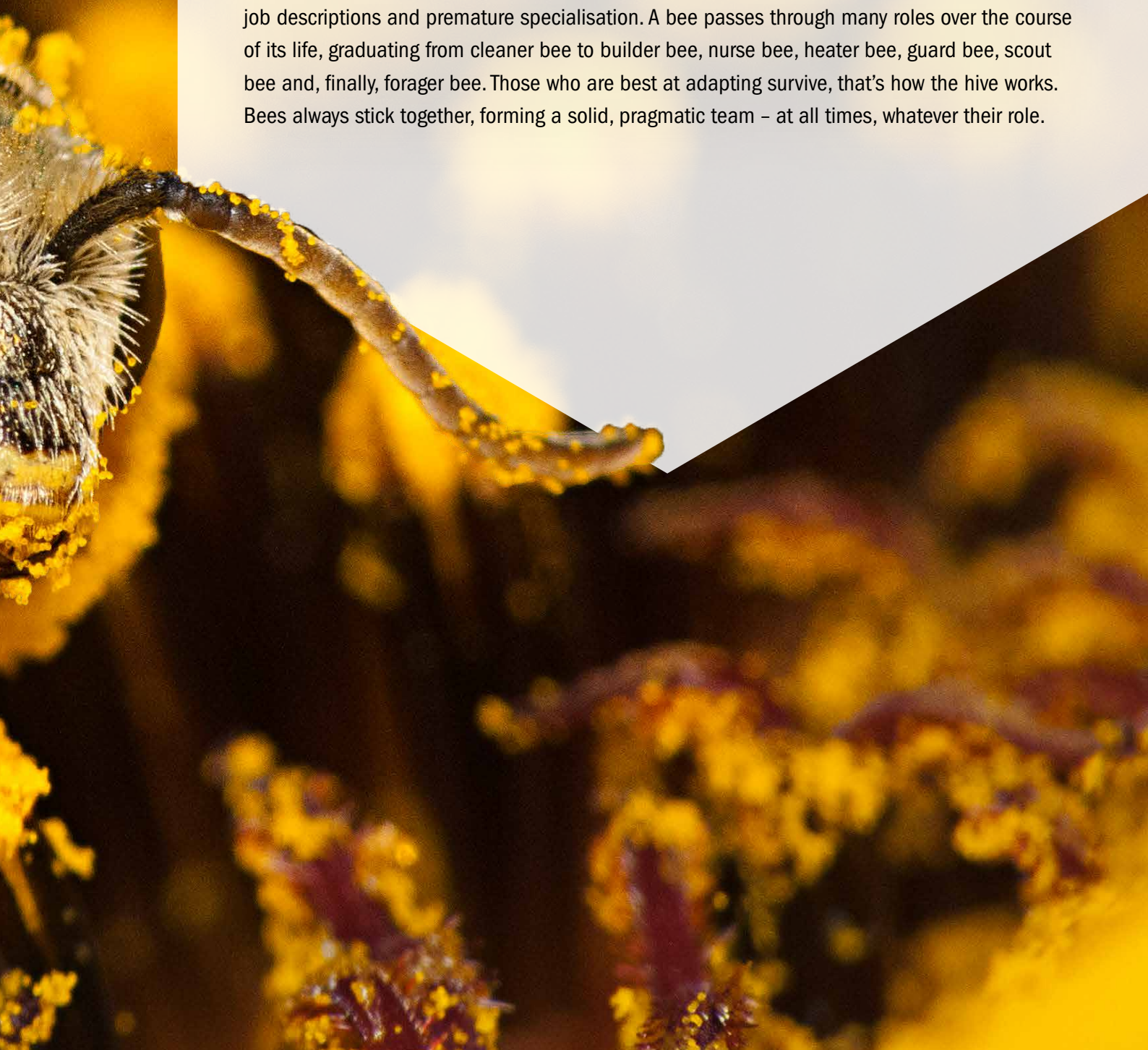
We have achieved many goals, in particular that of reducing repeat defects. Together, we have also prepared a new concept to reduce defect costs and optimise our quality organisation for implementation in 2020.



ROLE CHANGE: A MATTER OF SECONDS

Bees are also very good at crisis management. When a sudden storm prevents a large number of forager bees from returning to the hive, for example, the remaining foragers immediately become more active. In no time at all – starting out with, say, just a few hundred forager bees – ten thousand or more members of the colony become forager bees. The colony improvises, swiftly making changes to existing structures to incorporate new approaches and remedy deficiencies.

The colony functions as a flexible social system. There is continuous job rotation rather than rigid job descriptions and premature specialisation. A bee passes through many roles over the course of its life, graduating from cleaner bee to builder bee, nurse bee, heater bee, guard bee, scout bee and, finally, forager bee. Those who are best at adapting survive, that's how the hive works. Bees always stick together, forming a solid, pragmatic team – at all times, whatever their role.





