



Joint Strike Fighter exit costs





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Part I Conclusions, recommendations and responses



1 Introduction

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1.1 Background

1.1.1 General

The Ministry of Defence currently has a fleet of F-16s, which must eventually be replaced. Since 2002 the Netherlands has therefore been taking part in an international cooperation programme for the development of a new fighter aircraft, the Joint Strike Fighter (JSF). The JSF may be the successor to the F-16 in the Netherlands. This country's participation in the international JSF programme is part of the Replacement of F-16s project, which was designated as a 'large project' by the House of Representatives in 1999.

The Ministry of Defence is responsible for replacing the F-16 and participating in the international JSF programme. The Ministry of Economic Affairs, Agriculture and Innovation is responsible for promoting the involvement of Dutch industry in the development, production and sustainment of the JSF.

In June 2012, the Ministry of Defence estimated the costs of purchasing the JSF at EUR 7.478 billion, on the basis of 85 aircraft, and the operating costs over thirty years at EUR 13.567 billion (2011 prices, planned dollar rate USD 1 = EUR 0.75). The Rutte-Verhagen government appropriated EUR 4.5 billion for the replacement of the F-16.

1.1.2 Motion in the House of Representatives

On 5 June 2012 the House of Representatives adopted a motion calling on the government to take all the necessary steps to exit from the JSF programme and purchase the F-16's successor 'off the shelf' when the time comes. The Minister of Defence made an undertaking to the House of Representatives to commission an independent study of the costs and the impact on employment of three policy options:

1. continuation of the present policy of partnership in the JSF programme;
2. continuation of the present policy, but withdrawal from the test phase;



3. complete withdrawal from the JSF programme, and purchase of an aircraft off the shelf when the time comes.

At the Minister of Defence’s request we are hereby conducting a study of the costs. The Ministry of Economic Affairs, Agriculture and Innovation has commissioned a study of the impact on employment from SEO Economic Research.

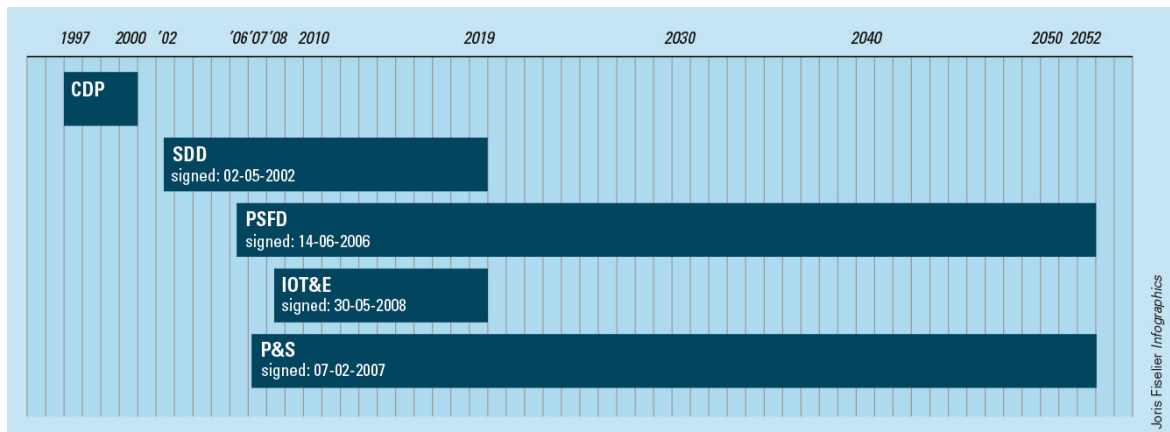
1.2 Context

1.2.1 Involvement in the JSF programme

The Netherlands is involved in the JSF programme under the terms of four Memoranda of Understanding (MoUs) signed by the Ministry of Defence. These are agreements between the defence ministries of the participating countries. The Ministry of Defence has signed the following MoUs:

- the System Development and Demonstration (SDD) MoU
- the Production, Sustainment and Follow-on Development (PSFD) MoU
- the Initial Operational Test and Evaluation (IOT&E) MoU
- the Production and Sustainment (P&S) MoU

Figure 1 Schedule for Memoranda of Understanding



System Development and Demonstration (SDD) MoU

Details of cooperation on the development of the JSF are set out in the System Development and Demonstration (SDD) MoU. The goal is to develop a ready-for-production fighter that can be deployed as soon as it is produced. Nine countries have signed the SDD MoU: the United States, the United Kingdom, Canada, Denmark, the Netherlands, Norway, Italy, Turkey and Australia.



The Netherlands joined in 2002. This MoU has since been extended up to 2018.

Production, Sustainment and Follow-on Development (PSFD) MoU

The countries that have signed the SDD MoU for the development of the JSF have also entered into a partnership for its production. Details of this are set out in the Production, Sustainment and Follow-on Development (PSFD) MoU. The countries that have signed the PSFD MoU are the same as the ones that have signed the SDD MoU.

This MoU will remain in force throughout the service life of the fighter, up to 2052.

In mid-2013 the JSF Program Office (JPO) is expected to decide in which partner countries (a) sustainment of the engines and (b) logistics and warehousing for the sustainment phase will take place. In mid-2014 the JPO is expected to decide where sustainment of the JSF airframe will take place. These decisions are of relevance not only to sustainment in the PSFD phase but also to future agreements between the countries taking part in the PSFD MoU.

Initial Operational Test and Evaluation (IOT&E) MoU

An Initial Operational Test and Evaluation (IOT&E) phase is designed to test the JSF's operational capacities and capabilities. This is done in an operational test environment, in this case in the United States. Three countries are taking part in this phase: the United States, the United Kingdom and the Netherlands. The Netherlands joined in 2008. The MoU was due to remain in force until 2015, but was recently extended up to 2019.

Production and Sustainment MoU (P&S)

The Production and Sustainment (P&S) MoU or 'European Footprint' is an agreement signed in 2007 between the Netherlands, Norway and Italy. Under this agreement the signatories will jointly endeavour to ensure that certain activities in the PSFD phase, such as the production and maintenance of the aircraft, are carried out in these three countries. Details of the P&S MoU have yet to be worked out.

Before signing these four MoUs, the Netherlands had signed the Concept Demonstration Phase (CDP) MoU. This concerned the preliminary phase of the JSF programme, and ran from 1998 to 2001. The Netherlands' contribution to this was EUR 93.3 million (NLG 200 million). This preliminary phase is now over and is not part of the project definition



used by the Ministry of Defence. In this report we will only consider the CDP phase when determining how much the Netherlands has already spent on the JSF programme.

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Dutch industry is expected to benefit from partnership in the JSF programme. In 2002, to compensate the State for the costs of participation, the Ministry of Economic Affairs, Agriculture and Innovation and the industries concerned signed a cofinancing agreement (CFA). Under the terms this agreement, industry will remit to the State a percentage of its turnover from work on the JSF.

1.2.2 Partnership

The Netherlands' partnership in the JSF programme consists of participation in the four MoUs. In principle, this does not mean that the Netherlands has chosen the JSF or decided to purchase it. However, the participating countries have specified a planned number of aircraft to be purchased, which has served as a formula for distributing costs, benefits and contributions to the organisation of the JSF programme. The Netherlands can wholly or partly terminate its partnership, for example by withdrawing from some or all of the MoUs.

There are also links between the various MoUs, in the sense that withdrawal from one may entail withdrawal from others (see chapter 4).

1.2.3 Annual monitoring reports on the replacement of the F-16

Since 2005 we have been regularly informing the House of Representatives on the situation regarding the replacement of the F-16. Among other things, we have looked at developments in the preparations for purchase and (since 2011) their consequences for the present fleet of F-16s.

1.3 Questions

We have studied the costs and consequences of three aforementioned policy options:

1. continuation of the present policy of partnership in the JSF programme;
2. continuation of the present policy, but withdrawal from the test phase;
3. complete withdrawal from the JSF programme, and purchase of an aircraft off the shelf when the time comes.



At the minister's request we have assumed for the purposes of this study that the present fleet of F-16s will be replaced by 68 aircraft.

The minister requested us to study the relative costs of the three policy options for further involvement by the State in the JSF programme. In consultation with the Ministry of Defence, and in the light of the minister's detailed questions, we have analysed the costs in terms of three aspects: functionality, time and money.

The functionality and money aspects represent 'value for money'. By this we mean that our study is not confined to items that can be assigned a monetary value. We have also considered the qualitative aspects of the three options, such as the benefits of international cooperation, the promised qualities of the aircraft, the quality and feasibility of different versions of the test phase, and ambitions regarding the air force's operational capabilities. Time is a linking factor in relation to the functionality and money aspects; it mainly concerns the consequences of keeping the F-16 in service longer than planned. Consistently placing this in a time perspective provides a clear picture of the consequences for the air force's budget and operational capabilities.

