In 2013 the armed forces of the Netherlands commemorate the centenary of their air arm. What today is known as the Koninklijke Luchtmacht or Royal Netherlands Air Force (rnlaf), came into being on 1 July 1913 as the Luchtvaartafdeeling (lva) or Air Service of the Army. Only after the Second World War, in March 1953, the rnlaf was established as a separate service equivalent to the army and the navy. The centenary of this Dutch institution for third-dimension warfare is an appropriate moment for research into its early history, since only few historical publications have been written about its pre-war development. This study covers the history of the air arm of the Netherlands army from its inception in 1913 until the general mobilization of the Dutch armed forces on 28 August 1939, the eve of the Second World War. The actions of the air arm and air defence, including the five-day war of May 1940, from that moment on have already been thoroughly documented in two well-researched studies. The air arm’s preparation for war during the mobilisation period of August 1939 through May 1940 is covered in detail in R. de Bruin et al., Illusies en incidenten, while F.J. Molenaar’s De luchtverdediging in de meidagen 1940 constitutes the official history of the air arm and the air defence in the war of 10-14 May 1940.

Although the process of modernisation and expansion of the Dutch armed forces took a careful start in 1935 after fifteen years of constant reductions in defence spending, the air weapon was far from fully manned and equipped with modern aircraft when mobilisation came in 1939. This study therefore focuses on the main question: “What role in the defence of their country’s neutrality did Dutch policymakers attach to the air arm of the Army, and how was this achieved in reality at the moment of mobilisation of the armed forces in August 1939?” To address this question, air power thought in the Netherlands, both professional and political, has been analysed against the background of international development of aviation and the military use of aircraft in the Interbellum, which is described in chapter 1.

As the Netherlands remained neutral during the First World War, its armed forces took no part in the air war over the Western Front. It was from this extensive fighting in the air that air power theorists derived their post-war theories and forecasts of future air wars, based upon roles and missions extracted during the intensive air combat of 1914-1918. How did these theories affect air power thinking in the Netherlands? And what role did the Netherlands’ political and military authorities see for the air arm to play in keeping the country’s neutral policy? This is the theme of chapter 2.

The airplane, both civil and military, underwent an enormous technological advance during the Interbellum. How did the traditional army leadership value this costly development, and were the specific personnel and organizational requirements of an air force being met? Moreover, the constant development of military aircraft required a continuous modernisation from an adequate industrial base, and it is relevant to explore the dependence of the Dutch air arm on its national aeronautical industry, given the neutral stance of the Netherlands. In Chapters 3 through 5, these and other related issues concerning the air service are explored for three different periods: (1) the formative years of 1913-1919 in which a firm foundation was laid in spite of all sorts of difficulty; (2) the peacetime development during 1920-1935, when professional development was increasingly hampered by budgetary restraints; and (3) 1935-1939,
years of incomplete modernisation and expansion. Chapter 6 contains the overall conclusions of this study.

This study is primarily top-down, which means that the main focus is air power thinking at governmental and parliamentary level as well as among the military leadership. In particular, the policies, organizational measures, and preparatory actions for the mobilisation of personnel and materiel by Ministers, chiefs of the General Staff and the commanding officers of the Air Service will be scrutinized. Developments related to the Dutch Naval Air Service (Marineluchtvaardienst or MLD) and the Air Service of the Colonial Army in the Netherlands East Indies are only mentioned as they affect the history of the air arm of the army in the Netherlands. The main sources for research and analysis of this study were found at the National Archives (NA) in The Hague and at the Netherlands Institute for Military History (NIMH). Contemporary newspapers and parliamentary proceedings could be reviewed on the Internet. Additional primary sources were available in the professional military reviews in the yearly editions of the Wetenschappelijk Jaarbericht of the Netherlands Society for Military Art and Science, in the professional military magazine Militaire Spectator, and in the air power quarterly Luchtmaacht. A list of secondary sources is attached at the end.