≡PILATUS≡

37°11'15"N | 3°47'36"W

HUMAN RESOURCES

ANOTHER INCREASE IN EMPLOYEES

As a group, Pilatus increased its workforce to 2,289 full-time employees. There was a particularly big increase in the number of employees, up twelve percent, at our subsidiary in America. This can be attributed to an expansion in specialist personnel in the wake of completion of the new hall in 2018. Pilatus has 46 employees in Australia. 93 percent of employees work in Switzerland – a clear sign of our commitment to this location.

CREATING THE BEST POSSIBLE CONDITIONS

Anyone who passes through the Pilatus production facilities and offices will see employees who, day after day, give of their best for the company and its products. They perform at the highest levels, with untiring motivation. This is not something to be taken for granted by any means, and we work hard to ensure it stays that way. Not an easy task due to the many challenges and unexpected factors which often play a role.

Whilst external factors are difficult to control, there is much that we have in our own hands. We must work to combat staff turnover, the loss of sought-after top performers and service providers, and increased absenteeism due to accident and sickness. Against this background it is our duty to ensure the best possible conditions for both staff and company.

139 APPRENTICES WORLDWIDE IN 16 PROFESSIONS

We can be proud of our 36 graduate apprentices in Stans and an average exam grade of 5.02. Pilatus is a healthy and, above all, a sought-after employer with a reputation for quality. On 12 August 2019, another crop of 41 apprentices joined Pilatus in Switzerland for on-the-job training. Apprentice recruitment for summer 2020 also looks very positive.

The development of the apprentice programme at our subsidiary in America is very encouraging: completion of the first apprenticeship gave cause for celebration in the summer. Pilatus Business Aircraft Ltd currently has eight apprentices under training in three different professions. That underscores the importance and the attractiveness which Pilatus enjoys worldwide as an employer and training provider.

RECRUITMENT OF SPECIALISTS – A MAJOR CHALLENGE

The pressure of competition is intense and it is increasingly difficult to recruit a satisfactory number of specialists. The consequence of this battle for talented personnel is the need to step up our efforts to find the right specialists. That obviously increases recruitment costs.

BUILDING THE FUTURE

Airport Buochs Ltd (ABAG) looks back on a good operating business year in which revenues rose in comparison to 2018 despite a drop in the number of flight movements. ABAG, which is owned 50 percent by canton Nidwalden and 50 percent by Pilatus, attributes this good result to improved procedures. Flight operations proceeded without incident and customers are satisfied.

There was a sharp drop in year-on-year flight movements, down from 16,134 in 2018 to 13,945. Statistically, each flight movement comprises one take-off and one landing. There was a downturn in the volume of Pilatus flight movements in particular, at 5,690 movements compared to 7,719 in 2018. The Nidwalden Gliding Club, various customers of Airport Buochs Ltd and the Swiss Air Force all recorded fewer flight movements, adding to the decline in the overall total.

THE AIRPORT CONVERSION PROCESS CONTINUES

ABAG is actively involved in shaping its future. Infrastructure renewal is a subject of preoccupation and absorbs resources. The first phase of the master plan was completed last year. But a solution to the problem of long-term financing for air traffic control services has not yet been found. The resultant lack of planning certitude must be resolved urgently.

Detailed replies to objections against the conversion dossier were received in 2019. A revised version of this dossier was submitted to the Swiss Federal Office of Civil Aviation (FOCA) in 2018.

AN ENERGETIC START TO 2020

The object sheet of the Sectoral Plan for Aviation Infrastructure (SIL) was approved by the Swiss government in February 2020. ABAG expects to see further planning breakthroughs in 2020.

The FOCA is expected to deliver a decision on the conversion dossier during the first six months of the year. A number of legal uncertainties still remain, however. Objections and possible pursuit of appeals to the next higher level of authority, and the repercussions of such actions, are particularly difficult to predict.

Nevertheless, ABAG has several goals for the coming year: a breakthrough in the dossier on air traffic control services, specific measures in relation to master planning and drafting of viable planning approval applications for infrastructure renewal. Further aims for 2020 include improved safety in the vicinity of Herdernstrasse with the installation of surveillance equipment and new barriers.