We have quantified the findings of this study wherever possible. Where this is not possible, we have provided a qualitative picture.

Except where otherwise stated, all amounts in this study are quoted in euros, based on a planned dollar rate of USD 1 = EUR 0.7752 (2012 prices).

Disclaimer
We have not examined the legal aspects or consulted external legal experts in drawing up this report. The contents should therefore not be seen as a legal recommendation or assessment.

1.4 Structure of this report

This report is divided into two parts. Part 1 answers the Minister of Defence's question on the three policy options for the JSF programme. Chapter 2 shows the costs and consequences if the Netherlands continues its present partnership in the JSF programme. Chapter 3 describes the costs and consequences if the Netherlands remains a partner but withdraws from the test phase. Chapter 4 indicates the costs and



consequences if the Netherlands withdraws from the JSF programme
altogether and purchases an aircraft off the shelf when the time comes.
Chapter 5 presents our conclusions and recommendations. The response
from the Minister of Defence and our afterword are set out in Chapter 6.

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Part 2 presents the findings that led to our conclusions in Part 1.



2 Option 1: continuation of the present policy

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2.1 Introduction

Since 1997 the Ministry of Defence has been involved in the production and development of the Lockheed Martin F-35 'Lightning II' Joint Strike Fighter (JSF). The JSF is a multifunctional fighter aircraft that is being developed in three versions by nine countries, including the United States. The Netherlands sees the conventional version of the JSF, which uses ordinary runways, as a potential successor to the F-16.

The Ministry of Defence purchased its present F-16s between 1979 and 1992. Of these, 68 are still operational.

The coalition agreement signed by the Rutte-Verhagen government stated that it would not decide on the successor to the F-16 during its term of office. However, the government did decide to remain involved in the international JSF programme. The Netherlands has since purchased two test aircraft for use in the JSF test phase (IOT&E).

Section 2.2 discusses the functionality, time and money aspects of the 'continuation of the present policy' option. The development problems affecting the functionality of the JSF programme and the JSF itself are examined in section 2.2.1. We then discuss the planning risks (*Time*, section 2.2.2) and financial risks (*Money*, section 2.2.3) arising from these development problems. Our conclusions on this policy option are set out in section 2.3.

2.2 Functionality, time and money

2.2.1 Functionality

The JSF programme

The Minister of Defence sees major benefits in international cooperation on the JSF programme. The nine partner countries developing the JSF will eventually have well-coordinated aircraft, systems and operational



concepts and capabilities. Cooperation generates economies of scale in the development and production of the aircraft, limiting the costs of these for the individual countries. As with the F-16, cooperation concerns not only the development phase but also follow-on development, sustainment and possibly operational deployment.

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Although there is little doubt that international cooperation is beneficial, it also entails greater risks. This was demonstrated by the problems that arose with the development of the Short Takeoff and Vertical Landing (STOVL) version. The STOVL version is mainly being developed for other participating countries. This has caused delays to the entire programme.

The JSF aircraft

The evaluations of candidates in 2001 and 2008 made clear that the JSF is considered highly functional. In 2008, the State Secretary for Defence stated that the JSF's final score in the evaluation was well above the threshold value for mission effectiveness at the operational level required by the Netherlands (Ministry of Defence, 2008).

However, the development of a complex, innovative technological system such as the JSF is by no means problem-free. Over the years, reports by the US audit office, the Government Accountability Office (GAO), have identified problems with the development of the JSF. The most recent report (GAO, 2012) specifically mentions problems with the development of the aircraft's software, as well as problems concerning the development of the pilots' helmets. These are a key factor in the functionality of the aircraft, since they form the link between the pilot and the aircraft's functions. Furthermore, a considerable part of the aircraft's overall functionality has yet to be tested. This means that there are still considerable risks regarding the development of the aircraft.

Risks

Most of these risks to the future functionality of the JSF can only be controlled by the manufacturer. There is not very much the Dutch government can do to ensure that the aircraft will have the required level of functionality. Development problems affecting functionality may lead to increased costs and delays, and – assuming they are eventually solved – will above all pose risks to the Netherlands in terms of time and money.



2.2.2 Time

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The JSF programme

The original intention was that the production version of the JSF could be delivered from 2012 onwards. However, the JSF programme has already sustained a number of delays. For example, the SDD phase was planned to continue until 2013, but owing to delays it has been extended several times, most recently up to 2018. In March and June 2012 the US audit office stated that further delays and financial setbacks cannot be ruled out (GAO, 2012).

The test phase (IOT&E) has also been delayed. When the IOT&E MoU was signed the partners assumed that the test phase would take place between 2011 and 2013. It is now – provisionally – scheduled for 2015-2019. This means that full-rate production of the aircraft has also been delayed: it is now scheduled for 2019, but there may be additional delays if the test phase is further postponed. All these delays have been reported to the House of Representatives.¹

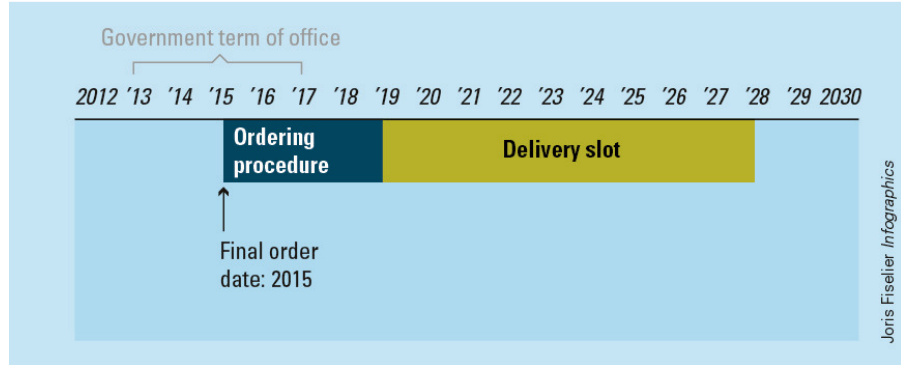
Consequences for the F-16

The replacement of the F-16 is also being delayed by the political decision-making process in the Netherlands. The coalition agreement signed by the Rutte-Verhagen government stated that it would not decide on the purchase of the successor to the F-16 during its term of office. As a result, the period of the JSF programme in which the JSFs so far planned by the Netherlands could be delivered (the 'delivery slot') has shifted to 2019-2027. Given the current scheduling of the JSF programme and the fact that the ordering procedure takes four years, the Netherlands will have to initiate its order by 2015 if it wishes to take delivery of the JSF – as a partner – during the scheduled slot.

¹ 2011 annual report, p. 94.



Figure 2 Time by when JSF must be ordered under current JSF ordering system



These delays to the JSF programme have consequences for the Netherlands, since the F-16 must be kept in service longer than planned. Until 2011, the Ministry of Defence assumed that the F-16 would be phased out between 2016 and 2024. It is now clear that phasing-out cannot begin as early as 2016. The F-16 will have to be kept in service longer than planned. The minister now assumes that it will be phased out from 2019 to 2027 – three years later than previously thought. His policy letter of 8 April 2011 announced a programme for keeping the F-16 in service up to 2027. The letter estimated the investment costs of the programme at EUR 300 million. This has now increased to EUR 304 million up to 2027, plus EUR 30 million additional operating costs over the period 2015-2027, a total of EUR 334 million. This programme will guarantee the technical quality of the aircraft up to 2027, but is not sufficient to raise the operational capacity of the F-16 to a level commensurate with the Ministry of Defence’s operational ambitions.