**Air power thinking in the Netherlands**

As in all other countries, military aviation in the Netherlands before World War I was viewed as a means of aerial reconnaissance, supplementary to the – in the case of the Dutch army weakly manned – cavalry. Although the neutral Netherlands remained outside the fighting of the Great War, its armed forces were kept mobilised for the full period of 1914-1918. During that war, air fighting among the belligerents increased enormously, and all of today’s air forces’ missions were established over the Western Front, like strategic and tactical reconnaissance, artillery spotting, offensive and defensive air combat, close air support of ground troops, and finally strategic bombing operations aimed at the enemy homeland. In Great Britain, such bombing operations by the Germans led to a public outcry and in 1918 resulted in the formation of the Royal Air Force (RAF), the world’s first independent air arm.

In the Netherlands, these developments were closely watched, but the isolated neutral stance and the great difficulty of buying specialized aircraft abroad, prohibited implementation of the tactical war experiences into the Air Service. Nevertheless at the end of the war, LVA commander Hendrik Walaardt Sacré urged that almost half of the aircraft should be fighters, both for the air defence of vital objects and for escorting reconnaissance aircraft.

With the war over and strong budget cuts applied, the General Staff specified the role of the LVA in the early 1920s as primarily supporting the Field Army with reconnaissance. In the Dutch defence policy in support of its neutral foreign policy, the Field Army’s role was to delay invading forces, so that a defence of the Vesting Holland, the central redoubt in the western part of the country, could be organized until assistance from allies was forthcoming. Training and exercises during the 1920s were mainly aimed at reaching a high professional level in this support function to the Field Army. Air defence and bombing operations were considered only secondary missions and existed mainly on paper.

From 1930 onwards, the LVA’s tactical expert, captain Johan G.W. Zegers, who read all international air power literature and had learned from the publications of Giulio Douhet, began to
promote independent air operations. Given the small size of the Dutch airspace, he declared the traditional single-seat fighters less suitable for the air defence mission, because they would have insufficient time to climb to height after being alerted and intercept the bombers before they dropped their loads. As an alternative he proposed heavily armed, fast multi-engined aircraft with several crew members, which could patrol at height up to four hours. This concept was analogous to the French bombardement/combat/reconnaissance (bcr) aircraft, which were used as croiseurs aériens, or air cruisers. In promoting the air cruiser concept, Zegers wanted to develop independent air missions with bomber type aircraft, while avoiding the issue of offensive air operations in the framework of the defensive posture of a neutral country. Until 1935 his theories found no political support, partly because the lva commanders Jacob J. van Santen (his predecessor as tactical expert) and Petrus W. Best preferred fighters, but mainly because of ever more stringent budgetary restrictions.

The failure of the League of Nations to conclude arms control agreements, in particular with respect to offensive air power, and the resulting air re- armament in Germany, France and Great Britain with bomber forces, did not go unnoticed in the Netherlands. To general Izaäk H. Reijnders, who became chief of the General Staff in 1934, it became clear that with strong air forces at both sides of his country, the policy of neutrality in yet another European war would probably not keep the Netherlands out of the fight. Each party would try to occupy the Low Countries in order to prohibit the establishment of air bases there for offensive air operations against the other party, and use the air bases for their own purposes. According to Reijnders, the Dutch armed forces lacked adequate air defences to withstand a strategic assault of the country with – he was sure – strong air attacks in the opening phase of war.

The new government under Prime Minister Hendrikus Colijn, who also took the Defence department during 1935-1937, increased defence spending to improve re-equipment with modern aircraft and air defence artillery. Captain Zegers was now the principal staff officer to lieutenant-general Marius Raaijmakers, who was established as Inspecteur Militaire Luchtvaart (iml) or Inspector of Military Aviation in April 1935. After the occupation of the Rhineland by Hitler’s forces in March 1936, Colijn ordered Raaijmakers to draw a ten-year plan for modernisation and expansion of the lva. Within a month Raaijmakers delivered his plan for the build-up of an air force of three Luchtvaartregimenten (lvr) or Air Regiments: 1 lvr for air defence and independent air operations, 2 lvr for air support to the Field Army, and 3 lvr for training. As recommended by Zegers, the air cruiser was the central asset in this plan and with strong support from Raaijmakers and Reijnders, Colijn ordered in May 1936 the urgent development of the Fokker TV bomber to fit this role.

