Luftfartstilsynet
CIVIL AVIATION AUTHORITY - NORWAY

State Safety Program Norway

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Preface

Aviation has seen growth in recent years. Although there are regional differences, air traffic has increased worldwide. Further positive growth is expected in the coming ten years, especially in the emerging economies. Safety statistics have also been positive.

Aviation is a global industry characterised by fierce competition and constant change. The airlines are continuously making adaptations. New companies are established and new business models introduced. We see changes in ownership structures, aircraft being registered in countries with more favourable terms, new employment forms being introduced, and the working conditions are generally more demanding than before. The biggest challenge in the safety work is to maintain the good safety statistics in the face of all the changes that are taking place and the increase in traffic.

In response to this challenge, the UN's International Civil Aviation Organization (ICAO) has taken the initiative to introduce a State Safety Program (SSP). This initiative must be seen in conjunction with the introduction of Safety Management Systems (SMS) and a risk-based approach to regulation. The purpose is to make the safety management systems even more systematic, including to further clarify the division of responsibilities.

Norway supports ICAO's initiative and hereby introduces the first version of Norway's State Safety Program. We will make active efforts to ensure that the program is further developed and satisfactorily maintained in the time ahead.

Oslo and Bodø
27 June 2017

Ketil Solvik-Olsen
Minister of Transport and Communications

Lars Kobberstad
Director General of Aviation

Background to Norway's State Safety Program

ICAO was established through the Convention on International Civil Aviation, known as the Chicago Convention, signed on 7 December 1944. The objective and purpose of ICAO is to develop global standards and principles, and to further the development of new technology, in international civil aviation. The organisation's tasks include the promotion of safety in international aviation. So far, 191 states have endorsed the Chicago Convention.

In Annex 19 to the Convention, ICAO has specified the states' responsibility and requirements relating to aviation safety management. Requirements are set for personnel licensing (Annex 1), operation of aircraft (Annex 6), airworthiness of aircraft (Annex 8), air traffic services (Annex 11), accidents and incidents (Annex 13) and aerodromes (Annex 14).

This document uses the term *service provider* to cover all organisations providing aviation services, including training organisations, aircraft operators, maintenance organisations, design organisations,[1] manufacturers of aviation products, air traffic services and aerodrome operators. Strictly speaking, the term does not cover private flying, but, for the sake of simplicity, this document uses the term service provider to also cover private flying (incl. private aircraft, their use and maintenance, and private pilots) insofar as it is appropriate.

In accordance with ICAO's principles, aviation safety management is divided into two functional elements. One is the state's duty to provide aviation regulations and to establish an authority with oversight responsibility. The other element is the service providers' duty to establish safety management systems (SMS) to attend to aviation safety in their own area.

Aviation safety shall be managed through the activities of the individual states, the state's competent authority and service providers operating in the state in question. The state must define quantifiable safety performance targets and monitor safety developments in the different forms of aviation. The aviation authorities shall, in dialogue with the service providers, stipulate local safety performance targets for each service provider. The service providers must establish the necessary safety management functions as well as relevant safety management systems, so that they ensure aviation safety in their own area and the state's safety performance targets can be achieved. The aviation authorities shall ensure that the service providers perform this duty in an acceptable manner and that the targets are achieved.

The State Safety Program is intended to manage safety in civil aviation. The State Safety Program shall be adapted to the size and complexity of the country's total aviation activities. The introduction of the State Safety Program does not change the division of responsibilities between the government agencies or their ordinary interaction practices. First and foremost, the introduction of the program coordinates and strengthens the existing processes and adds risk-based elements (including risk-based oversight and risk management of aviation safety) to create an overall framework for aviation safety management.

The agencies involved in the State Safety Program so far are the Ministry of Transport and Communications, the Civil Aviation Authority Norway (CAA-N) and the Accident Investigation Board Norway (AIBN). The Norwegian Armed Forces will be involved insofar as it is expedient

[1] A design organisation is an organisation responsible for the design, modification or repair of aircraft products, parts and equipment.

in order to ensure safety in civil aviation. In the longer term, other agencies may also become involved.

This document, called the SSP document, describes Norway's State Safety Program and has been prepared in accordance with the ICAO template.

Component 1: Safety policy and objectives for Norwegian aviation

The overriding goal of Norway's transport policy is to provide a safe, efficient, accessible and environmentally friendly transport system that meets society's need for transport and promotes regional development. The transport policy is based on Vision Zero – the goal that there should be no fatal accidents or serious injuries in the transport sector.[2]

It is common to distinguish between aviation safety and security. Safety is about preventing injuries to people and damage to equipment as a result of weaknesses and limitations relating to persons, organisations and systems, where the principle is that everyone does their utmost to ensure safe aviation operations. This includes both preventive work and consequence-reducing measures. Security is about preventing attacks, i.e. intentional acts, against aviation and limiting the consequences if such attacks should nevertheless happen. Security work in aviation focuses particularly on reducing vulnerability, meaning weaknesses in the aviation system, that can be exploited by people with a malicious intent. The division of roles between the aviation authorities and the criminal justice authorities in the field of security is that the former helps to reduce vulnerability while the latter concentrates on neutralising potential threats.

ICAO's program template only covers safety. However, work to promote safety and security is ultimately about the same thing: preventing injuries to people and material damage or loss. To put it simply, aviation safety is about ensuring that passengers flying from A to B arrive safely. For them, the distinction between safety and security is not important; they only want to know that they will arrive safely. The program should be seen as a superstructure for all aviation safety work. Large parts of the program are dedicated to describing safety practices. The key documents in the field of security (the National Aviation Security Program, NASP, and the National Quality Control Program, NQCP) describe security practices. Naturally, these documents are not publicly accessible. The program will address security where it is deemed to be relevant, and insofar as it falls within the aviation authorities' area of responsibility.

Overarching safety targets have been defined as regards the number of accidents and deaths, regardless of whether these losses are due to security-related or safety-related factors. It may also be relevant to define separate targets for these two areas. Both the regulatory frameworks and the philosophies governing security and safety are different, which means that, in some cases, the targets must be defined differently and different measures must be used to achieve them. Viewing safety and security aspects as parts of a bigger picture enables overall management of aviation safety in Norway – meaning that safe aviation is paramount in both areas.

The Ministry of Transport and Communications, the CAA-N and the AIBN are the key authorities in relation to civil aviation. The Norwegian Air Sports Federation (NLF) is the aviation authority for sailplanes and balloons. The aviation authorities shall contribute to aviation safety and have a duty to carry out necessary, expedient aviation safety work, with the required resources and personnel.

[2] See Report to the Storting No 33 (2016–2017) the National Transport Plan 2018–2029, Chapter 10

Overarching safety targets

The main goal of aviation safety work is to avoid loss of life. The overarching safety targets for commercial aviation in Norway in the coming years are as follows:

1. Reducing the probability of fatal aviation accidents: For the ten-year period 2017–2026, the fatal accident rate (FAR[3] value) should be reduced to less than two fatalities per 100 million person flight hours for commercial passenger transport for aviation as a whole.
2. Reducing the probability of accidents in commercial aviation:
    a. For heavy commercial aircraft, the accident frequency rate should be reduced to less than 0.2 accidents per 100,000 landings (flights) for the five-year period 2017–2021 as a whole.
    b. For light commercial aircraft, the accident frequency rate should be reduced to less than 1.0 accidents per 100,000 landings (flights) for the five-year period 2017–2021 as a whole.
    c. For offshore helicopters, there should be no accidents in the period 2017–2021.
    d. For inland helicopters, the accident frequency rate should be reduced to less than 1.0 accidents per 100,000 landings (flights) for the five-year period 2017–2021 as a whole.

All accidents are to be included here, regardless of whether their reasons are security or safety-related. According to ICAO Annex 19, an aircraft accident is defined (in simplified terms) as an occurrence in which:

a) at least one person is fatally or seriously injured in connection with the flight,
b) the aircraft sustains damage or structural failure, or
c) the aircraft is missing or is completely inaccessible.

All Norwegian operators and all Norwegian commercial aircraft are covered by these targets. The safety targets are set out in the table below.

Group	**Safety targets**
Passenger transport	FAR value for the next ten years < 2 fatalities per 100 million person flight hours
Heavy commercial aircraft	Accident frequency rate for the next five years < 0.2 accidents per 100,000 landings
Light commercial aircraft	Accident frequency rate for the next five years < 1 accident per 100,000 landings
Offshore helicopters	No accidents in the next five years
Inland helicopters	Accident frequency rate for the next five years < 1 accident per 100,000 landings

Table 1: Safety targets for Norwegian commercial aviation.

[3] Fatal Accident Rate

No safety targets have been defined for general aviation and foreign aviation in Norway so far, but the aviation authorities will monitor the number of accidents and various types of incidents in order to monitor developments and consider whether measures are necessary.