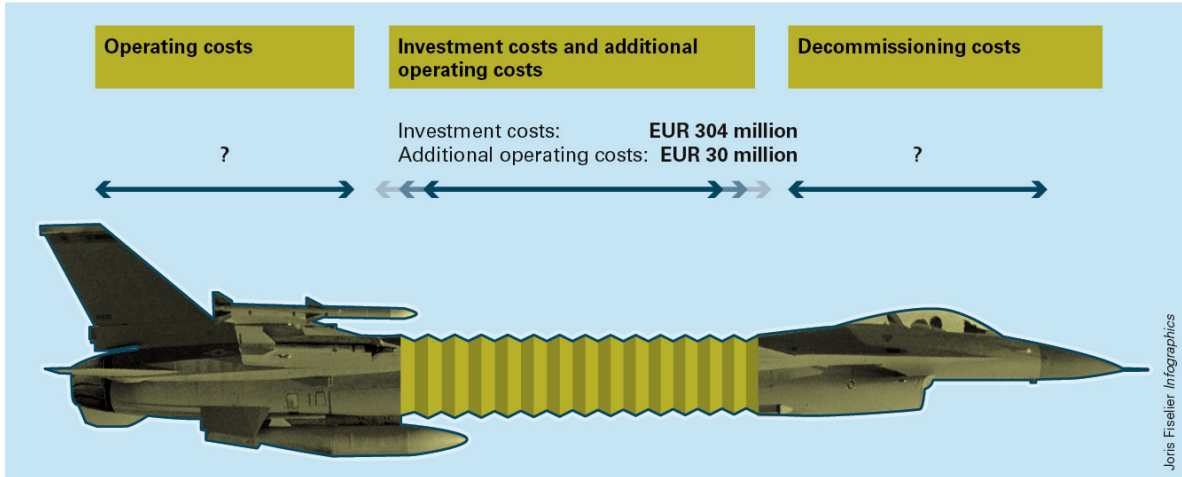
‘It should be noted here that, owing to the development of enemy weapon systems, the F-16 MLU can no longer be considered capable of carrying out all its missions under all circumstances, such as locating, identifying and eliminating ground targets through a layer of cloud. Support for ground troops and compliance with rules of engagement are therefore not feasible under all circumstances. Nor does the F-16 MLU have the offensive capacity to detect, locate, avoid, disrupt or eliminate threat systems, and hence is always dependent on external support for this purpose. It is also increasingly difficult to link up with other Allied armed forces’ data and communication networks or satellite communication systems.’

Source: Reply dated 23 August 2012 from the Directorate of Operational Policy, Requirements and Plans (DOBBP) to questions from the Court of Audit



The financial consequences of keeping the F-16 in service longer than planned are set out in figure 3.

Figure 3 Financial consequences of keeping the F-16 in service longer than planned



Our April 2012 report *Monitoring the replacement of the F-16s* stated that the government’s ambitions are already out of balance with the available funding, number of pilots and number of F-16s. The Minister of Defence has stated that ‘the margins are very tight’ and that he cannot always fulfil the ambition of having flexibly deployable armed forces. This ambition will be even harder to fulfil now that a smaller fleet of today’s F-16s must be kept in service longer than planned, since the aircraft will become more liable to defects and will require more inspections as they get older. This will reduce deployability.

2.2.3 Money

The Netherlands has now spent a total of EUR 1,233 million² on its involvement in the JSF programme. Under the provisions of the JSF programme MoUs, this country’s total contribution is an estimated EUR 1.74 billion. This is shown for each MoU on the diagram in figure 4.

² 2012 prices.



Figure 4 Amounts already paid and still to be paid for the JSF programme

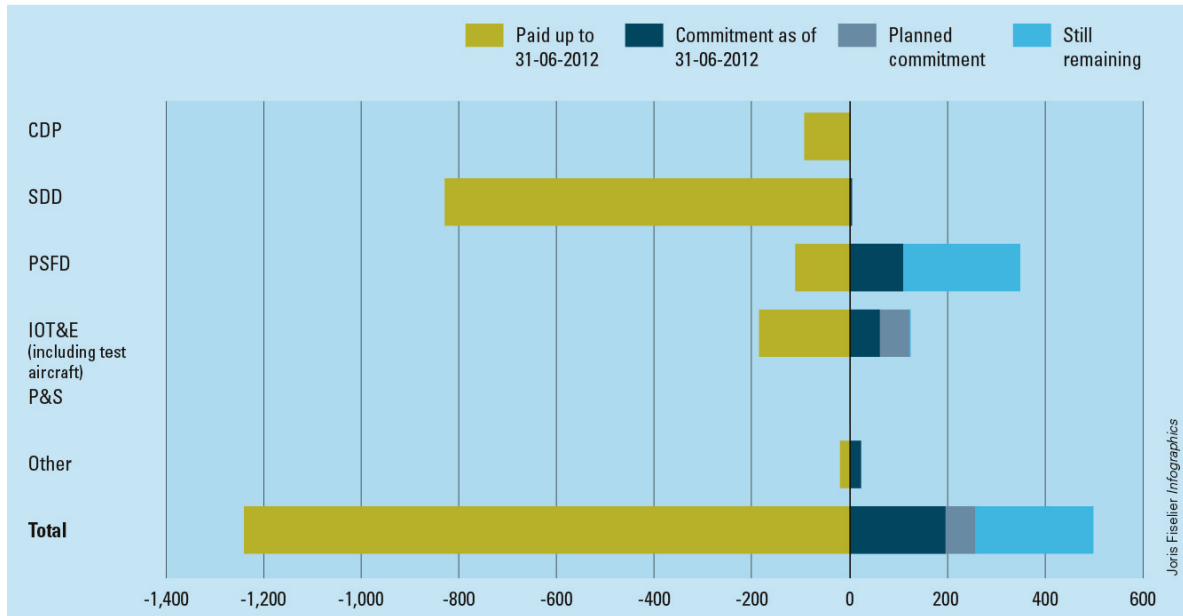


Figure 4 includes the expenditure on the two test aircraft purchased for the IOT&E phase, since during this phase the Netherlands will make the aircraft available as a non-financial contribution. The figure shows that the Netherlands has fully paid for both the preliminary (CPD) phase and the development (SDD) phase. It has paid for a quarter of the production, sustainment and follow-on development (PSFD) phase and has made commitments for a second quarter. Most of the amounts for the test (IOT&E) phase have already been paid, including most of the costs of the two test aircraft. The remaining costs of the test aircraft and the agreed amount for actually taking part have yet to be paid. No financial agreements have yet been reached on the P&S phase. Over EUR 33 million worth of commitments have been made for other matters, including support from the National Aerospace Laboratory (NLR) and the Netherlands Organisation for Applied Scientific Research (TNO); over EUR 23 million of this has already been paid.

The Ministry of Defence has appropriated EUR 4.5 billion for the replacement of the F-16; EUR 4.05 billion of this is now left.³ The estimated investment costs for 85 aircraft are around EUR 8 billion; for 68 aircraft the figure is around EUR 6.5 billion. If the present policy is continued, such an amount will be added to the expenditure over the period 2019-2026, depending on the number of aircraft purchased.

³ Money has already been spent on the PSFD phase and the two test aircraft.



Figure 5 Expenditure on MoUs and purchase of JSF Government term of office

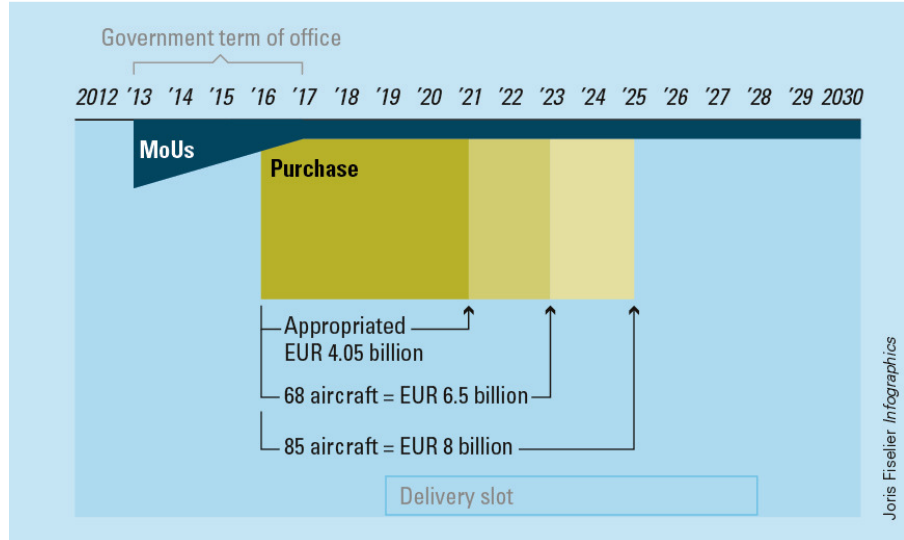


Figure 5 shows that amounts have been paid for the MoUs up to 2012. A further EUR 50 to 100 million a year will also be spent on the MoUs between 2013 and 2017. The figure also shows when payments for the purchase of the JSF are planned. These payments begin three years before delivery. Assuming that delivery will begin in 2019, the payments will thus begin in 2016: EUR 8 billion for 85 aircraft, spread over the period 2016-2024, averaging around EUR 900 million a year; if the Netherlands purchases 68 aircraft, the amount will be EUR 6.5 billion, spread over the period 2016-2022, also averaging around EUR 900 million a year. If the Ministry of Defence only used the EUR 4.05 billion appropriated for the replacement of the F-16 and maintained a similar amount of investment each year, the period would be 2016-2020.