However, by the end of 1937, international aircraft technology was advancing in such a fast way that aircraft speed rapidly increased. With new single-seat fighters like the Hurricane, Spitfire and Messerschmitt Bf 109 emerging, the air cruiser concept was seriously questioned by the commander of the Field Army and his chief of staff Van Santen. Meanwhile, LVA-commander Best had pleaded for the faster and heavily-gunned Fokker G.I twin-engined fighter. After dr. Johannes J.C. van Dijk had replaced Colijn as Defence Minister, fighter procurement prevailed with orders for 36 Fokker G.Is and 36 Fokker D.XXI single-seat fighters with fixed landing gear, whereas air cruiser procurement was limited to only sixteen out of a planned total of seventy Fokker TV bombers by early 1938. In the end, two precious years were lost by concentrating on the complex and costly Fokker TV air cruiser development, a concept that soon proved to be
outdated. So in the Netherlands, a change of mind regarding air-rearmament, not unlike the bomber-to-fighter shift in France and Great Britain, took place. The loss of time caused by this diversion of air power thinking among the Dutch policy makers would have serious consequences for the remainder of time towards mobilization.

The formative years 1913-1919

Dutch aviation began in earnest in 1907 with the foundation of the aero club of the Netherlands, a member of the Fédération Aéronautique Internationale (FAI). The first chairman of this aero club, which began its aeronautical activities with balloons, was colonel Cornelus J. Snijders, a visionary engineer who would soon become chief of the General Staff. He saw to it that the use of the air for military purposes in Europe was evaluated and a commission was set up in 1910 to advise the government on the need to incorporate aviation into the armed forces. To buttress the work of this committee, Snijders organized during extensive army manoeuvres in September 1911 a provisional air service with private pilots and aircraft. Although good results were recorded and the value of aircraft for military use was proven, the secretary of the commission and future first commander of the Air Service, Walaaardt Sacré, concluded that only a permanent flying service with intensive training of selected officers could guarantee good quality of the air reconnaissance mission. War Minister Colijn submitted the report of the commission and its proposal to establish the Air Service (LVA) to parliament, which voted for it with the proviso that only aircraft – no balloons or airships – were acquired and only unmarried volunteer officers were selected to man these aircraft. The LVA was established on 1 July 1913 at the aerodrome of Soesterberg with five pilots, thirty-three ground crew and one airplane. Soon, a handful of Farman aircraft were procured from France, but after war broke out in August 1914 this source dried up, and in 1915 a dozen of these aircraft were license-built in Amsterdam by the Trompenburg (Spyker) automobile factory.

However small the LVA was in August 1914, the supreme commander of the Dutch armed forces, general Snijders, ordered the airplanes into the air for border patrols to detect eventual neutrality incursions. During the war Snijders saw to it that the tiny air organization could grow and flourish. The home base at Soesterberg was expanded with hangars and maintenance facilities, and additional sites for flying operations were opened, of which the airfield near Fort Schiphol in the central Holland redoubt would become the future civil airport of Amsterdam. The most serious limitation during these years was the inability to obtain modern aircraft and train aircrew with them. The LVA interned more than hundred aircraft from warring countries, which had made emergency landings in Holland. Although these unexpected aircraft deliveries greatly enhanced the insight of the LVA into the technical and tactical development of aircraft on both sides, it proved impossible to translate this into a substantial domestic aircraft production for want of raw materials and aeronautical knowledge.