FLIGHT MOVEMENTS AIRPORT BUOCHS	2015	2016	2017	2018	2019
Pilatus Aircraft Ltd	6,042	5,472	8,190	7,719	5,690
Airport Buochs Ltd	4,250	4,115	4,353	4,180	4,150
Nidwalden Gliding Club	3,211	3,394	3,734	3,307	3,191
Swiss Air Force	404	1,111	1,844	928	914
Total	13,907	14,092	18,121	16,134	13,945

46°58'27"N | 8°23'46"E

HIGHLY EFFICIENT TEAMWORK

Bees are extremely economical in everything they do: they manage their resources carefully and put their own infrastructure to the best possible use. A honeycomb is the perfect example. It is multi-functional, serving as a store for nectar, as a recipient for honey or as a nursing pod. Each cell forms a hexagon of astounding regularity: every angle measures 120 degrees and even the cell walls are practically the same thickness everywhere: 0.03 inches (0.07 millimetres). Probably the lightest and most stable shape conceivable, there is no better geometric choice.

Bees only produce as much honey as they actually need. Anything left over is recycled, not wasted. The bees also store honey for survival in the winter or on cold days – when leaving the hive is impossible. Having enough food for everyone inside the hive at all times ensures independence from external factors. Every bee works for the others, and for the next generation, too.

Bees are extremely efficient. Take forager bees, for example. Foragers mark the plants they visit with a chemical signal so that other bees know not to bother with that particular plant – saving the time and energy that would otherwise be required to land and examine the plant. It also saves a whole load of frustration! Truly, management by nature.





FACTS AND FIGURES

PILATUS GROUP

KEY INDICATORS FOR THE PILATUS GROUP	2015	2016	2017	2018	2019
Total Sales (CHF million)	1,122	821	986	1,092	1,170
Aircraft in Net Sales	121	117	115	128	134
Orders Received (CHF million)	1,367	1,087	1,422	1,015	1,132
Order Book Value (CHF million)	1,470	1,744	2,167	2,089	2,037
EBIT (CHF million)	191	89	135	157	153
EBIT as % of Sales	17.0	10.8	13.7	14.3	13.1
Cash Flow (net profit plus depreciation, CHF million)	178	95	133	156	165
Cash Flow as % of Sales	15.9	11.6	13.5	14.2	14.1
Investments in Fixed Assets (CHF million)	42	49	54	61	26
Investments in R&D (CHF million)	107	101	107	51	50
EBIT before R&D (CHF million)	298	190	242	208	203
EBIT before R&D as % of Sales	26.6	23.1	24.5	19.0	17.4
Net Assets (CHF million)	324	398	534	606	579
Inventories (CHF million)	639	485	647	479	495
Customer Advances (CHF million)	497	204	238	256	219
Number of Full-time Equivalents	1,905	1,961	2,113	2,283	2,289
BALANCE SHEET EXTRACT	2015	2016	2017	2018	2019
Current Assets (CHF million)	1,646	1,259	1,255	1,290	1,318
Long-term Assets (CHF million)	173	214	349	419	453
Total Assets (CHF million)	1,819	1,473	1,604	1,709	1,771
Liabilities (CHF million)	870	520	541	599	571
Equity (CHF million)	949	953	1,063	1,110	1,200
Total Liabilities and Equity (CHF million)	1,819	1,473	1,604	1,709	1,771
Equity Ratio in %	52.2	64.7	66.3	65.0	67.8

	2018		2019	
TOTAL SALES	%	CHFm	%	CHFm
Pilatus Aircraft Ltd, Stans, Switzerland ¹	66.4	725.3	57.5	672.7
Pilatus Business Aircraft Ltd, Broomfield, USA	30.5	332.8	38.9	454.6
Pilatus Australia Pty Ltd, Adelaide, Australia	3.1	33.6	3.6	42.7
Total	100.0	1,091.7	100.0	1,170.0

¹ Consolidated via Pilatus Stans

US dollar translation rates 2019: 0.9937 / 2018: 0.9785

Australian dollar translation rates 2019: 0.6911 / 2018: 0.7312

SALES BY REGION	%	CHFm	%	CHFm
The Americas	31.8	346.6	39.0	457.5
Europe	27.2	296.8	24.5	286.3
Asia	15.8	172.3	17.9	208.9
Australia	21.6	236.3	16.5	192.5
Africa	3.6	39.7	2.1	24.8
Total	100.0	1,091.7	100.0	1,170.0

SALES BY BUSINESS UNIT	%	CHFm	%	CHFm
General Aviation	55.2	603.0	71.5	836.3
Government Aviation (Trainer)	44.8	488.7	28.5	333.7
Total	100.0	1,091.7	100.0	1,170.0

AIRCRAFT IN NET SALES²	Number of aircraft	Number of aircraft
PC-12 NG	80	83
PC-24	18	40
PC-21	27	11
PC-6	3	0
Total	128	134

² Delivered aircraft and accrued aircraft based on the PoC method (PoC = Percentage of Completion; net sales of trainer is considered based on the production progress)