The investment budget for defence materiel is around EUR 1.6 billion a year from 2017 onwards. The investment budget is apparent from the Defence Investment Plan up to 2022. For the years thereafter it is not yet known. If 85 aircraft were purchased, this would use up over half of the Ministry of Defence's annual investment budget for nine years; if 68 aircraft were purchased, this would use up the same proportion of the budget for seven years.

The ministry's 2013 budget indicates that the appropriated EUR 4.5 billion is not sufficient to purchase the planned 85 JSFs. Our study shows that it would still be far from sufficient even if only 68 JSFs were purchased. We note that the investments required for these numbers of aircraft have for many years used up so much of the total investment budget that far-reaching choices will surely also have to be made regarding other weapon



systems in order to accommodate these investments. The Minister of Defence did not ask us to estimate the number of JSFs that can be accommodated within the appropriated amount. In our opinion, however, the mechanism for making the calculations required in this connection needs to be indicated here.

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The number of aircraft is determined by the unit price. However, this will depend on when the aircraft are purchased. Aircraft produced at an early stage in the process are more expensive than ones produced later on. On the other hand, aircraft produced later on will eventually become more expensive again owing to factors such as inflation.

Figure 6 Unit price and delivery slot for JSF

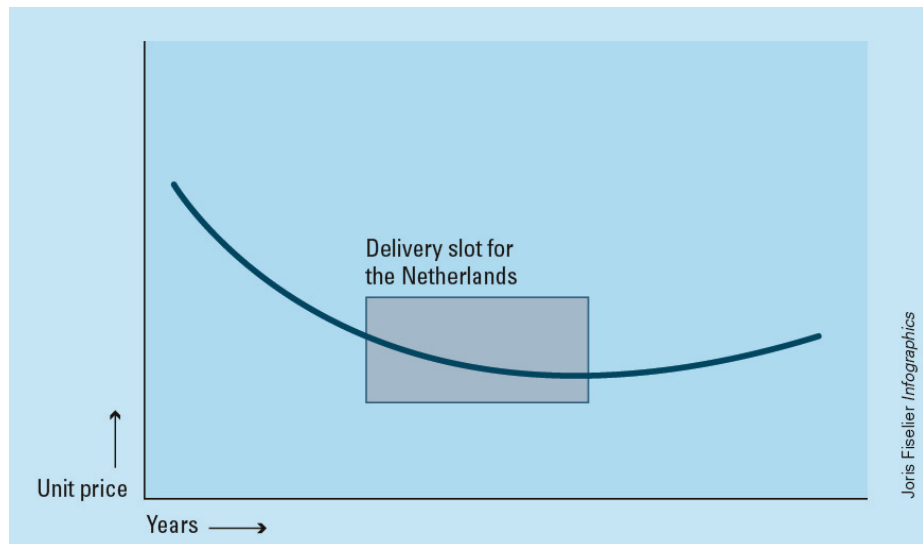


Figure 6 shows this system with a fictitious price curve. The exact price curve is not yet known. The delivery series planned for the Netherlands in the PSFD phase is relatively inexpensive. The first aircraft to be delivered will be more expensive and the last ones cheaper, but on average the series falls within what is known as the 'sweet spot'.

If the Netherlands maintains its decision to introduce the JSF in 2019 and purchases fewer aircraft, the aircraft will be more expensive on average. If the investment budget is reduced, the number of aircraft to be purchased will therefore fall disproportionately. This is shown in the following figure.



Figure 7 Investment in JSF in relation to number of aircraft

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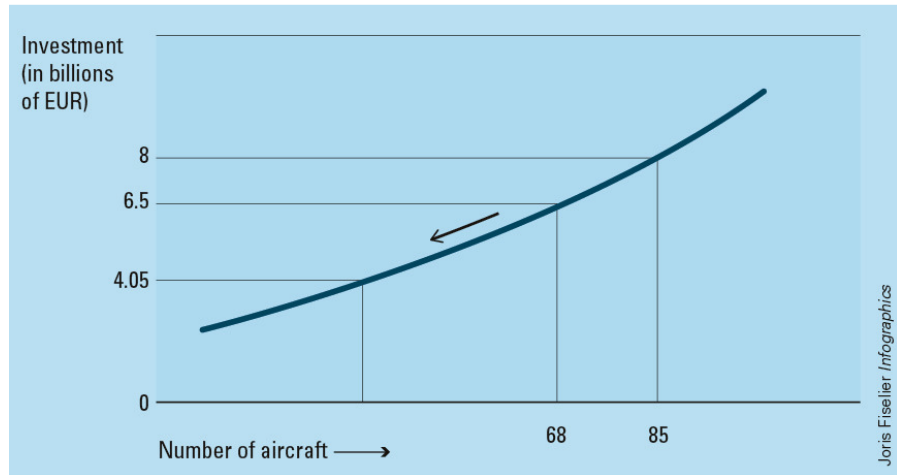


Figure 7 shows that, with a lower budget, the number of aircraft to be purchased will fall disproportionately. The figure is not based on exact data, which is why we have not indicated a number of aircraft for an investment of EUR 4.05 billion.

According to the Ministry of Defence, the estimated operating costs for 85 JSFs over thirty years would be EUR 14.2 billion, or EUR 473 million a year; for 68 aircraft this would be EUR 13.2 billion, or EUR 440 million a year. The operating costs would not fall in the same proportion as the number of aircraft, as some of the costs are less variable.

So far the ministry has not shown how it plans to incorporate these operating costs into its budget. Until now the ministry has not had itemised operating figures for each type of weapon.

2.3 Conclusion on option 1

International cooperation in the JSF programme has functional benefits. The various countries will eventually have well-coordinated aircraft, systems and operational concepts. However, such cooperation also entails risks, as both the aircraft and the organisation of the programme are becoming more complex. There have been problems with the development of the JSF for many years, and these are leading to delays and increased costs.

The Minister of Defence cannot pay for the planned number of JSFs with the appropriated investment budget. So far he has not shown how he plans to incorporate the operating costs into his budget.



Continuation of the present policy, including the purchase of the JSF as the successor to the F-16, will make major demands on the Ministry of Defence's available funds. This will compel the minister to make far-reaching choices regarding the composition and equipment of other branches of the armed forces and/or the number of JSFs to be purchased. Such choices will also affect the minister's ambitions for the armed forces.



3 Option 2: withdrawal from the test phase of the JSF programme

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3.1 Introduction

An Initial Operational Test and Evaluation (IOT&E) phase is designed to test the operational capabilities and potential of the aircraft in an operational test environment, and to determine how the system can be used operationally for various missions in various circumstances (threat environments) and weather conditions and in combination with other countries' weapon and other systems. By taking part in the JSF test programme, the Dutch government expects to be able to introduce an operational aircraft quickly and safely.

So far three countries are taking part in the JSF operational test phase: the United States, the United Kingdom and the Netherlands. Australia and Norway are considering joining. Italy had also been invited to take part but has now decided not to, for budgetary reasons.

Under the terms of the IOT&E MoU, the Netherlands has agreed to make two test aircraft available as a non-financial contribution. These aircraft have now been purchased and largely paid for. The Netherlands is also contributing five pilots and some 45 other personnel. The intention is that the test aircraft and personnel will form part of a joint pool that can be used to carry out test missions with the other partner countries.

If the Netherlands withdraws from the test phase of the JSF programme, it will have to develop some alternative test phase of its own if it decides to purchase the JSF (it will also have to do this if it decides to purchase another aircraft). The Netherlands could also decide to introduce the JSF or another aircraft without an operational test phase, but this is not the customary procedure.

Section 3.2 discusses the functionality, time and money aspects of the 'withdrawal from test phase' policy option. The differences between the IOT&E test phase and a separately developed test phase are examined in



section 3.2.1. We then discuss the planning risks (*Time*, section 3.2.2) and financial risks (*Money*, section 3.2.3) arising from the two kinds of test phase. Our conclusions on this policy option are set out in section 3.3.

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3.2 Functionality, time and money

3.2.1 Functionality

We asked the Ministry of Defence to provide seven versions of an alternative test phase, ranging from one as similar as possible to the joint IOT&E test phase (possibly in cooperation with other countries) to versions in which the capabilities would be less thoroughly tested and ones in which only offensive or defensive operational aspects would be tested. There is also a version in which no test phase would be carried out at all.

JSF programme test phase

The Netherlands can develop an alternative test phase for the JSF, but this cannot match the thoroughness, depth and quality of the one in the JSF programme, and the risks will be greater. This has to do not only with the aircraft but also with the test environment and cooperation under the terms of the MoU.