Details concerning the overarching safety targets are set out in Appendix 1. In addition, see 2.2 for a more detailed description of the targets.

Safety policy

The aviation authorities base their aviation safety work on the following principles:

- The aviation authorities shall actively promote safe and socially beneficial aviation in accordance with the national transport policy objectives. This means that aviation safety cannot been considered in isolation, but must be seen in conjunction with the benefit to society and the level of safety that can be achieved within a realistic framework. Safety is always paramount, but in practice, it is often necessary to take into consideration factors such as the accessibility of transport services and their efficiency.
- Regulations developed by the EU and EASA[4] shall be implemented as far as they are relevant and acceptable for Norway.
- Aviation safety work shall be based on the principle of 'just culture'. The 'just culture' principle means that no one shall be punished for, or subjected to sanctions from their employer, for actions, omissions or decisions taken that are commensurate with their training and experience, but where gross negligence or wilful violations are not tolerated.
- Systematic work on human factors[5] shall form part of the aviation safety work.
- Where expedient, an information-based and performance-oriented approach shall be used in regulatory development and oversight activities.
- Development trends in aviation safety shall be identified, and a risk-based approach shall be used to be able to give priority to the areas of greatest concern or need.
- The level of safety performance in Norwegian aviation shall continuously be measured and monitored by means of national overarching safety indicators and the service providers' safety performance indicators.
- The aviation industry shall be involved in the discussion of safety-related matters and the work on continuously improving safety.
- Good safety practices and a positive safety culture based on safety management principles shall be promoted in the aviation industry.
- Aviation safety data shall be collected, analysed and exchanged by and between all relevant organisations and service providers.
- Steps must be taken to ensure that aviation authority personnel have the knowledge and skills needed to fulfil their oversight and safety management responsibilities.

[4] The European Aviation Safety Agency
[5] Factors that influence human performance

Element 1.1 Legislative framework

The Norwegian regulatory framework shall be in accordance with aviation safety standards set by ICAO and the EU. For areas where ICAO and the EU do not develop regulations, national requirements will be set where this is considered necessary for aviation safety reasons.

If special Norwegian conditions so indicate, for example difficult weather conditions or topographical conditions, and it is considered necessary in order to ensure an acceptable level of safety, the Norwegian safety requirements shall be made more stringent than the international standards, if the international standards allow. Arrangements that entail exemptions from the joint European regulations shall be approved by the EFTA Surveillance Authority (ESA), on EASA's[4] recommendation.

The Chicago Convention

Internationally, the Chicago Convention is the governing instrument in aviation. Standards and recommended practices adopted by ICAO are published as annexes to the Convention and have largely been implemented in Norway through the Norwegian Aviation Act and pertaining regulations. Both EU regulations and national regulations are largely based on ICAO's standards and recommended practices.

The Norwegian Aviation Act

The Aviation Act[6] provides overall rules for Norwegian aviation. The Act is general and applies to all aviation activities in the realm.[7] Aviation in Norway may only be undertaken in accordance with the Aviation Act and regulations adopted under the authority of the Act.

The Act also applies to aviation in connection with petroleum activities on the Norwegian continental shelf and for aviation involving Norwegian aircraft outside Norwegian territory. The Act sets out provisions for both civil and military aviation and other government aviation (i.e. non-military public aviation).

The CAA-N administers the regulations governing Norwegian civil aviation.

Norwegian aviation legislation is published and available on the Lovdata website (www.lovdata.no) free of charge. New acts and regulations are published in the Norwegian Legal Gazette (www.lovdata.no/info/lovtidend). The legislation is also available on the CAA-N's website (www.luftfartstilsynet.no).

The CAA-N issues guidance material to national regulations where deemed necessary. This material is issued in the form of, for example, Aeronautical Information Circulars (AIC) and annexes to regulations. The guidance material is available on the CAA-N's website.

[6] Act of 11 June 1993 No 101 relating to aviation

[7] The Aviation Act applies to Svalbard and Jan Mayen, cf. the Regulations of 23 November 1973 No 3427 relating to aviation on Svalbard and the Regulations of 23 November 1973 No 3460 relating to aviation on Jan Mayen.

EU/EEA and EASA

Today, the regulatory framework in the aviation field is largely developed in the EU, and through the EEA Agreement, Norway has undertaken to follow the same aviation safety regulations as the EU member states. The EU regulations take effect in Norway once they have been implemented into Norwegian law through the adoption of an act or regulations. Every six months, the Government adopts a work program for Norway's cooperation with the EU, which forms the basis for the Norwegian authorities' work to participate in and exert influence in different EU arenas. The Ministry of Transport and Communications has also adopted a separate strategy for how the Ministry and its subordinate agencies shall work on EU and EEA issues.

With regard to aviation covered by the EEA Agreement, the provisions that supplement and implement the EEA Agreement in the field of aviation take precedence over other provisions of the Act; see the Aviation Act Section 1-1 second paragraph.

The EEA Agreement covers neither Svalbard nor the continental shelf. Whether new provisions incorporated into the EEA Agreement shall apply to Svalbard or the continental shelf is considered on a case-by-case basis.

The most important part of the EU/EEA regulatory framework in the field of aviation safety is Regulation (EC) No 216/2008 (the EASA Regulation).[8] The principal objective of the Regulation is to maintain a high level of civil aviation safety in Europe through harmonised regulations. In the Regulation, the EU Commission is authorised to provide detailed legislation in the form of delegated acts and implementing acts. In addition to the EASA Regulation, important legislation includes the acts establishing the Single European Sky[9] and Regulation (EC) No 300/2008 in the field of civil aviation security.

As mentioned earlier, areas not covered by the EU/EEA regulations are regulated through the provisions of the Norwegian Aviation Act and other national regulations.

EU regulations are published and freely available in the electronic database EUR-lex (www.eur-lex.europa.eu). Regulations are also available on EASA's website (www.easa.europa.no).

EASA publishes guidance material relating to regulations covered by the EASA Regulation, in the form of acceptable means of compliance (AMC) and guidance material (GM). This material is available on EASA's website.

Regulation (EU) of the European Parliament and of the Council No 376/2014 on the reporting, analysis and follow-up of occurrences in civil aviation (the Reporting Regulation) is implemented in Norway through Chapter XII of the Aviation Act. Chapter XII of the Aviation Act contains provisions on the protection of reported information and the person reporting it. In some respects, the provisions go further than the requirements of the Regulation. The CAA-N is the competent national authority. Provisions on notification and reporting are also included in the (Norwegian) Reporting and Notification Regulations.[10]

[8] Regulation on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC, now Regulation No 2016/2008.
[9] Regulation (EC) of the European Parliament and of the Council No 549/2004, 550/2004, 551/2004 and 552/2004.
[10] Regulations of 1 July 2016 No 868 on the obligation to report and notify aviation accidents and incidents etc.

Regulation (EU) No 965/2012 (also known as EASA OPS) is implemented by the (Norwegian) Regulations of 7 August 2013 No 956 relating to air operations. Annex II to the Regulation, ARO.RAMP, regulates the performance of ramp inspections of aircraft of operators under the regulatory oversight of another state (SAFA[11] inspections).

Element 1. 2 Responsibilities and accountabilities

Aviation authority

The authority granted to the Ministry of Transport and Communications pursuant to the Aviation Act has largely been delegated to the CAA-N.[12] The delegation includes full responsibility for overseeing safety regulations and for issuing licences and permits. The delegation also includes the competence to provide supplementary regulations to the Aviation Act in a number of areas.

The Norwegian Air Sports Federation (NLF) is the competent national authority for sailplanes and balloons as of 1 January 2016, and has been granted the competence to issue licences and carrying out oversight activities in this area.[13] The competence to stipulate regulations for the area nonetheless rests with the CAA-N and the Ministry of Transport and Communications.

Formally, the Ministry has full authority to issue instructions to the CAA-N and the NLF. This authority is exercised with great caution.

International aviation bodies

In the EU, aviation has undergone a gradual liberalisation since the 1990s. This has resulted in a free internal market for flights in and between the EU member states and the EEA states. Norway is part of the internal market through the EEA Agreement.

The competence to issue aviation safety regulations has largely been transferred to the EU. Since Norway is not a member of the EU, regulations issued by the European Parliament, the Council or the EU Commission are not directly legally binding on Norway or the Norwegian aviation industry. Regulations adopted by EU bodies only become binding in Norway once they have been incorporated into the EEA Agreement and implemented into Norwegian law through an act or regulations.