Nevertheless, by 1917 a wartime LVA organization model was approved, comprising of 288 aircraft in sixteen squadrons, including reserves, 186 pilots, and some 600 ground crew. By November 1918, only a small fraction of these plans was realised and the expansion was halted after the Armistice.
Years of budgetary restraint 1920-1935

On 1 November 1919, Captain Joachim H. Hardenberg took over command of the Air Service from Walaardt Sacré and he would stay at the helm for exactly ten years, leaving as colonel. Coming from the inner circle of General Staff officers, Hardenberg was tasked to mould the tiny Air Service into shape, within the limits of a sharply reduced budget and a frozen personnel establishment. Moreover, with General Snijders in retirement, the General Staff only saw a role for the LVA as an auxiliary service for reconnaissance. The new Conscription Act of 1922 brought an overall army restructuring, resulting in a school institute to train conscripts in peacetime, with combat units only to be formed at general mobilisation. In line with this, the LVA was to be a small peacetime skeleton school organization for training pilots and observers for the reconnaissance mission.

The aircraft obtained during World War I were put aside, and Anthony H.G. Fokker supplied 100 of his most modern but yet undelivered aircraft (C.I reconnaissance and D.VI fighter aircraft) from his former German production line to the LVA. With these sturdy machines, the LVA had to start over in 1920. From 1923 onwards, the acquisition of a small quantity of new aircraft was included in the yearly budget. Although the small NVI aircraft factory competed with Fokker during 1922-1925, the Amsterdam-based Fokker industry in reality was holding a monopoly to supply all aircraft to the LVA until 1935. Not only were Fokker planes of world-class quality during the 1920s (and therefore successful in export), the government policy dictated that aircraft for the military air services and KLM must be ordered from the domestic aircraft industry. For airplane engines and instruments however, the Dutch remained dependent of foreign suppliers.

The annual intake of air crew to be trained was established at 24 pilots and 20 observers. Selection of candidates was improved by the Chief Medical Officer at Soesterberg, who had made intensive study of what aero medical knowledge was available in France and Britain, and who had analysed the non-technical causes of previous accidents. Other support functions, like the Radio- and Photographic departments, were also professionalised.

Basic wartime formations to be formed at mobilisation were Vliegtuigafdeelingen (VA) or squadrons, which were to be organized as follows:

- **Vliegtuiggroepen** (Vl.Gr.) or Aircraft Groups, one for each Field Army division, each composed of a tactical reconnaissance squadron (verVA), an artillery reconnaissance squadron (arVA) and an escort fighter squadrons (besVA), in total 20 aircraft per Group;
- **Strategic reconnaissance squadrons** (stratverVA) for the Supreme Armed Forces Command and the Field Army commander, with 6 aircraft each;
- **Fighter squadrons** (jaVA) of 10 fighters each for air defence;
- **Bombardment squadrons** (bomVA), to be formed with requisitioned KLM passenger planes, converted to bombers.

The required wartime strength at mobilisation was estimated at 2,255 personnel in 1925 to man a force of 168 first-line aircraft, which were at that time not yet available. It would also take many more years to form a sufficient reservoir of trained reservists and conscripts to fill this organization. In order to limit the number of pilots on active duty in peacetime for financial reasons, most pilots were allowed to fly only one year after graduation. After that, they were put on reserve status and permitted to fly only six hours per month. Most of these pilots found their way to the
KLM and pioneered the long route to the Netherlands East Indies. Peacetime strength at Soesterberg in the late 1920s was never more than 52 pilots and some 45 aircraft in daily service. Due to a professional leadership and intensive training, the tiny LVA had a high quality standard, as was demonstrated during international flying competitions in the 1920s and early 1930s.

Under the new commander Van Santen, who was a pilot and observer himself and took over from Hardenberg at the end of 1929, pilot training and the peacetime organization were changed to reflect a shift from reconnaissance support to enhanced training in air combat and formation flying. This was however frustrated by ever more stringent budget cuts following the economic crisis of 1929, allowing for no more than 46 pilots on active duty and all sorts of economy measures. Aircraft acquisition was reduced to a minimum, resulting in a sharply ageing fleet at a time when aircraft technology was developing fastly.