Since the JSF has a large number of new operational qualities, many operational tasks will have to be performed differently. The United States already has experience with a fifth-generation fighter; the Netherlands and other partner countries do not. If the Netherlands develops its own test phase, it will have to determine (by a process of pioneering or trial and error) how these operational capabilities are to be deployed; this will entail risks to the progress, safety, quality, efficiency and effectiveness of the test phase. In addition, the Netherlands will not have access to all the facilities available on the test ranges in the United States. As far as is known, the facilities at test ranges in Europe are much more limited.

Finally, the Royal Netherlands Air Force will be unable to develop operational concepts together with the partners it will frequently be operating with during actual deployments.



Risks

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A new fighter can be introduced without a test phase, but this will entail considerable risks in terms of safety and functionality when the aircraft is first deployed operationally by the air force.

Like the Netherlands, Denmark is a partner in the JSF programme. It was also asked to sign the IOT&E MoU, but did not have sufficient funds. Denmark acknowledges that this will delay the transition and reduce the quality of operational deployability. Denmark has not yet decided whether to purchase the JSF, but is expected to make a decision on this in 2014.

There are also risks arising from participation in the IOT&E MoU, for example if a Dutch aircraft were lost during testing. However, an alternative test phase would entail the same risks.

3.2.2 Time

The JSF programme

The greatest risks arising from the Netherlands' participation in the IOT&E MoU concern planning. There are concerns about this because the 24 test aircraft taking part in the IOT&E MoU are not yet sufficiently well equipped. The Block 3 software, which is designed to ensure complete sensor integration and control of all the weapons, is not yet fully developed. Since the restructuring of the JSF programme, the Pentagon has not yet set new starting and finishing dates for the IOT&E phase. The Ministry of Defence now assumes that the IOT&E phase will take place in 2015-2019, but there is always a risk of further postponement.

Consequences for the F-16

Delays to the test phase will aggravate the financial and operational consequences of keeping the F-16 in service longer than planned. The Ministry of Defence has appropriated EUR 304 million to keep the F-16 operational up to 2027. If the IOT&E phase is further delayed, the F-16 will have to be kept operational beyond 2027.

If the Netherlands withdraws from the IOT&E MoU, it is again almost certain that the F-16 will have to be kept in service longer than planned, up to 2029. This is because the first series of JSFs to be delivered will have to be used for the test phase, and hence cannot yet be deployed on missions. In an alternative test phase, F-16s will also be used as 'enemy aircraft'. An alternative test phase will therefore reduce the operational deployability and availability of the F-16.

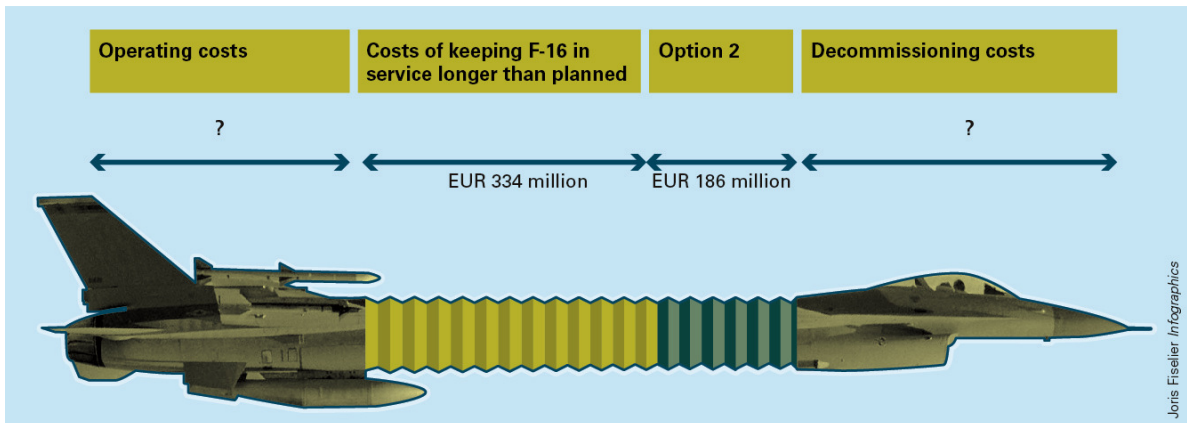


3.2.3 Money

Withdrawing from the IOT&E MoU will allow the Ministry of Defence to save a small proportion of the EUR 23.3 million worth of participation costs and several tens of millions in miscellaneous costs arising from participation. On the other hand, the ministry will still have to pay the remainder of the costs of purchasing the two test aircraft in the coming years. The Netherlands may also have to pay for a test phase of its own. Depending on its design and thoroughness, as well as opportunities for international cooperation, this will cost between EUR 63 million and EUR 318 million.

However, financial benefits may also be expected, because an alternative test phase will affect aircraft delivery dates, some of which will be postponed. Ordering aircraft at a later stage will save around EUR 100 million, owing to the price curve described in section 2.2.3. However, these savings will be cancelled out by the even higher costs of keeping the F-16 operational up to 2029. Up to 2027 these costs will be EUR 334 million, but if the F-16 is kept in service up to 2029 they will increase by a further EUR 180 to 186 million.

Figure 8 Costs of keeping the F-16 in service longer than planned in option 2



Furthermore, not a great deal can be done with the two test aircraft that have already been purchased. The proceeds from sale of the aircraft, estimated by the Ministry of Defence at EUR 150 million, may well not be realised. It seems more likely that the Netherlands will sustain a substantial loss on the two aircraft.



3.3 Conclusion on option 2

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The IOT&E test programme is highly functional. An alternative test phase developed by the Netherlands can hardly match the thoroughness, depth and quality of this JSF test programme. There are inherent risks in the IOT&E programme; for instance, a Dutch aircraft could be lost during the joint test phase. However, the same risks would arise in an alternative test phase. Dispensing with a test phase altogether would jeopardise the flying safety and functionality of the aircraft.

In the light of the information currently available, taking part in the IOT&E phase is the fastest and cheapest way for the Royal Netherlands Air Force to obtain a fully operational replacement for the F-16, even if account is taken of the planning risks involved. The alternatives would mean delays and lower quality, with increased risks for personnel, aircraft and operational capability.

It will be clear from the foregoing that withdrawal from the IOT&E MoU would be of little benefit to the Ministry of Defence in terms of either functionality, time or money.

We would therefore not recommend the option of withdrawing from the IOT&E test phase.



4 Option 3: complete withdrawal from the JSF programme and purchase of an off-the-shelf successor

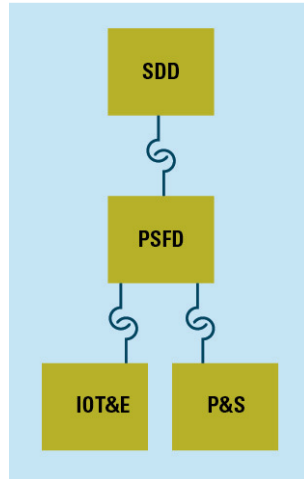
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4.1 Introduction

The Netherlands' partnership in the JSF programme includes participation in the four MoUs (see section 1.3). The Netherlands can wholly or partly end its participation, for instance by withdrawing from some or all of the MoUs. Withdrawal from the partnership does not affect which aircraft the Netherlands will eventually purchase to replace the F-16.

Some MoUs are linked to one another; withdrawing from one automatically means withdrawing from one or more of the others. These links are as follows:

- Withdrawing from the SDD MoU automatically means withdrawing from the PSFD MoU and hence the P&S MoU.
- Withdrawing from the PSFD MoU, the IOT&E MoU or the P&S MoU does not automatically mean withdrawing from the SDD MoU.
- Withdrawing from the PSFD MoU automatically means withdrawing from the IOT&E MoU.
- Withdrawing from the IOT&E MoU or the P&S MoU does not automatically mean withdrawing from other MoUs.

**Figure 9 Links between MoUs**

We note that the P&S MoU still has to be worked out in detail and has not yet led to commitments on the part of the State. Given the aforementioned links between the various MoUs, the most important ones are the SDD MoU and the PSFD MoU. We will therefore focus on the consequences of the Netherlands withdrawing from these two MoUs.

Section 4.2 discusses the functionality, time and money aspects of the 'complete withdrawal' policy option. The differences between the JSF and alternative aircraft are described in section 4.2.1. We then examine the schedule for the purchase of the JSF, as a partner or otherwise, or an alternative aircraft (*Time*, section 4.2.2). Section 4.2.3 discusses the financial benefits and disadvantages of withdrawal from the JSF programme. Our conclusions on this policy option are set out in section 4.3.