The EU has established the European Aviation Safety Agency (EASA), which is tasked with assisting the EU Commission and the EU member states. EASA, as the expert agency, prepares new regulations in the EASA Regulation's area of application. In 2005, Norway became affiliated to EASA through the EEA Agreement. Norway is a member of EASA's Management Board and has the right to make proposals and speak, but not vote, at board meetings. Norway also participates in working groups appointed by the agency. The EASA Regulation gives EASA the responsibility for certain tasks that were previously performed by the aviation authorities of the

[11] Safety Assessment of Foreign Aircraft
[12] Regulations of 10 December 1999 No 1273
[13] Regulations of 28 November 2015 No 1365 relating to the certification of crew members

individual countries. This applies to, for example, certification of aircraft and safety authorisations for third-country operators.

ICAO oversees[14] that Norway has fulfilled its obligations under the Chicago Convention and its annexes. EASA oversees the national authorities through dedicated inspections in each aviation domain, to ensure that the authorities comply with the EASA regulations and the obligations provided for therein. In relation to security, ESA oversees the CAA-N to ensure that it operates in accordance with the applicable rules.

Investigation authority

The Accident Investigation Board Norway (AIBN) is the national investigation authority tasked with investigating accidents and serious incidents for the purpose of identifying factors that are assumed to be significant in relation to the prevention of aviation accidents. The investigations shall be documented in the form of investigation reports that may include safety recommendations.

Avinor

Avinor is not an aviation authority, but a wholly state-owned public limited company under the Ministry of Transport and Communications. Avinor's social mission is to own, operate and develop a nationwide network of aerodromes for the civil sector and joint air navigation services for the civil and military sectors. Air navigation services shall ensure the safe navigation of aircraft both in the air and on the ground. Air navigation services are organised in a separate company, wholly owned by Avinor. Avinor has an independent responsibility for aviation safety within its areas of responsibility.

Responsibility for the SSP

Both the aviation authorities and the aviation industry are responsible for aviation safety and aviation safety practices. Chief responsibility for aviation safety in Norway rests with the Ministry of Transport and Communications, and the Minister is responsible for Norway's State Safety Program.

As described above, the authority granted to the Ministry of Transport and Communications pursuant to the Aviation Act has largely been delegated to the CAA-N.[15] Furthermore, it follows from the Instructions for the Civil Aviation Authority Norway[16] that: 'The Civil Aviation Authority Norway has chief responsibility for overseeing Norwegian aviation. The role of the Civil Aviation Authority Norway is to actively promote safe and socially beneficial aviation in line with the Government's overall transport and communication policy objectives.' It follows implicitly from this that the CAA-N shall monitor the safety performance and developments in Norwegian aviation. Objectives for the CAA-N's work are described in annual allocation letters from the Ministry of Transport and Communications. The performance of the CAA-N's various duties is described in the authority's activity plan, which is revised annually.

[14] The Universal Safety Oversight Audit Program, USOAP
[15] Regulations of 10 December 1999 No 1273
[16] Royal Decree of 12 June 2009

The Ministry of Transport and Communications has tasked the CAA-N with preparing, initiating and maintaining Norway's State Safety Program. In its work on the SSP, the CAA-N shall cooperate with other relevant authorities based on established cooperation practices. In cooperation with the CAA-N, the Ministry of Transport and Communications and the AIBN shall form a working group to assist the CAA-N in the development and maintenance of the program.

The resources required for the establishment, implementation and maintenance of the SSP are provided for in the CAA-N's ordinary budget as part of its tasks.

The CAA-N will develop and adopt a State Safety Plan in continuation of the State Safety Program. Endeavours shall be made to achieve the targets stipulated in the State Safety Program by means of the measures described in the State Safety Plan. See also Component 2.

Element 1.3 Accident and incident investigation

The Accident Investigation Board Norway (AIBN) has been assigned responsibility for investigating aviation accidents and serious incidents on Norwegian territory. The AIBN was established in accordance with ICAO's standards for independent investigations of aviation accidents.[17] The AIBN is an independent agency under the Ministry of Transport and Communications.

The purpose of the AIBN's investigations is to examine factors assumed to be of significance to the prevention of aviation accidents. It is not the AIBN's duty to apportion blame or liability under criminal or civil law. The AIBN's investigations are conducted independently of other investigations or inquiries with a completely or partially identical purpose. It is up to the AIBN itself to decide the scale of the investigations to be conducted, including assessing the investigation's expected safety benefits in relation to the resources required. The AIBN's work is governed by the Accident Investigation Regulation,[18] which has been incorporated into the Aviation Act Chapter XII, the Regulations of 7 July 2016 No 906 relating to public investigations of accidents and incidents in civil aviation, and the Regulations on the obligation to report and notify aviation accidents and incidents etc. (the Reporting and Notification Regulations). Both the Aviation Act and the Accident Investigation Regulation contain provisions on the prohibition on submission in evidence, the prohibition on the imposition of sanctions by employers, and the duty of confidentiality relating to sensitive safety data. This is intended to protect people who make a statement to the AIBN. More information about the history and the regulations is available on the AIBN's website (http://www.aibn.no/Aviation).

The AIBN is tasked with investigating accidents and serious incidents. The AIBN may also investigate other aviation incidents if it expects the investigation to contribute to improving general aviation safety and preventing accidents.

[17] ICAO Annex 13, Aircraft Accident and Incident Investigation
[18] Regulation (EU) No 996/2010 of the European Parliament and of the Council on the investigation and prevention of accidents and incidents in civil aviation.

The AIBN shall keep the CAA-N and other relevant agencies informed about material safety findings made in the course of the investigation. Safety recommendations may be submitted at any stage of the investigation.

All the AIBN's investigations are documented in the form of an official report published on the AIBN's website (https://www.aibn.no/Luftfart/Published-reports). The report may contain safety recommendations addressed to competent authorities and other parties. The safety recommendations point to the problem area without making concrete proposals for solutions.

The safety recommendations are submitted to the Ministry of Transport and Communications, which has delegated the task of following up the recommendations to the CAA-N.

The CAA-N is tasked with keeping an overview of all the safety recommendations issued by the AIBN and all safety recommendations addressed to Norwegian parties (authorities as well as service providers) from other countries' accident investigation boards. Depending on who the safety recommendations are addressed to, the CAA-N may to a greater or lesser extent ensure that the recommendations are put into practice:

- Norwegian service providers: The CAA-N has oversight responsibility and may actively follow up the safety recommendation.
- The CAA-N: The safety recommendations will be considered and followed up as part of the CAA-N's continuous improvement work.
- Other Norwegian authorities, official bodies and organisations: In dialogue with the Ministry of Transport and Communications, the CAA-N can assist in and contribute to the follow-up of the safety recommendation.
- Foreign organisations and service providers: The CAA-N may encourage the relevant (aviation) authorities to follow up the safety recommendation.

The CAA-N closes the recommendations, i.e. concludes its follow-up, upon the Ministry of Transport and Communications' acceptance.

In addition to following up safety recommendations, the CAA-N shall also consider the AIBN's reports in order to identify and implement measures to improve aviation safety, cf. the Aviation Act Section 12-6. The CAA-N and the AIBN have prepared an agreement in order to ensure that the safety recommendations are processed in accordance with the guidelines set out in the Accident Investigation Regulation.

In connection with accidents and incidents, the CAA-N may initiate investigations independently of the AIBN's investigation. Based on its own assessment, the CAA-N shall implement the measures necessary to ensure aviation safety. The CAA-N may also contribute as a specialist resource in the AIBN's work.

Element 1.4 Enforcement policy

Issuing permits that grant access to aviation and overseeing permit holders are the fundamental elements in the enforcement of aviation regulations. If the CAA-N, through its oversight activities or in other ways, becomes aware of breaches of the aviation regulations, it may implement measures in the form of administrative sanctions. It is in cases where the ordinary oversight process

proves inadequate that a need for sanctions may arise. Sanction cases shall be processed in accordance with the guidelines in the CAA-N's enforcement policy, adopted on 1 May 2015.

The provisions on administrative sanctions are set out in, inter alia, the Aviation Act Chapters XIII and XIII a, which deal with flight prohibition, detention of aircraft, rectification orders, coercive fines and penalty fines. In addition, a number of provisions are set out in the Aviation Act or regulations whereby licences or permits may be limited or revoked in whole or in part. In addition to administrative sanctions, criminal offences may be investigated by the police, for example on the basis of a report from the CAA-N. The Aviation Act Chapter XIV sets out penal provisions for violation of the Aviation Act and regulations adopted pursuant to the Act.

The 'just culture' principle forms the basis for the aviation safety work and is a key element in the State Safety Program. In Regulation 376/2014 Article 2 (12) (the Reporting Regulation), 'just culture' is defined as follows: '"just culture" means a culture in which front-line operators or other persons are not punished for actions, omissions or decisions taken by them that are commensurate with their experience and training, but in which gross negligence, wilful violations and destructive acts are not tolerated.' This entails acceptance of human fallibility, and that learning from other people's and one's own mistakes is a more effective form of safety work than punishing those who have failed. The 'just culture' principle is particularly clear in connection with the reporting of aviation incidents and accidents, where the Aviation Act sets out specific protection rules. The two other key elements of a 'just culture' (in addition to the legal aspect) are learning and trust. Mutual trust between individuals, organisations and authorities is necessary in order to continuously improve the safety management system at the national level, which is precisely the intention of the State Safety Program.