FACTS AND FIGURES

		2018		2019
EMPLOYEES BY BUSINESS UNIT	%	Employees	%	Employees
General Aviation	64.1	1,463	71.7	1,642
Government Aviation	35.9	820	28.3	647
Total	100.0	2,283	100.0	2,289
EMPLOYEES BY FUNCTION	%	Employees	%	Employees
Production	52.3	1,193	54.3	1,243
Sales and Services	18.1	414	16.3	373
Development	15.6	355	15.0	343
Logistics (incl. ICT)	9.1	208	9.2	210
Administration	4.9	113	5.2	120
Total	100.0	2,283	100.0	2,289
EMPLOYEES BY COMPANY	%	Employees	%	Employees
Pilatus Aircraft Ltd, Stans, Switzerland	93.4	2,132	92.7	2,123
Pilatus Business Aircraft Ltd, Broomfield, USA	4.7	107	5.2	120
Pilatus Defence Solutions Pty Ltd, Sale, Australia	1.4	31	1.4	31
Pilatus Australia Pty Ltd, Adelaide, Australia	0.5	13	0.7	15
Total	100.0	2,283	100.0	2,289

PILATUS ORGANISATION

MANAGEMENT



MANAGEMENT OF PILATUS AIRCRAFT LTD

1	Daniel Geiser	VP Aircraft Assembly & MRO
2	André Zimmermann	VP Government Aviation
3	Thomas Ochsenbein	VP Business Support & CFO
4	Markus Bucher	CEO
5	Bruno Cervia	VP Research & Development, Deputy CEO
6	Ignaz Gretener	VP General Aviation
7	Roger Hess	VP Supply Chain & ICT
8	Roman Emmenegger	VP Manufacturing



46°58'13"N | 8°23'54"E

PILATUS ORGANISATION

BOARD OF DIRECTORS



BOARD OF DIRECTORS OF PILATUS AIRCRAFT LTD

1	Gerhard Beindorff	Member
2	Dominik Burkart	Member
3	Oscar J. Schwenk	Chairman
4	Gratian Anda	Vice Chairman
5	Bernhard Müller	Member

SUBSIDIARIES

PILATUS BUSINESS AIRCRAFT LTD, BROOMFIELD, USA

Oscar J. Schwenk	Chairman
Thomas Bosshard	CEO

PILATUS AUSTRALIA PTY LTD, ADELAIDE, AUSTRALIA

Oscar J. Schwenk	Chairman
Sebastian Lip	CEO

PILATUS DEFENCE SOLUTIONS PTY LTD, SALE, AUSTRALIA

Oscar J. Schwenk	Chairman
Kylie Price	Executive Agent

2019

HIGHLIGHTS



NOVEMBER

- **1,700th PC-12** delivered
- Last of 49 **PC-21s** handed over to the **Royal Australian Air Force**

OCTOBER

- Premiere of the all-new **PC-12 NGX**, the third generation of the world's best turboprop
- **50th PC-24** delivered

AUGUST

- **Groundbreaking ceremony** for the new building for **Pilatus Australia Pty Ltd** in Australia
- Six **PC-24s** sold to **KSA, the Swedish Air Ambulance Organisation**
- First **PC-24** flies in **South America**
- **Best Customer Service** Award won for the **18th time** in a row

JULY

- **PC-24 lands on grass for the first time** at Goodwood
- **First apprentice** completes training at **Pilatus Business Aircraft Ltd** in Broomfield, USA

MAY

- **200th PC-21** delivered – customer is the Royal Australian Air Force
- **Structure Assembly Hall** with C-frame riveting system goes **into operation** at Stans

APRIL

- First landing on a **rough field runway** for **PC-24** operated by the Royal Flying Doctor Service of Australia
- Last of twelve **PC-21s** handed over to the **Royal Jordanian Air Force**

MARCH

- Last of 17 **PC-21s** handed over to the **French Armée de l'air**

FEBRUARY

- **Swiss government** takes delivery of its **PC-24**



46°27'31"N | 7°54'29"E

Founded in 1939, Pilatus Aircraft Ltd is the only Swiss company to develop, produce and sell aircraft to customers around the world: from the legendary Pilatus Porter PC-6 to the best-selling single-engine turboprop in its class, the PC-12, and the PC-21, the training system of the future. The latest aircraft is the PC-24 – the world's first ever business jet for use on short unprepared runways. Domiciled in Stans, the company is certified to ISO 14001 in recognition of its efforts for the environment. The Pilatus Group includes two independent subsidiaries in Broomfield (Colorado, USA) and Adelaide (Australia). With over 2,000 employees at its headquarters, Pilatus is one of the largest employers in Central Switzerland. Pilatus provides training for about 130 apprentices in 13 different professions – job training for young people has always been a very high priority at Pilatus.

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