4.2 Functionality, time and money

4.2.1 Functionality

The JSF programme

One disadvantage of withdrawing from the SDD MoU and the PSFD MoU is that the Netherlands would then lose its channel of information and influence on decision-making during these phases. The Netherlands is currently a member of the various bodies set up under these MoUs, including the JSF Program Office (JPO).



The JSF aircraft

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In principle, withdrawal from the MoUs does not affect the Netherlands' decision on whether to choose the JSF or purchase this aircraft. Even after withdrawing from the JSF programme, the Netherlands can still decide to purchase the JSF off the shelf. Such a purchase would then take place under the American foreign military sales (FMS) procedure. A JSF purchased under this procedure is the same product as one purchased under the partnership.

Alternative aircraft

After withdrawing from the MoUs, the Netherlands can decide to purchase another aircraft (off the shelf).

The Ministry of Defence has conducted two evaluations of candidates for new fighters (in 2001 and 2008). On both occasions the JSF proved – on paper – to be the only one capable of carrying out the missions devised for the evaluation. We note that the underlying concepts for the missions were drawn up at a time when the Netherlands was already involved in the JSF programme. The concepts were based on requirements – the Basic Document on the Defence Materiel Process (DMP) – that were drawn up in 2000 and have not been revised since. We also note that not all the eligible manufacturers took part in the second evaluation. The main reasons for this were the Netherlands' close involvement in the JSF programme and the costs to candidates of submitting information for such an evaluation.

Our letter of 17 September 2009 criticised the 2008 evaluation of candidates. Among other things, we pointed to the brief time candidates were granted to submit information, its provisional status and the lack of symmetry in the information on the various candidates: a great deal was known about the JSF, and much less about the other aircraft. Especially in the light of this, we pointed to various shortcomings and uncertainties in the three crucial aspects of the evaluation: quality, delivery times and price (Court of Audit, 2009).

Since then, little has changed in the available information about other candidates. The Ministry of Defence has not recently requested further details about aircraft other than the JSF. We ourselves are not in a position to gather and assess the information that is needed for an evaluation of candidates. For this and other reasons, we can only draw limited conclusions about the functional consequences of choosing another aircraft to replace the F-16.



Other fighters that may be eligible to replace the F-16 are two American aircraft (the Boeing F/A-18 E/F Super Hornet and the F-16E/F C Block 60, or Advanced F-16) and three European ones (the Eurofighter, the Dassault Rafale and the SAAB Gripen NG).

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We note that the Gripen and the versions of the Eurofighter and the Rafale that were compared in the first evaluation of candidates are still being developed, whereas the two American candidates are already being produced and sold. The latter two candidates may therefore pose fewer development risks in terms of functionality.

The disadvantage of choosing one of the candidates that are already being produced and sold is that they may not add much in operational terms to the functionality the Netherlands already possesses with the F-16. It therefore seems reasonable to assume that, if the Netherlands were to choose such an aircraft, another replacement would soon be needed. According to the Ministry of Defence, none of the other aircraft is deployable in an environment with modern, advanced threat systems, and none of them has the Network Enabled Capacities (NECs) required in order to share information via a network with other armed forces – the very criteria for the functionality the air force has hitherto sought in the successor to the F-16.

4.2.2 Time

The JSF programme

If the Ministry of Defence withdraws from the SDD MoU and the PSFD MoU, one major consequence is that the Netherlands will lose its planned production capacity (delivery slot) in the period 2019-2026. As a partner, the Netherlands has the guarantee that the order series it wants is included in Annex A to the PSFD MoU. The United States cannot alter such series without permission from a partner country, even if FMS clients apply to purchase aircraft from the United States in a year when the production line is already fully occupied by orders from partner countries. If the Netherlands withdraws from the MoUs and purchases the JSF under the FMS procedure, uncertainty about when the aircraft can be produced and delivered is likely to increase.

JSF off the shelf

We note that American legislation prescribes an FMS ordering system that differs from the system for purchase by a partner in the development of a weapon system. The FMS procedure takes considerably longer than the procedure for JSF partners. If the Netherlands wishes to take delivery of



the aircraft from 2019 onwards, in accordance with the present schedule, the FMS ordering procedure will have to be initiated at the end of 2012. Other American aircraft also fall under the FMS procedure, but at present the Netherlands does not know the delivery times for these aircraft.

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It seems likely that the United States will be willing to sell FMS purchasers a training module for the aircraft. The capacity for this will probably only become available after training courses for partner countries are completed. It will probably cost the Netherlands more to set up its own course.

Alternative aircraft

The Netherlands has not recently reviewed delivery times for the European aircraft, or for the alternative American aircraft. The Ministry of Defence has informed us that, in the light of current knowledge, it believes the selection, ordering and production procedures for such aircraft will result in roughly the same delivery times as are now foreseen for purchase of the JSF by a partner country. In the absence of more detailed information, however, we are unable to confirm this.

4.2.3 Money

Benefits of withdrawing from the JSF programme

The amount of money that will be saved if the Netherlands withdraws from the JSF MoUs is small, and will be spread over many years.

Withdrawing from the SDD MoU will not yield any financial benefits to the State, for the Netherlands has already made its maximum contribution and hence there is no budgeted expenditure that can be saved.

The period of notice for withdrawing from the PSFD MoU and the IOT&E MoU is ninety days. If the Netherlands announces on 1 January 2013 that it intends to withdraw from the PSFD MoU and the IOT&E MoU, its commitments will cease on 1 April 2013. During this period, the Netherlands will have to continue making contributions. The Ministry of Defence has EUR 175 million worth of commitments scheduled for this period; of these, EUR 100 million will still have to be paid, and EUR 75 million will be saved. The EUR 100 million largely concerns payments for the two test aircraft (over EUR 60 million).

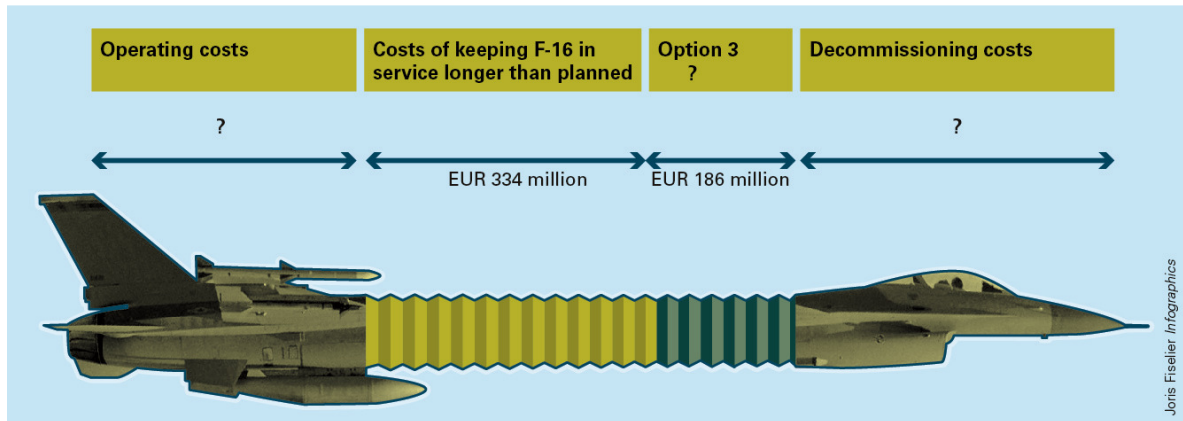
Only small amounts will be saved after the ninety-day period has elapsed, ranging from several tens of millions in 2014 and 2015 to several million in each of the years thereafter.



Consequences for the F-16

It is uncertain how long the F-16 will have to be kept in service if the Netherlands withdraws from the JSF MoUs. As we have already indicated (section 2.2.2), the present schedule, in which the F-16 will be kept in service up to 2027, will cost EUR 334 million. If this is extended by another two years, up to 2029, the costs will increase by EUR 180 to 186 million. This may not be necessary with another aircraft.

Figure 10 Costs of keeping the F-16 in service longer than planned in option 3



In line with the assumption in this study that the F-16 will be replaced by an off-the-shelf aircraft, we have not looked at the financial consequences of keeping the F-16 in service longer than planned if it is not replaced.

If the Netherlands withdraws from the MoUs, the EUR 4.5 billion appropriated for replacement of the F-16 will not be saved as long as it is assumed that the F-16 will be replaced.