The Air Service also faced an internal crisis between 1932 and 1935. The Technical Service had been an integral part of the LVA from its inception in 1913, and was well equipped and well manned for all technical support activities, including deep maintenance and overhaul. As in all air forces, daily flying at Soesterberg was a close teamwork by both air and ground crews. This was abruptly ended in August 1932 by a decree of the Defence Minister to separate the Air Service from its Technical Service, which was to be known as the Luchtvaartbedrijf (LVB) under the direct command of the Minister, whereas the LVA remained under direct command of the chief of the General Staff. Many competence issues followed, and the director of the LVB, colonel (retired) Karel E. Oudendijk, a protégé of the Defence Minister, tried to usurp almost all technical responsibilities of LVA commander Van Santen, who was only a lieutenant-colonel. As all technical personnel was placed in the LVB, with detachments to the LVA for work in its hangars, Van Santen considered all this an unjustified curtailment of his position as the senior military aviation expert in the country. Conflict also erupted between the two in specifying the requirements for new aircraft. When Van Santen’s requirement for a two-seat fighter was overruled by Oudendijk’s choice for the Fokker C.X reconnaissance aircraft in 1933, the chief of the General Staff and the Defence Minister were fed up with the clashes at Soesterberg. They both wished the two quarrelling officers to be replaced, but because of Oudendijk having a fixed contract only Van Santen had to go and was succeeded by lieutenant-colonel Best. This officer, who came from the General Staff and was unfamiliar with the Aviation Service, found the morale at Soesterberg at low ebb with the pilots distrusting their accident-prone obsolete training aircraft. His urging for at least a handful of new training aircraft fell on deaf ears with the Minister. Moreover, the clashes between LVA and LVB continued, until the Minister tasked his Inspector of Engineering Troops, major-general Raaijmaakers, to investigate the situation. His solution was both simple and effective: a joint authority should be put above the commander of the LVA and the director of the LVB to communicate directly with the Minister of Defence and the chief of the General Staff. This was agreed upon and as of 15 April 1935 Raaijmaakers himself, about to be pensioned, was installed as Inspecteur Militaire Luchtvaart (IML) or Inspector of Military Aviation, with the rank of reserve-lieutenant-general. Thereafter the situation improved, as all parties were put to work to modernise and expand the neglected Air Service.

Although the Air Service’s role within the Army during the 1920s and early 1930s was rather small and unimportant, with never more than two-and-a-half percent of the squeezed Army budget allotted to it, the LVA made an important contribution to the development of civil aviation in the Netherlands. As said, most KLM pilots were drawn from the LVA, the military base
at Schiphol was made available for the international air traffic, and the Radio- and Aero Medical Services of the LVA also supported civil aviation. At the instigation of the LVA, an aeronautical research institute (Rijks Studiedienst voor de Luchtvaart or RSL) was established in 1919 in Amsterdam to support both military and civil aviation operations, as well as the development of new aircraft designs by Fokker. Suggestions to form an Air Ministry as an overarching government agency in control of all aviation, like in Britain, were however resolutely turned down because of vested interests at several Ministries. Even political pressure from Parliament to combine the Army and Naval Air Services, or at least their acquisition and technical services as an economy measure, was withstood by the admirals who deemed a separate Naval Air Service an integral part of the fleet with responsibilities both in Europe and in Asia.

Fokker, after its export successes in the 1920s, also suffered from both the economic crisis and its inability to modernise its construction and production techniques in the 1930s. While American companies like Boeing and Douglas switched to mono-wing metal constructions with retractable landing gears, Fokker kept building aircraft with wooden wings, linen-covered fuselages of steel frames and fixed landing gears. As KLM and other airlines went for these modern metal airplanes, Fokker almost went bankrupt in 1933. A small order for twelve D.XVII fighters was placed for the LVA to keep Fokker going, while a government commission studied the possible nationalisation of Fokker. Because this study took almost two years and the outlook in 1935 was improved as the modernisation of the LVA was planned, Fokker was never nationalised. A new management board was put in place and the Fokker factory gradually implemented new metal production techniques.