As regards aviation incidents and accidents, the police carry out investigations in accordance with the Director General of Public Prosecutions' circular R.1926/88 Part II no 1/1992. The CAA-N provides expert assistance at the police's request. The CAA-N's expert assessments are based on the 'just culture' principle, meaning that it does not apportion blame, but contributes objective, professional input to the clarification of the facts of the case. Furthermore, on request, the CAA-N provides assessments of whether the matter warrants prosecution in light of the 'just culture' principle. The 'just culture' principle is not an integrated part of the police's own assessment of criminal liability, but the CAA-N wishes to promote the principle also in the criminal justice system in connection with aviation incidents and accidents.

Based on safety management principles, the service provider is responsible for implementing necessary corrective measures in its own organisation following an accident or incident. This applies regardless of whether the CAA-N finds reason to impose sanctions.

The EFTA Surveillance Authority (ESA) has a certain competence to impose fines on Norwegian design organisations[19] and manufacturers of aeronautical products in cases where the organisation has been certified by EASA.

[19] A design organisation is an organisation responsible for the design, modification or repair of aircraft products, parts and equipment.

Component 2: Risk management

A State Safety Program entails that service providers shall have a Safety Management System (SMS). The SMS shall ensure that service providers operate in accordance with regulations and implement processes for risk assessment and risk management. An agreement shall be established between the competent authority and each individual service provider concerning the safety performance to be achieved through the service provider's SMS. This is explained in more detail in element 2.2 below. The state shall oversee the service providers and their risk assessments and risk management through the SMS.

The state shall also employ the same risk management principles. Regulatory development, the identification of safety performance indicators and targets, as well as the development of oversight programs, are all safety management processes that can be performed with a risk-based approach.

Parts of aviation, for example private flying, security and ground handling of aircraft, are not covered by the requirement for an SMS. Some of the service providers who are not covered by the SMS requirement will nevertheless indirectly be dealt with in accordance with this requirement because they are subordinate to a service provider that follows this regime.

The Armed Forces perform aviation activities with a bearing on civil aviation safety. As regards the State Safety Program, the Armed Forces are considered a service provider in their capacity of aerodrome operator and airspace user. The Armed Forces are not subject to civil aviation legislation, however, and are not required to have a Safety Management System. Since the Armed Forces' activities may nonetheless affect civil aviation safety, they will be involved in the State Safety Program. This means that the Armed Forces shall be part of the dialogue on safety challenges and national safety performance targets. The State Safety Program will be addressed at the CAA-N's regular meetings with the Armed Forces. When safety performance targets are to be defined, matters concerning the Armed Forces will also be addressed at these meetings.

Element 2.1 Requirements for the service provider's SMS

An SMS describes a systematic process that includes an administrative structure, management, safety policy and risk management procedures. The SMS shall be used to:

- identify safety risks
- ensure continuous monitoring and assessment of the level of safety
- continuously improve the SMS and ensure that corrective measures are implemented to maintain the desired level of safety.

In order to meet the SMS requirement, it may in some cases be necessary for a service provider to require its suppliers to have an SMS.

ICAO requires approved training organisations (Annex 1), aircraft operators (Annex 6), maintenance organisations (Annex 6), design and production organisations (Annex 8), air traffic service providers (Annex 11) and aerodrome operators (Annex 14) to implement an SMS that meets the requirements set out in the above-mentioned annexes.

The implementation status for these areas in Norway is as follows:

- Approved training organisations
    - Regulation (EU) No 1178/2011 was incorporated into Norwegian law in 2013,[20] and Part-ORA[21] contains a requirement for training organisations for crew members (ATO[22]) to establish an SMS.
    - Regulation (EU) No 2015/340 (Air Traffic Controller Regulation) was incorporated into Norwegian law in 2016[23] and requires service providers to establish an SMS.
    - Regulation (EU) No 1321/2014 (the Maintenance Regulation, Part-147) has been incorporated into Norwegian law,[24] but does not contain any SMS requirements. This will be introduced in connection with a subsequent revision of the regulations.
- Aircraft operators
    - Regulation (EU) No 965/2012 (Part-OPS) has been incorporated into Norwegian law[25] and entered into force in October 2014. Part-OPS requires aircraft operators to establish an SMS.
    - Regulation (EU) No 1321/2014 (the Maintenance Regulation, Part-M) has been incorporated into Norwegian law, but does not contain any SMS requirements. This will be introduced in connection with a subsequent revision of the regulations.
- Maintenance organisations
    - The applicable Norwegian regulations do not contain any SMS requirements applicable to Norwegian maintenance organisations.
    - An SMS requirement will be implemented through an amendment of Regulation (EU) No 1321/2014 (the Maintenance Regulation, Part-145). This amendment will be introduced in connection with a subsequent revision of the regulatory framework.
- Air navigation service providers
    - An SMS requirement for air navigation service providers was incorporated into Norwegian law already in 2003 through BSL A 1-9.[26] Regulation (EC) No 2096/2005, which was incorporated into Norwegian law in 2007,[27] sets an SMS requirement for the air traffic service and the air navigation service. SMS requirements for other air navigation service providers (the aviation weather service, the aeronautical information service etc.) are still stipulated in BSL A 1-9.
- Aerodrome operators
    - An SMS requirement for aerodrome operators was incorporated into Norwegian law already in 2003 through BSL A 1-9. Regulation (EU) No 139/2014[28] was incorporated into Norwegian law in 2015[29] and contains an SMS requirement for

[20] Regulations of 28 November 2015 No 1365 relating to the certification of crew members
[21] Organisation Requirements for Aircrew
[22] Approved Training Organisations
[23] Regulations of 17 June 2016 relating to the education and certification of air traffic controllers
[24] Regulations of 7 May 2015 No 488 relating to continuing airworthiness etc. (the Maintenance Regulations)
[25] Regulations of 7 August 2013 No 956 relating to air operations
[26] Regulations of 21 August 2003 No 1068 relating to the use of safety management systems in the air navigation service and the ground service (BSL A 1-9)
[27] Regulations of 11 November 2003 No 1345 relating to the establishment, organisation and operation of the air traffic service
[28] Commission Regulation (EU) No 139/2014 of 12 February 2014 laying down requirements and administrative procedures related to airports pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council
[29] Regulations of 25 August 2015 No 1000 relating to the certification of aerodromes etc.

aerodromes operators covered by this regulation. Operators of other aerodromes will still be required to have an SMS pursuant to BSL A 1-9.

- Security
    - In security, the most important groups of operators are indirectly required to have an SMS through the aerodrome regulations and the regulations on flight operations.
- Private flying
    - No SMS requirements apply to private flying.

Through approval processes and regular oversight activities, the CAA-N shall measure the effect of the service providers' SMS. The complexity of a service provider's organisation and operations must be reflected in its SMS. If an SMS-approved organisation uses subcontractors, it is a requirement that the organisation has a system for approving subcontractors.

A superstructure in the form of a State Safety Program is required in order to ensure that the service providers' Safety Management System results in good safety management overall. The CAA-N will develop the State Safety Program in step with SMS requirements being incorporated into the regulatory framework in the different areas. This means that, as the service providers start using SMS, the State Safety Program will be developed to ensure uniform management of aviation safety.

Element 2.2 Agreement on the service provider's safety performance

The transport policy is based on Vision Zero – the goal that there should be no fatal accidents or serious injuries in the transport sector.[30] This overarching vision shall be achieved through the stipulation of concrete, national targets. The targets shall be defined based on a set of the most important safety performance indicators. In the work on developing a Safety Management System, the service providers shall also propose their own safety performance targets with pertaining indicators. These targets and indicators shall be approved by the authorities in dialogue with the service provider. Each service provider's safety performance targets shall underpin the national targets and contribute to their achievement. The national targets that are adopted will support the European safety performance targets, but purely national targets may also be stipulated.

The aviation industry shall develop methods for systematic, continuous monitoring of safety performance. Monitoring and analysis of safety indicators will provide valuable information in several areas:

- It will give the service provider and the authorities information about whether the service provider has achieved an acceptable level of safety performance.
- It will provide information about whether the service provider's SMS works as intended.
- It will provide information about whether implemented safety measures have the desired effect.
- It will give the authorities information that can be used in a risk-based assessment of the oversight activity.

[30] See Report to the Storting No 33 (2016–2017) the National Transport Plan 2018–2029, Chapter 10

- It will contribute to an overall description of the aviation safety situation, including risk factors, that all parties agree on and that can be used in the dialogue on aviation safety and in proactive aviation safety work.