Costs of withdrawing from the JSF programme

Besides the amounts that will be saved, withdrawal from the MoUs will also entail costs. All four MoUs make specific provision for this. Any partner that withdraws is basically liable for the costs of amending or terminating contacts with industry. Such costs can be claimed by other partner countries or – through the US Department of Defense (DoD) – by industry.

Costs of claims by industry

Any compensation that the Netherlands must pay in respect of claims by industry is limited by the US Federal Acquisition Regulation. This indicates which costs are eligible for compensation if a partner terminates a defence contract. The actual amount of compensation is likewise limited, for it will never be more than the maximum contribution that a partner country has agreed to pay for the MoU in question.



The Netherlands has already paid its entire contribution for the SDD phase. It could still be required to pay some EUR 360 million for the PSFD phase.

We note that the main contractors in the JSF programme have hitherto only signed contracts with industry for periods of about a year. This is because the JSF is not yet in full-rate production. Although these one-year contracts are based on long-term agreements and strategic agreements, these do not entitle industry to contracts beyond the end of the current one. Partner countries are unlikely to terminate one-year contracts before they expire.

Dutch industry could request that its remittances to the State worth EUR 105 million (net present value at 2001 prices) under the terms of the cofinancing agreement (CFA) be adjusted. However, the agreement includes a provision allowing the State to end its involvement in the JSF programme without the remittances being affected.

Royalties

The consequences for the royalties that the Netherlands earns on third-party sales as a partner are small. Both the SDD MoU and the PSFD MoU include provisions that guarantee the Netherlands the royalties even after withdrawal from the programme. The royalties are paid by non-partner countries as a supplement to the development costs of the aircraft if they purchase the JSF under the FMS procedure.

Development cost advantage

Countries that have taken part in the programme do not need to pay the supplement known as the 'development cost advantage',⁴ since they have already contributed to the development of the JSF. The Netherlands would normally have to pay this supplement if it purchased the JSF under the FMS procedure. However, under the terms of an annex to the SDD MoU signed by the United States and the Netherlands, the United States would waive the Netherlands' share of the supplement for development costs if the Netherlands purchased the JSF under the FMS procedure.

The waiver would only apply in full if the Netherlands remained a partner in the SDD MoU, and partially if the Netherlands withdrew from it.

⁴ Term used in the CFA.



There is no such waiver for the PSFD MoU. If the Netherlands purchased the JSF under the FMS procedure, it would therefore have to pay the supplement for the PSFD part of the development costs.

Additional costs of purchase under the FMS procedure

If the Netherlands purchased the JSF under the FMS procedure, it would also have to pay the manufacturer surcharges for sustainment of the servicing apparatus and handling of the order, as well as the administration management costs (AMS) that the US government charges for all FMS purchases. As a partner, the Netherlands would not have to pay these additional costs. The surcharges and administration management costs together amount to some 5% of the purchase price. The purchase of 68 aircraft would thus be EUR 325 million more expensive than if the JSF were purchased as a partner country.

The financial consequences of withdrawing from the JSF programme for off-the-shelf purchase of the JSF are summed up in table 1:

Table 1 Financial benefits and disadvantages of withdrawal from JSF programme and off-the-shelf purchase of JSF

Disadvantage		Benefit	
		Savings	265 mln
MoU claims (max.)	375 mln		
Claims by industry	TBD		
JSF: FMS%	325 mln		
Dev. supplement	TBD		
Alternative test phase	TBD		
F-16 additional (min.)	186 mln		

Table 1 shows that option 3 will be more expensive than option 1 if the JSF is purchased off the shelf.



Table 2 Financial benefits and disadvantages of withdrawal from JSF programme and purchase of another aircraft

Disadvantage		Benefit	
		Savings	265 mln
MoU claims (max.)	375 mln		
Claims by industry	TBD	Proceeds from test aircraft	TBD
Additional costs of other aircraft	TBD	Additional savings on other aircraft	TBD
Other weapon systems	TBD		
Test phase	TBD		
F-16 additional	TBD	F-16 not additional	TBD

If another aircraft is chosen, there are still too many uncertainties to state whether option 3 will be more expensive than option 1.

4.3 Conclusion on option 3

If the Netherlands withdraws from the JSF programme, it will lose an information channel and influence on the development of the JSF. The functionality of an off-the-shelf JSF is known to be same as that of one purchased as a partner. The functionality of an alternative off-the-shelf aircraft is only partly known, but according to the Ministry of Defence it would in any case be less than that of the JSF. If the Minister of Defence is to choose an aircraft other than the JSF, the Commander of the Armed Forces must revise the criteria for the F-16’s replacement.

Withdrawing from the JSF programme and purchasing an alternative aircraft off the shelf will not lead to faster replacement of the F-16 than the present policy. We draw this conclusion in the light of the limited current knowledge about the selection procedure, the ordering system and other candidates’ delivery times. For the time being we cannot make any statements about the expected delivery times of several European candidates that are still being developed.

Withdrawing from the JSF programme will save the State EUR 265 million, but will cost the State at least EUR 405 million. There will also be other costs, the amount of which is as yet unknown.

It will be clear from the foregoing that, if the Netherlands withdraws from the JSF programme altogether, this will above all create uncertainties in



terms of functionality, time and money. In chapter 3 we concluded that we would not recommend withdrawing from the IOT&E MoU (option 2). The same applies to the SDD MoU, which has already been fully paid for, and from which the State can now only expect future benefits.

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As for the PSFD MoU, withdrawing from it and purchasing the JSF off the shelf would cost the Netherlands more than it would yield in benefits.

The idea that if the Netherlands withdraws from the partnership the sums already invested in the JSF should be considered 'sunk costs' is mistaken. Under the terms of the MoUs and the CFA, the Netherlands will still be entitled to its royalties, part of the development cost advantage and the remittances from industry even after withdrawing.

Given the consequences in terms of functionality, time and money, a rational decision to withdraw from the JSF programme and purchase another aircraft off the shelf can only be made if the present criteria for operational deployment of the Royal Netherlands Air Force are revised.



5 Conclusions and recommendations

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We have studied the Minister of Defence's questions about the costs and consequences of three policy options in terms of functionality, time and money, and have answered his questions in the light of our study.

Continuation of the present policy without any change (option 1) will give the air force an aircraft whose functionality is considered by the Ministry of Defence to be very promising. However, this option entails risks in terms of time and money. Our study also shows that lack of funds within the Ministry of Defence for the replacement of the F-16 rules out continuation of the present policy without any change. The available funds, currently EUR 4.05 billion, are insufficient for 85 aircraft, or even for 68 aircraft. A smaller number of fighters will compel the Royal Netherlands Air Force to adopt different criteria for operational deployment.

As a partner in the JSF programme, given the present programme schedule and the planned phasing-out of the F-16, the Netherlands will have to decide by 2015 whether to purchase the first production aircraft.

We would not recommend withdrawal from the test phase (IOT&E) (option 2), since this would be of little benefit to the State in terms of functionality, time or money.

Given the consequences in terms of functionality, time and money, a rational decision to withdraw from the JSF programme and purchase another aircraft off the shelf (option 3) can only be made if the present criteria for operational deployment of the Royal Netherlands Air Force are revised.

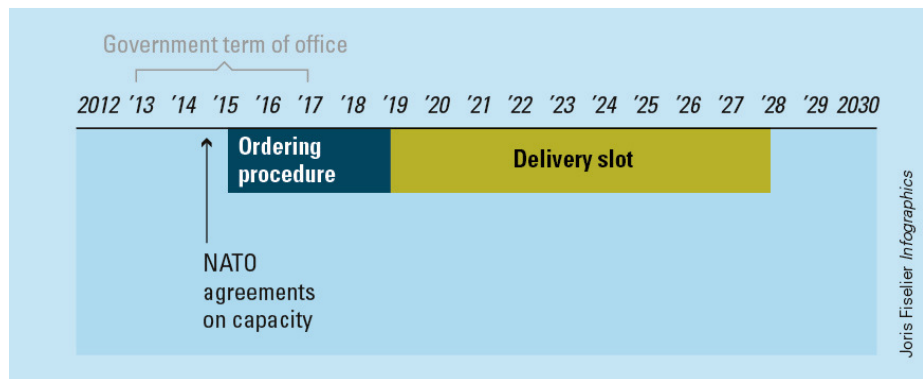
The government originally decided to join the JSF programme in the light of the then prevailing criteria for deployment of the air force. Our study shows that both option 1 and option 3 will compel the Minister of Defence to make far-reaching decisions on the composition and equipment of the Royal Netherlands Air Force and perhaps also other branches of the armed forces. Such decisions are likely to affect the functionality of the



Netherlands’ defence. The lack of balance between available funds, capacity and ambitions means that the minister will either have to revise the present criteria for operational deployment of the Royal Netherlands Air Force and perhaps other branches of the armed forces, including in NATO (for instance, closer operational cooperation with other countries), or else revise the budgetary criteria.