**Problematic modernisation and expansion after 1935**

Chief of the General Staff Reijnders confronted the cabinet in early 1935 with an urgent list of military measures to improve the equipment of the army, with special attention for air defence. Prime Minister Colijn proposed Parliament later that year the establishment of a special investment fund to alleviate materiel shortcomings, which was approved by a large majority, thus ending the era of continuous defence cuts. After Hitler’s occupation of the Rhineland in March 1936, Colijn took several precautionary measures, one of them requesting from general Raaijmaakers a ten-year plan for modernisation and expansion of the air force. Raaijmaakers proposed a three-regiment wartime organisation with 221 first-line aircraft, and a total of 407 aircraft including reserves. As 144 existing aircraft could be used, he foresaw acquisition of 263 aircraft with spares for a total amount of 25.2 million Dutch guilders, to be spent in ten years. Colijn approved this plan in May 1936 and ordered the development of the Fokker TV air cruiser, the central asset in this plan, not only for air defence patrols, but also for strategic reconnaissance and bombardment. Another novelty was that Fokker’s monopoly was broken by Raaijmaakers, as he wanted training and light reconnaissance aircraft to be built by the Netherlands’ other famous aircraft builder S.F.W. (Frits) Koolhoven, who ran his factory at the Waalhaven airfield in Rotterdam. So, there would be competition for all other subsequent re-armament projects.

As the international situation deteriorated by the end of 1936, Colijn ordered Raaijmaakers to accelerate the ten-year plan into a four-year plan. Raaijmaakers presented this new plan for 1937-1941 in January 1937 at a total cost of 46 million Guilders (36 million for aircraft, 5 for air-
fields and hangars, and 4.5 for munitions and supplies). General Reijnders however reduced the amount for aircraft by 4 million to 32 million Guilders, which later proved to be a ‘cap’ when aircraft prices went up as tension mounted. Early in 1938, Fokker had obtained orders for 36 D.XXI single-seat fighters, 36 G.I twin-engined fighters and only 16 TV air cruisers as that plane was seen as controversial by now. In May 1938, Minister Van Dijk asked Raaijmakers to request proposals from Dutch and foreign industries for all remaining aircraft required in the four-year plan. He came up with a full list of recommendations in October, just before he retired for a second time on 1 November 1938. At that same date, a new organization, the Commando Luchtverdediging or Air Defence Command, came into being in The Hague with former LVA commander Best – now a major-general – as commanding officer. The Air Defence Command not only comprised of the former LVA, now designated as Luchtvaartbrigade or Aviation Brigade, but after longtime arguments also of the other air defence organizations of the army: the Air Defence Artillery Brigade with two regiments, the searchlights of the 3rd Engineer Regiment and the Auxiliary Air Observer Corps.

With respect to the most urgent aircraft requirement for modern single-engine air defence fighters, Raaijmakers had, with strong support from Best and Reijnders, recommended an immediate buy of a squadron of British Hurricane fighters. This would create time for Dutch industry to develop follow-on designs. Minister Van Dijk declined, however, and under pressure from Dutch industry decided to charge Koolhoven with the further development of the FK.58 fighter, a type which was also ordered in small numbers by the French air force. The acquisition section of the LVB insisted in several design changes of the FK.58 to comply with their regulations. By the time the 1.000 hp Bristol Taurus engines needed to be ordered for these fighters, Britain was at war with Germany and an export embargo was in force. So, when mobilisation came, the Dutch lacked modern air defence fighters. The same story more or less applied to the urgent requirement for a fast twin-engine strategic reconnaissance aircraft, for which the German Dornier Do 215 was recommended. Van Dijk however charged Fokker either to modify the G.I or develop a new G.II for this role, but when it became clear a year later that this would take too much time, the Dorniers were ordered at the eleventh hour. Their delivery subsequently was blocked by German Luftwaffe chief Göring. The only recommendation for a foreign aircraft on which Van Dijk did not interfere, because such a type was not on any Dutch drawing board, was the American Douglas-Northrop 8A-3N, eighteen of which were delivered during the mobilisation period.