The development of safety performance targets, with pertaining indicators for aviation safety in Norway, will be an element in the further development of the State Safety Program. When such targets have been adopted, all service providers shall consider what actions are required in order to achieve the desired targets, and what measurements and methods should be implemented to ensure the agreed result. Achievement of the safety performance targets shall be evaluated regularly, and the stipulation of new targets shall be based on the results achieved.

Norway's State Safety Program shall be evaluated and updated regularly. Updates shall take into account improvements achieved in aviation safety and the applicable level of aviation safety, in addition to any new safety performance targets or indicators adopted by the EU or other sources.

State Safety Plan

The CAA-N will develop a State Safety Plan in continuation of the State Safety Program. Overarching safety performance indicators and targets will be defined in the State Safety Program, while the measures to achieve the targets shall be described in the State Safety Plan. The plan shall also contain deadlines and describe the division of responsibilities. Measures to improve the State Safety Program may also be included in this plan.

The plan shall be revised annually. As part of a continuous improvement process, targets and measures will also change in step with the improvements achieved.

The development of safety performance targets and indicators will probably follow the areas and targets defined by the EU Commission, which are also described in the European Plan for Aviation Safety, EPAS.[31] The CAA-N shall take active part in the annual revision of the EPAS. The Norwegian State Safety Plan will also cover national and local follow-up points. This means that local safety considerations pertaining to individual service providers shall be taken into account. Work on the State Safety Plan has not started yet.

A monitoring period may be relevant before targets can be defined on the basis of some of the indicators.

[31] The European Plan for Aviation Safety, available on EASA's website easa.europa.eu

Component 3: Safety assurance

Oversight of service providers is the authorities' most important tool to ensure that the providers comply with established regulatory requirements. In accordance with the SSP, it is particularly important that the SMS meets both regulatory requirements and safety performance targets. The oversight processes are intended to give the authorities confidence that the service providers are capable of managing aviation safety in their own area. Through the oversight process, the authorities play an active role in aviation safety in relation to the individual service providers. As a consequence of the State Safety Program, the aviation authorities will also play an active role at a more general level in that each service provider's safety performance forms part of the aviation safety situation as a whole.

Element 3.1 Safety oversight

The CAA-N is responsible for overseeing civil aviation in Norway. The safety system in aviation is largely based on overseeing whether the service providers comply with the applicable regulations. This includes both approvals and oversight in the fields of safety and security.

Approval is an initial verification that an object of oversight[32] meets the regulatory requirements. The process is initiated by an application for either first-time approval or change of an existing approval. The CAA-N uses a variety of methods in the approval process, including investigation, document control and oversight activities. The result is either rejection of the application or the issuing of a licence, an approval or a privilege granting the applicant access to aviation.

Oversight is a process intended to verify whether the holder of an approval maintains regulatory compliance and thereby continues to be entitled to engage in aviation operations. Some oversight activities will be unannounced, but in most cases, advance notification will be given. The CAA-N uses many of the same methods in connection with oversight as for approval. The conclusion following an oversight activity will either be that there is a need to close non-compliance issues[33] or that the situation is satisfactory. Facts and non-compliances, if any, are documented in an oversight report. Non-compliances must be closed within a given deadline, and the CAA-N will follow up to ensure they are.

The CAA-N approves and oversees Norwegian civil aviation, i.e.:

- Airworthiness
    - Airworthiness and noise level certification of individual aircraft
    - Organisations involved in the production, maintenance and maintenance management of aircraft and pertaining training of certified personnel
    - Maintenance training organisations
    - Certified personnel

- Flight operations
    - Aircraft operators

[32] Object of oversight: A legal or natural person or an object subject to aviation legislation that may, on application, be granted a certificate, approval, privilege or recognition by the CAA-N.
[33] Finding: non-compliance with a regulatory requirement

    - Private flying
    - Training organisations for aircrew
    - Flight simulators used by training organisations the CAA-N oversees
    - Aircrew
    - Personal licences and privileges
    - Aero-medical centres and aero-medical examiners
    - Use of remotely piloted aircraft systems (RPAS[34]) and what are known as Annex II aircraft[35]

- Health, safety and the environment (HSE) for aircrew on bases in Norway, within the framework of the Norwegian Working Environment Act
    - Pilots
    - Cabin crew

- Aerodromes and air navigation
    - Aerodrome operators
    - Air navigation service providers
    - Training organisations for air traffic controllers
    - Aerodrome and air navigation equipment
    - Air traffic controllers and other air navigation or aerodrome personnel
    - Medical requirements for air traffic controllers
    - Aviation obstacles and marking of such obstacles
- Security
    - Air freight agents and known consignors (KC)
    - The security aspect relating to airlines, aerodromes and air navigation
    - Personnel certified to provide security training

The CAA-N does not directly oversee providers of ground handling services or security services (Securitas and NOKAS etc.), as these services are performed by the service providers' subcontractors. Service providers (here: aerodromes and airlines) that use subcontractors are responsible for ensuring that the relationship between the service provider and the subcontractor addresses all relevant regulatory requirements. The CAA-N oversees the service provider, and notification of any non-compliance on the part of the subcontractor are addressed to the service provider. The service provider then follows up its subcontractor and ensures that changes are made so that the non-compliance can be closed. The CAA-N, on its part, follows up the service provider and decides whether the non-compliance can be closed.

In aviation, a system of extensive mutual recognition has been established between the EU/EEA member states. This means that approvals, licences etc. issued by one country are recognised by other countries. The service providers may operate across national borders without having to apply for approval in all the relevant countries. This system means, for example, that it is the competent

[34] Remotely Piloted Aircraft System

[35] Annex II to the EASA Regulation (see footnote 7). Annex II aircraft are not covered by EU regulations, but are regulated at the national level only.

authority in the airline's home country that oversees foreign airlines operating in Norway. The aviation authorities involved can enter into agreements on oversight cooperation for service providers operating across national borders. For some areas, such a system of mutual recognition has also been established with countries outside the EU/EEA through special agreements.

Aircraft are not considered service providers. However, it is the competent authority of the state where the aircraft is registered that oversees continued airworthiness for aircraft registered in countries other than Norway. In such cases, agreements are normally established between the countries' competent authorities so as to avoid ambiguity. However, the CAA-N carries out what are known as SAFAs,[36] spot-checks to verify that the use of aircraft registered outside the EU/EEA meets relevant requirements. The CAA-N also carries out SACAs,[37] spot-checks to verify that the use of aircraft registered in the EU/EEA meets relevant requirements. Moreover, the CAA-N may perform an HSE oversight of foreign companies' personnel on bases in Norway.

EASA is the European authority responsible for type certification, and thus has oversight responsibility for design organisations.[38]

The CAA-N prepares annual oversight plans for all domains (flight operation standards, airworthiness, aerodromes, air navigation and security). The oversight system is fundamentally frequency-based. Risk areas and service providers are given higher or lower priority based on, among other things, previous oversight findings and reported aviation incidents. The oversight plans are adjusted as necessary during the year based on assessments relating to reported incidents and experience gained through oversight activities. If the CAA-N receives notifications of concern, or in other ways learns about possible deviations on the part of a subject of oversight, an oversight will be conducted if it is considered expedient.

The CAA-N has established procedures that describe the approval process and the oversight process. Oversight activities are carried out by inspectors with the relevant expertise.

As part of the SMS/SSP system, the CAA-N shall also oversee that the service providers' risk management is satisfactory. This has already been established in some areas, and the CAA-N shall develop the necessary expertise and methods in step with regulatory developments as described in 2.1.

Element 3.2 Safety data collection, analysis and exchange

Safety data are a fundamental prerequisite for aviation safety measurement and for setting safety performance targets. Safety data thus form the basis for the two main processes in a State Safety Program: risk management and oversight. The two main sources of safety data are oversight activities and the service providers' reporting of aviation accidents and incidents.

The Reporting Regulation (Regulation (EU) No 376/2014) imposes a duty on aviation personnel to report all accidents, serious incidents and other incidents that have or could have affected safety.

[36] Safety Assessment of Foreign Aircraft
[37] Safety Assessment of Community Aircraft
[38] An organisation responsible for the design, modification or repair of aeronautical products, parts and equipment.

A list of what types of incidents this duty covers has been established.[39] The Reporting Regulation also contains provisions on voluntary reporting, which supplements mandatory reporting. The Norwegian system for reporting aviation incidents and accidents covers both mandatory and voluntary reporting pursuant to Regulation (EU) No 376/2014. Aviation personnel who are affiliated to a Norwegian service provider or crew on aircraft registered in Norway shall report to the CAA-N. Accidents and serious incidents shall also be reported to the Accident Investigation Board Norway (AIBN). The purpose of the reporting is to ensure that the authorities have information they can use in their safety work.