In 2014 NATO is due to reach agreement on the member countries’ deployment of capacity over the period 2014-2019 (see figure 11). In this connection, the Ministry of Defence will in any case have to identify its own capabilities and potential difficulties. It would then seem advisable to review the present criteria for operational deployment of the Royal Netherlands Air Force.

Figure 11 NATO agreements on deployment of capacity Government term of office



We recommend that account then be taken of our findings and conclusions on the three policy options. As long as the available funds only allow the Minister of Defence to purchase a far smaller number of JSFs, we believe he will have to revise the air force’s ambitions. This may result in a new picture of the capabilities that the Netherlands seeks in the successor to the F-16, the number of aircraft required, and opportunities for international operational cooperation by the air force.



6 Minister of Defence's response and afterword by the Court of Audit

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We submitted the draft version of our report to the caretaker Minister of Defence for comments. He sent his response on 19 October 2012. The response is reproduced in full in section 6.1. Our afterword is set out in section 6.2.

6.1 Minister of Defence's response

'I hereby present to you my official response to the draft report on the costs of withdrawing from the F-35 project that the Netherlands Court of Audit submitted to the Ministry of Defence on 17 October 2012. The Court of Audit drew up the report following my request of 20 August 2012 (ref. BS2012026458). I appreciate the Court of Audit's efforts to complete the study so quickly. I will discuss various aspects of it in this letter.

Affordability and number of aircraft

The coalition agreement signed by the Rutte government stated that a decision on the replacement of F-16s would be made by a subsequent government. In my policy letter 'The Ministry of Defence in the wake of the credit crisis', dated 8 April 2011, I therefore announced that EUR 4.5 billion would be appropriated for the replacement of the F-16 in the ministry's investment plans. This sum was unrelated to the number of aircraft, which had yet to be determined. A decision to purchase was not expected before 2015, and part of the necessary investment would therefore lie beyond the ten-year planning horizon as of 2011. There was therefore never a task-based budget linked to a specific number of aircraft.

The debate on the replacement of F-16s usually focuses on investment costs. In recent years, estimates of the operating costs (which will be very high over a period of 30 years) were approximate, as some major parameters – again including the number of aircraft – were not yet known. However, the ministry has made such estimates on various



occasions.⁵ Your report now rightly draws attention to the need for the F-16's replacement to be compatible with the ministry's budgetary capacity. The appropriated EUR 4.5 billion, of which EUR 0.45 billion has now been spent, is not sufficient for the purchase of 85 F-35s (the planned number up to now) or 68 F-35s (the present number of F-16s). The operating expenditure for these numbers of aircraft will also be higher than the current operating expenditure on the F-16.

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The Court of Audit's 2011 monitoring report, dated 3 April 2012, concluded that the ministry's ambitions and the number of F-16s are now out of balance. Assuming that the current trend towards closer international cooperation continues in the near future, the ministry believes it can perform its tasks in an operationally acceptable manner with 56 F-35s. It will then no longer be possible to carry out the same number of operations simultaneously, and the operations will have to be shorter, but the aircraft will be of the required quality. The ministry is both able and willing to accommodate the necessary operating and investment expenditure within its budgetary constraints.

The F-35 weapon system will account for a large proportion of the ministry's budget, necessitating explicit adjustment of the armed forces' operational goals. The Court of Audit has reached the same conclusion. It is also inevitable that for a number of years other investment projects that are now under consideration or already foreseen will have to be carried out later or less rapidly, will be smaller than originally planned or may even be scrapped altogether, especially as future weapon systems will often be more expensive to operate. Planning over a period longer than ten years is in any case more uncertain. This has to do with an array of factors such as new insights or threats, innovations and price changes. New projects that were not foreseen in their present form 10 years ago, such as Cyber, have also emerged during this government's term of office. The converse is also true: the recent decision to get rid of the Leopard tanks means that their eventual replacement is no longer under discussion.

Withdrawal from the operational test phase not recommended

I welcome the Court of Audit's conclusion that it does not recommend withdrawal from the operational test phase (IOT&E). An operational test phase is necessary whenever a new weapon system is introduced. Taking part in the international operational test phase for the F-35, together with

⁵ For example EUR 9.1 billion for 85 aircraft, included in the Court of Audit's monitoring report, on 11 October 2006 (26 488, no. 51) and EUR 9.874 billion for 85 aircraft, addendum to the 2008 annual report, on 15 April 2009 (26 488, no. 167).



the United Kingdom and the United States, provides many operational benefits at relatively low cost. As the report indicates, an alternative F-35 test phase developed by the Netherlands could hardly match the international test phase in thoroughness, depth and quality. The alternatives studied are more expensive and pose risks to personnel, aircraft and operational capacity. Another important factor is that most of the Netherlands' spending on the international operational test phase – in particular, the purchase of the two test aircraft – has already taken place.

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Fighter aircraft and NATO

Close international cooperation is of vital importance if the Netherlands is to maximise the return on its defence efforts. There is a long history of cooperation with our NATO allies on fighter aircraft, and it makes sense for this to continue. NATO has repeatedly made clear that there is a growing need for modern, multi-role fighters capable of carrying out complicated missions in close cooperation with other advanced land, sea and air weapon systems in high-threat environments. The F-35 is by far the best aircraft for this purpose. Eight of our NATO allies are partners in the F-35 project, and the report points out that they will eventually have 'well-coordinated aircraft, systems and operational concepts and capabilities'. With entirely European-made aircraft, the opportunities for cooperation would invariably be more limited. The report mentions the remaining design risks with the F-35 in the short term, but these will decrease as development of the aircraft progresses. Dozens of F-35s are already in service. The F-35 has considerably greater potential for growth in response to changing circumstances and new threats than any of the currently available alternatives. Choosing the F-35 will give political decision-makers the most options for deployment, instead of restricting these for the next 30 years.

As your report states, NATO is currently planning its capacity for the period 2014-2019. The F-35 will not yet be operationally available in that period. As regards fighter aircraft, this will be a period in which the Netherlands' F-16s will be less and less deployable. Timely information on the subject is needed so that NATO can make an optimum assessment of member countries' individual and combined capabilities during the second half of the decade. This process is unrelated to either the replacement of F-16s or the point at which the Netherlands must decide whether to purchase the F-35.

NATO is well aware of the downward trend in member countries' defence budgets and the implications of this for the composition and extent of their individual, and hence also combined, capabilities. In other words,



numbers of weapon systems, including fighters, will tend to fall rather than rise. For the period after 2019, NATO therefore foresees a need for future-proof, broadly deployable aircraft with advanced capabilities. The F-35 fits this profile perfectly, and also offers personnel the best possible protection. The Ministry of Defence therefore remains committed to the quality standards it adopted at the outset. There is no reason to consider purchasing lower-quality alternatives, especially if this would not yield substantial savings.

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Conclusion

Besides operational and financial aspects, economic aspects also have a major part to play in decisions on the replacement of F-16s. In the next few years the manufacturers of the F-35 will be making far-reaching decisions on maintenance facilities. The economic importance of these to the Netherlands is evident, and postponing a final decision in favour of the F-35 may therefore be risky. This country also needs to make its position clear as soon as possible with a view to international cooperation, for example with Norway.

As agreed, the Court of Audit's report does not discuss the economic aspects of the replacement of F-16s. These are dealt with in the report by SEO Economic Research, which will be submitted to the House of Representatives on the same date as your report. Both reports have been published at a time when fundamental decisions are due to be made. Thank you once again for contributing to them.'

6.2 Afterword by the Court of Audit

The minister's response makes clear that he still sees the JSF as the successor to the F-16. In his view, the purchase of the JSF (both investment and operating costs) can be paid for out of his ministry's budget if the number of aircraft is reduced to 56. He believes that this can be achieved by deploying the aircraft less. The minister also considers it inevitable that other investment programmes will be carried out later or less rapidly, may be smaller than planned or may be even be scrapped.

This above all confirms our conclusion that the Ministry of Defence is now compelled to make far-reaching decisions about the composition and equipment of the Royal Netherlands Air Force. If there are only 56 JSFs, the armed forces' operational goals and hence the Netherlands' contribution to NATO will explicitly have to be adjusted.



We will wait and see what decisions are made, and will meanwhile continue to report on developments concerning the replacement of F-16s and the implications for the deployability of the current F-16s. Around the time of the Christmas recess we will launch a web dossier on the F-16 and its replacement. This will be regularly updated.



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