All in all, the strong lobby of the Dutch aircraft industry, whose capacity was limited and whose dependence on foreign equipment was substantial, combined with rigid acquisition regulations by the Defence Department, were the main causes for the delivery of only 117 (or one third) of 346 aircraft required in the four-year plan for modernisation and expansion of the Dutch Air Arm at the time the mobilisation of the armed forces was ordered in August 1939. Since the Air Defence Command was already pre-mobilised during the Albanian crisis of April 1939, all available aircraft during the summer of 1939 were quickly worn out as a result of the training of a great number of reservist air crew now in service. Only by reducing flying hours and maintenance troops working overtime, this situation could be restored to normal proportions by August 1939.
Conclusion

The Air Corps, introduced in the Netherlands Army in 1913, was not in a position to fully develop into a effective weapon during the neutral stance in World War I. In the 1920s it suffered from a limited role as an auxiliary reconnaissance service for the ground forces and continued budget cuts. Nevertheless, being small-sized, the Air Corps managed to establish a highly professional cadre. While from 1930 onwards international developments required paying more attention to air defence, deeper budget cuts and internal problems caused by differing views, further eroded the Air Corps. By 1935 the Netherlands Air Corps hardly represented any operational value and could not be regarded as a firm foundation for speedy modernisation and expansion, once this was approved.

Initial modernisation and expansion centred around the Douhet-inspired air cruiser concept as was propagated by captain Zegers. As neither the General Staff nor the Defence Ministry had any real air power expertise, the responsible authorities had no other choice than to follow Zegers’ advice. Only two years later, after much time, money and energy was spent on the development of the Fokker T.V air cruiser, former commanders of the Air Corps Van Santen and Best saw their pleas of switching priority to defensive fighters accepted by Minister Van Dijk. This Minister blocked any further acquisition of bombers as air cruisers and requested proposals from Dutch and international companies for the supply of the remainder of aircraft to complete the four year plan.

General Raaijmaakers advised, with strong support from the newly appointed Air Defence Commander Best and the Chief of the General Staff Reijnders, to immediately order from running production British single-seat Hurricane fighters and German Dornier strategic reconnaissance aircraft. The Minister lingered however and decided to order these aircraft from domestic aircraft companies. Although Parliament did not block any budget for air rear- armament, it demanded as a result of a strong lobby by Fokker and Koolhoven that, for the sake of employment, aircraft if possible should be ordered from national companies. Moreover, the Minister’s industrial advisers urged to spread orders between Fokker and Koolhoven in order to maintain price control through competition. But as a result of the small size of the Dutch aeronautical industrial base, both these companies could not develop and produce the required aircraft types in time. More time was lost on bureaucratic acquisition procedures and unique specifications. To make matters worse, an export ban blocked the delivery of British engines for the Koolhoven fighter after the war started in September 1939.

The final result of the described situation was that – in spite of four years of hard work – the modernisation and expansion program of the Netherlands Army Aviation had only progressed half way at the general mobilisation of the country’s armed forces on August 28, 1939, in particular lacking a modern air defence. Even if all planned aircraft equipment would have been delivered by then, it is extremely questionable whether enough crew could have been provided. The personnel policy of the Army dictated a strong dependency on reservists and conscripts to fill the ranks, also for military aviation. The Army had waited too long to expand the tiny peace-time cadre, and the mobilised troops lacked training and experience. Thus, even the limited air organization which was called for during the advanced mobilisation of air defence forces in April 1939, needed many months of additional training before achieving operational status.