Aviation accidents and incidents shall be reported using a prescribed form, NF-2007, or other formats that meet the requirements set out in the Reporting Regulation. The duty to report is personal, and aviation personnel can submit their report directly to the authorities or to the service provider that employs/hires them. The service provider has a duty to facilitate reporting and shall forward relevant reports to the authorities.

Protection of reported information, the reporter and persons mentioned in reports

Pursuant to the Aviation Act, the CAA-N and the AIBN have a duty of confidentiality concerning all information reported in accordance with the Reporting Regulation.

As a rule, information obtained by the CAA-N or the AIBN in accordance with the Reporting Regulation may not be submitted in evidence in any subsequent criminal or civil case against the person who provided the information.

In principle, the state cannot bring civil action on the grounds of reported information. However, the prohibition against civil action does not apply when there are qualified reasons to believe that the person providing the information has acted culpably[40].

The CAA-N shall neither impose penalty fines nor revoke personnel licences based on reported information, unless the information concerned clearly indicates that the person providing the information or a person mentioned in the report does not meet specified medical requirements, or for other reasons is clearly unfit to hold the licence.

Employers are subject to a corresponding prohibition on imposing sanctions on the person who reported the information or persons mentioned in reports, unless there are qualified reasons to believe that clearly culpable conduct is involved.

These protective rules are in line with the principles of just culture.

Case processing of aviation accidents and incidents

The CAA-N has an electronic case processing tool for accident and incident reports. Dedicated case officers receive the reports, assure the quality of the information provided, add codes for the course of events and remove all information identifying individuals. In other words, only the case

[39] Section 1 of the (Norwegian) Reporting and Notification Regulations, cf. Regulation 2015/1018 laying down a list classifying occurrences in civil aviation to be mandatorily reported according to Regulation (EU) No 376/2014 of the European Parliament and of the Council.
[40] Cf. the Aviation Act Section 12-12 second paragraph

officer who receives the incoming report has access to information identifying the person submitting it. This information is necessary in cases where the CAA-N needs supplementary information.

Reports related to the same occurrence are gathered to form one case, which is stored in the national occurrence database. The database is an ECCAIRS[41] database developed by the EU's Joint Research Committee and follows ICAO's ADREP[42] standard. The case (accident/incident) is subsequently allocated to the relevant inspector. The inspectors are responsible for deciding whether follow-up of occurrences in their area of responsibility is necessary and, where relevant, do so.

Most cases are closed without further follow-up, while others are followed up in connection with the next oversight activity relating to the enterprise, and a few are followed up separately with the service provider. The purpose of the follow-up is to ensure that the service provider attends to safety in a satisfactory manner and has an acceptable system for this.

Analysis of data

In a State Safety Program, the authorities shall establish a system for measuring aviation safety through relevant indicators in different areas, as described in 2.2. By means of these indicators, the authorities shall measure and set goals for developments in aviation safety at an overarching level, in different areas of aviation (e.g. inland helicopter transport) and for different aviation domains (aerodromes, air navigation, airworthiness, flight operations standards). More concrete risk areas (for example failure/faults in an aircraft's components and systems) or consequences (such as damage to aircraft) can be measured and followed up directly.

The CAA-N has established a set of safety performance indicators. They include an overview of the number of accidents and the accident frequency rate (number of accidents per 100,000 flight hours/landings) for the different types of aviation. These overviews are an expression of safety at an overarching level and can be used to monitor long-term developments in aviation safety. Defined safety performance indicators that shed light on aviation domains, threats and accident sequence precursors are also included. The nature of the indicators differs greatly, but they will in different ways support the long-term measurements and identify short-term trends. The CAA-N uses the established indicators when planning and implementing oversight activities in the different aviation domains. The indicators will be developed further in the time ahead, parallel to the development of the State Safety Program in general and the need for aviation safety data in particular.

Safety performance indicators shall also be incorporated into the service providers' SMS, so that the service providers' safety performance contribution can be measured in relation to the established national indicators. The service providers' safety performance indicators shall reflect their activities and complexity. A set of safety performance indicators may therefore vary between service providers.

[41] European Co-ordination Centre for Aircraft Incident Reporting Systems
[42] Accident/Incident Data Reporting

The CAA-N shall develop a process and a method for setting concrete safety targets in a more comprehensive structure, with both overarching goals and improvement targets for specific topics and service providers. The work shall be interdisciplinary, based on internal cooperation and include other parties involved in Norwegian aviation.

Exchange of data

As previously mentioned, the data collected via mandatory incident reporting are anonymised before being made available to the authorities. Other parties involved in safety-promotion work can apply for access to reported information. The disclosure of information mainly concerns statistics and data at an aggregated level. For research purposes and in some types of aviation safety work, information about individual cases may be needed, in which case any references directly or indirectly identifying persons and organisations will be removed. This ensures protection of individuals and service providers' continued trust in the authorities. The statistics are available to everyone, including the media, and are prepared both on request and according to a fixed plan.

In accordance with the Reporting Regulation, all cases are transferred to the European Central Repository (ECR), which is administered by the EU's Joint Research Committee. Access to the ECR is strictly regulated, and ECR data can only be used in work related to promotion of aviation safety. The CAA-N has access to the ECR, and the AIBN may be granted access as necessary. In accordance with requirements set out in Annex 13 (Aircraft Accident and Incident Investigation) to the Chicago Convention, the CAA-N sends information about relevant accidents and incidents to ICAO on a continuous basis.

Use of other safety data

The CAA-N shall review the reports published by the AIBN in order to identify and, if relevant, put in place measures to improve aviation safety. In addition, the CAA-N shall follow up all safety recommendations issued by the AIBN. The safety recommendations are the AIBN's recommendations, and the CAA-N carries out an independent assessment of whether the proposed measures are adequate and feasible. On this basis, the CAA-N decides whether, and, if relevant how, the safety recommendation shall be followed up.

The CAA-N also uses all other available safety data in its safety work, such as findings, notifications of concern from the public or aviation personnel, information from the media, accidents and incidents in other countries, as well as analyses carried out in Norway and abroad. The CAA-N shall develop robust processes to be able to utilise all available information in the best possible way in the work to promote aviation safety.

Element 3.3 Risk-based oversight

In simple terms, risk-based oversight can be described as the authorities directing their attention to the areas or service providers where the need for oversight is greatest. Under the current practice,

this means to decide, based on a risk assessment, which areas or service providers shall be subject to oversight activities within a regulated, but flexible time frame. The oversight frequency shall be defined for all relevant service providers. Risk assessments are also used to prioritise topics, i.e. to define focus areas. In other words, risk-based oversight is based on a risk assessment to determine where and how often the CAA-N shall carry out oversight activities and which regulatory areas to check. The purpose of the oversight remains to verify regulatory compliance.

Risk-based oversight will contribute to increase the effect of oversight activities as risk areas are subject to increased attention. The regulations instruct the authorities to carry out risk-based oversight, but the development does not move forward at the same pace in all domains. Moreover, the regulatory requirements differ from one domain to the next. The introduction of risk-based oversight is therefore at different stages for the CAA-N's different domains.

In line with the SMS/SSP system, the CAA-N shall further develop risk-based oversight, and this will be given high priority in the CAA-N in the time to come. The methodological approaches to risk-based oversight may differ between the different domains also in the long term. Risk-based oversight is at the development stage in EASA as well. It will probably take some time before EASA has developed more detailed descriptions (Acceptable Means of Compliance, AMC) relating to risk-based oversight.

Component 4: Aviation Safety Promotion

Aviation safety promotion is about the internal and external processes the state establishes to facilitate safety training, communication and an understanding of aviation safety. The overriding purpose of safety promotion is to increase the general level of knowledge and understanding of requirements, guidelines and the safety situation in aviation. This shall be achieved through effective communication.

Aviation safety promotion is an integral part of the State Safety Program, and shall be further developed in step with the program. Clarification of roles, cooperation, good communication (channels, arenas etc.) and a focus on safety culture will be emphasised.

Element 4.1 Internal training, communication and dissemination of safety information

In a State Safety Program, the state shall ensure increased awareness, aviation safety training and communication within and between the government agencies involved. This internal communication shall primarily address safety-relevant information to support the development of an organisational culture that leads to an efficient and effective State Safety Program.

Internal competence-building relating to the State Safety Program shall be coordinated between the various government agencies through harmonised measures. Personnel involved in the implementation and oversight of the SSP and SMS shall be given priority. Special consideration shall be given to personnel who will be involved in deciding whether the SMS requirements and other safety performance requirements are met.

Basic training in SMS and SSP has been provided in the CAA-N and will be followed up with additional measures in step with the development of the State Safety Program.

The government agencies involved in aviation shall take a comprehensive approach to their respective roles. It is therefore important to ensure that forums are established for contact between the government agencies and the organisation responsible for the SSP, i.e. the CAA-N. The forums shall be dedicated to aviation safety issues and the State Safety Program. Forums have been established for communication between the CAA-N and the Ministry of Transport and Communications, between the CAA-N and the AIBN, and between the CAA-N and the Armed Forces. In addition, the Ministry of Transport and Communications, the AIBN and the CAA-N shall form a working group that will assist the CAA-N in further development and maintenance of the SSP.

Communication with the other government agencies is more sporadic. As the State Safety Program grows, communication with other relevant government agencies will be developed.

Element 4.2 External safety training, communication and dissemination

The state shall have communication methods in place to promote the introduction of SMS. The basic content of such external communication is related to SMS requirements and guidance material. The communication should be open to feedback from the service providers. The SSP document and pertaining guidelines shall be made available to the service providers.

The CAA-N has established dialogue and information flow with the service providers concerning the SSP and SMS in the relevant domains. How far the dialogue has progressed varies with the different areas in aviation The dialogue includes information about regulatory requirements and about the establishment of safety performance indicators and targets. Workshops have been held, AICs[43] published, and the inspectors are in regular dialogue with their subjects of oversight. To help the service providers, the CAA-N has prepared, among other things, overviews of regulatory requirements and corresponding procedures (known as 'compliance lists') for flight operations standards. The CAA-N will continue to develop the dialogue with the service providers.

In accordance with the State Safety Program, the CAA-N shall offer the service providers advice or training in the SSP and SMS. When the service providers are to implement SMS, this also includes risk-based management. The CAA-N has a general duty to provide guidance, also in relation to risk management. This is to ensure that the service providers adopt a standardised approach to SMS.

The state shall establish and maintain satisfactory communication with the service providers. The CAA-N has established the following forums, among others:

- The annual Aviation Conference
- The Committee for Helicopter Safety on the Norwegian Continental Shelf
- Flight Safety Forum for Inland Helicopter Operators
- The Aviation Security Council
- Contact meetings with relevant service providers

The CAA-N is also invited to, and attends some service providers' internal safety meetings.

In addition, the CAA-N contributes by publishing different types of safety information, including:

- AICs
- Safety directives
- Annual reports describing accidents and incidents in the previous year
- Annual risk assessments for civil aviation (security, terrorism and sabotage)
- VFR guide
- The CAA-N website

The CAA-N also contributes with safety-related information through conversations during inspections, guidance in connection with the consideration of various applications etc.

The CAA-N will make information and guidance material relating to SMS and the SSP available to the service providers as soon as it is developed by the EU and ICAO. The SSP document shall be available on the CAA-N's website. The CAA-N will develop its dialogue with the service providers in step with the other processes in the State Safety Program.

[43] Aeronautical Information Circular

Definitions

The definitions are intended to make it easier to understand the terms used in this document. They are not necessarily complete or formally precise and correct.

Norwegian	English	Definition
Avvik	Non-compliance	Non-compliance with a requirement imposed pursuant to acts or regulations.
Designorganisasjon	Design organisation	An organisation responsible for the design, modification or repair of aircraft products, parts and equipment.
Flysikkerhetsprogram	State Safety Program (SSP)	An integrated set of rules and activities, the purpose of which is to improve aviation safety in a country.
Flysikkerhetsplan	State Safety Plan (SSP)	An overview of which measures are to be implemented, and by whom, in a given period in order to achieve the targets stipulated in the State Safety Program.
Menneskelige faktorer	Human factors	All contributory factors that influence human performance (including people's physical, mental and social abilities) in the interaction between people, technology and organisations throughout the aviation system.
Rettferdighetskultur	Just culture	A principle that means that no one shall be punished for actions, omissions or decisions taken that are commensurate with their training and experience, but where gross negligence or wilful violations are not tolerated. This is an element in a safety culture.
Regelverksetterlevelse	Compliance	Fulfilling regulatory requirements
Sikkerhetsstyring/-ssystem	Safety management / -system (SMS)	Systematic activities to achieve and maintain a safety level in accordance with the targets and requirements set by the organisation.
Tilsynsobjekt	Oversight object	A legal or natural person or an object subject to aviation legislation that may, on application, be granted a certificate, approval, privilege or recognition by the CAA-N.
Tjenesteyter	Service provider	All organisations that provide aviation services, including training organisations, airlines, maintenance organisations, design organisations, manufacturers of aeronautical products, air traffic services and aerodrome operators.

Appendix 1: Overarching safety targets

Historically, civil aviation safety in Norway has improved considerably, at the same time as the level of activity has escalated. This is illustrated in the figure below. Numerous measures have been implemented to improve aircraft, technical systems on board, flight operations, the infrastructure on the ground and in the air, communication/surveillance, and all major ground support systems relating to the air traffic service, aerodrome operation and security. It is therefore not realistic to expect the same safety improvements in absolute terms to continue going forward. However, further safety improvements are obviously possible through continued professionalization in parts of the industry and by establishing and maturing elements of risk management.

Number of accidents involving aircraft registered in Norway

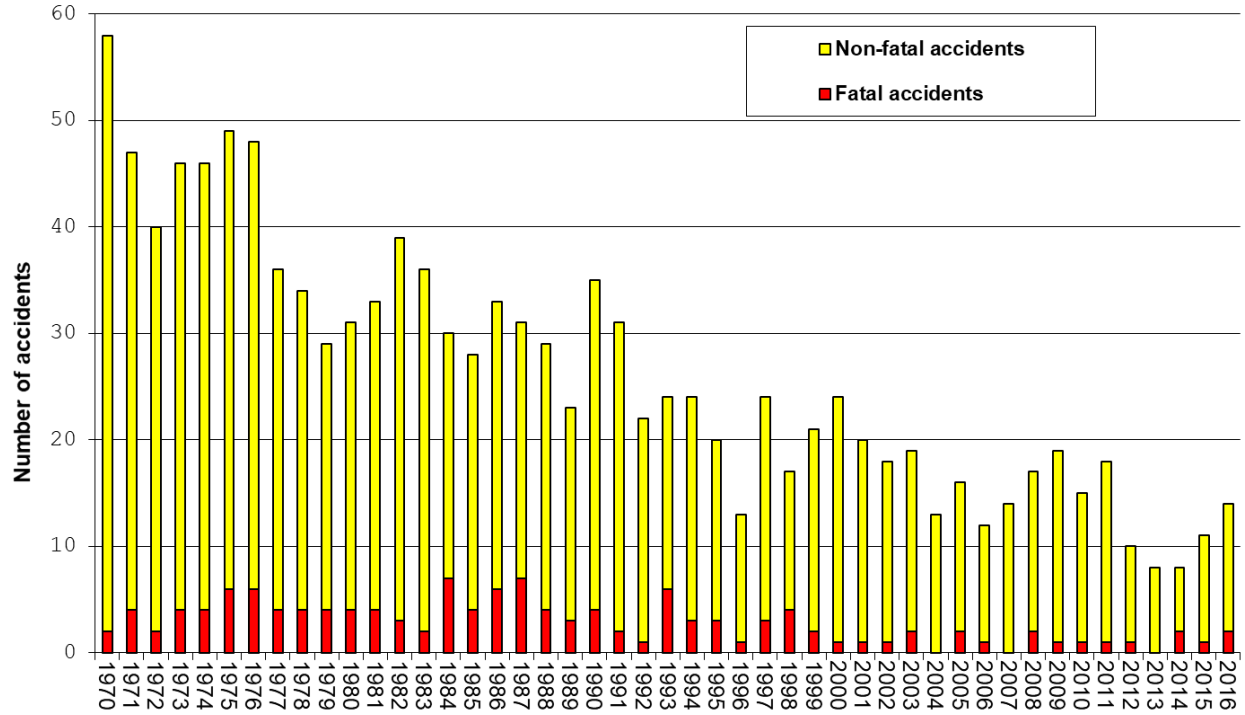

Figure 1: Historical development in the number of accidents involving aircraft registered in Norway: fixed wing aircraft and helicopters, commercial and non-commercial. Accidents involving ultralight aircraft and remotely piloted aircraft are not included.

The overarching safety targets shall describe the state's ambition for safety improvements in the years ahead. The aviation industry's support for the targets must be ensured, as the results – aviation safety – are created and recreated by them every single day. Then, the overarching targets must be broken down into more local, specific improvement targets for the aviation industry, intended to contribute to achieving the desired results. This will create a sense of mutual obligation, so that the aviation industry and the authorities work together to improve aviation safety. The local targets shall be prepared by the authorities and the service providers together. Only overarching safety targets have been defined at this point.

In this context, Norwegian aviation is limited by two dimensions:

- Aviation on Norwegian territory (ground and air)

- Aviation involving a Norwegian air operator (Norwegian AOC[44]/licence) or aircraft registered in Norway

The Norwegian aviation authorities have a varying degree of influence and control in the different scenarios, from a high degree of influence and control of Norwegian operators flying in Norway, to a low degree of control of foreign operators flying in Norway. This has been taken into consideration when developing the safety performance targets – to strike a balance between ambition and realism. Historical developments in aviation safety in Norway and Europe have also been taken into account.

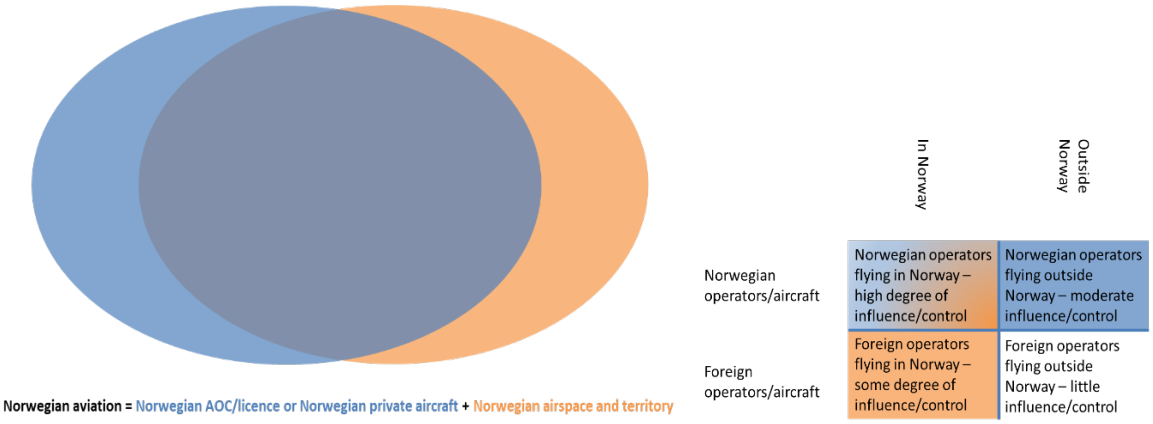

Figure 2: Norwegian aviation

Within Norwegian aviation as a whole, illustrated in the figure above, there are two limited areas where no explicit safety performance targets are defined in the first edition of Norway's State Safety Program. They are (a) aviation involving foreign aircraft and foreign airlines on/in Norwegian territory and (b) Norwegian general aviation. For both areas, accidents and incidents shall be monitored, broken down by the type of scenario and the type of flight/aircraft, in order to monitor developments in safety performance. This monitoring enables safety performance targets to be established in a subsequent revision of the State Safety Program.

Probability of a fatal aviation accident: FAR value

FAR, the Fatal Accident Rate, is calculated as the number of fatalities per 100 million person flight hours[45] for all commercial passenger transport. This means that the FAR value indicates the probability of being fatally injured in an aviation accident and is a way of expressing the paramount priority in aviation safety work – to limit loss of lives. Norwegian passenger transport includes the vast majority of Norwegian aviation and must perform at the highest level of safety. The safety level in passenger transport can serve as an overall indicator of safety in Norwegian aviation, and is suitable for long-term monitoring. Passenger transport includes about 95% of Norwegian aircraft's flight hours, and more than 99% of person flight hours on Norwegian aircraft. Highlighting passenger transport as particularly important does not mean that other specialised commercial air operations or private flying are given lower priority, but recognises differences in acceptable levels of risk between these sectors. This FAR value takes the differences between

[44] Air Operator Certificate
[45] If 100 persons fly for one hour, this amounts to 100 person flight hours. Both passengers and crew members count.

aviation accidents into account, as they can entail catastrophic losses or no personal injuries at all. The FAR-value is essential to ensure support for the prevention of major accidents. However, also the prevalence of material accidents should be reduced in the time ahead.

According to ICAO Annex 19, an aircraft accident is defined (in simplified terms) as an occurrence in which

a) at least one person is fatally or seriously injured in connection with the flight,
b) the aircraft sustains damage or structural failure, or
c) the aircraft is missing or is completely inaccessible.

Commercial passenger transport includes all commercial flights where persons are transported from one place to another, but also circular flights that land in the same location that they took off from. This also includes the return flight after dropping passengers at their destination to return the plane or helicopter to the point of departure, as well as scheduled flights or offshore flights that happen to be conducted without passengers on board in one direction. Ferry flights and positioning flights are not included in this FAR value, nor are specialised flights that only transport cargo or flights carrying a suspended load, or flights with only crew or persons performing work on board the aircraft. Training flights without passengers, government aviation and private flying are also excluded from this FAR value, because of the active risk exposure and greater acceptance of risk in these sectors. Ambulance flights and helicopter emergency medical services (HEMS operations) are included in the FAR value together with regular passenger flights.

The FAR value thus expresses the level of safety historically and until the present. Targets based on the FAR value express the desired future level of safety for passengers who buy a ticket to travel on a Norwegian aircraft, and those who have to use air transport to and from their place of work (or as a patient), both offshore and inland transport. The target for the next ten years (2017–2026) as a whole is to reduce the FAR value to less than two fatalities per 100 million person flight hours. Fortunately, there are few fatalities in Norwegian commercial air transport by plane and helicopter. Safety performance targets based on the FAR value have been set for the next ten years as a whole to have a sufficiently long period to be able to identify real changes.

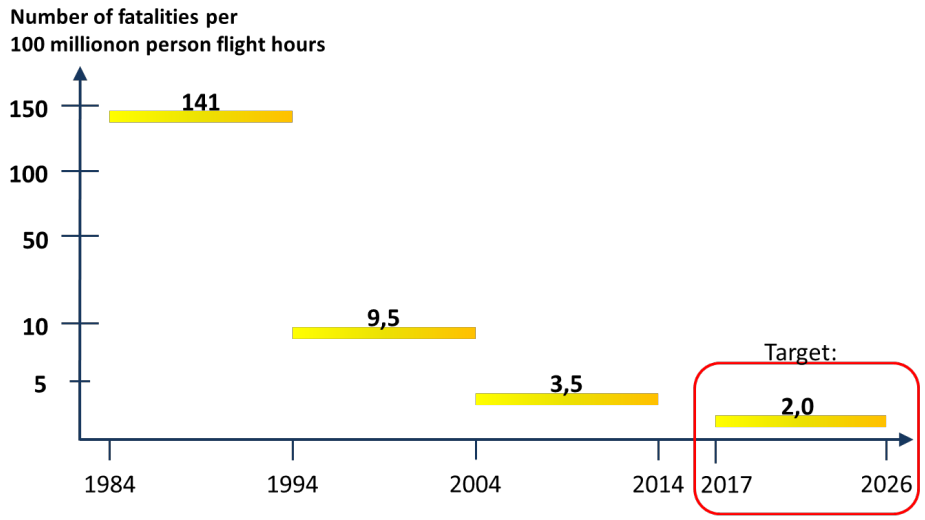

Figure 3: Historical development in FAR value in Norwegian commercial passenger transport.

The safety performance target based on the FAR value is at a more overarching level than the targets for sub-types of aviation (which are based on accident frequency rates), since only fatal accidents count. Loss of human lives shall of course be given more weight than material loss. These targets complement each other in that endeavours shall be made to reduce all imaginable forms of losses, while special focus is given to scenarios that have a major accident potential and scenarios that may lead to serious personal injuries.

Accident frequency rate

Based on the information available, the EU's recommended division and material national conditions that can and should be addressed, we divide Norwegian aviation into the following segments:

- Foreign air transport[46] on Norwegian territory
- Private flying involving an aircraft registered in Norway
- Commercial Norwegian aviation
    - involving heavy aircraft[47]
    - involving light aircraft[48]
    - involving offshore helicopters
    - involving inland helicopters

Based on an overall assessment, no overarching safety targets have been defined for foreign air transport in Norway, nor for private flying involving aircraft registered in Norway. We have an overview of previous accidents and incidents for these segments, and developments in the time ahead will be monitored.

For the other segments, i.e. Norwegian commercial aviation, the safety performance targets are based on the accident frequency rate: number of accidents per 100.000 landings (flights). Accidents are important with regard to aviation safety and the most commonly used parameter for measuring aviation safety, because the term comprises both serious personal injuries and/or major material damage. The definition has also remained more or less unchanged over time and is perceived identically regardless of the type of aviation/aircraft and geography. Accident frequency rates are important because they are normalised in relation to the activity/size of the operator and country. This provides robust parameters that enable comparison across time and across activities and/or countries. The targets have been set for the next five years as a whole. This gives a sufficiently long period to identify changes, while at the same time not too long with regard to the pace of change in aviation.

Operations on the short runway network make up a material part of Norwegian aviation. It is therefore reasonable that such operations are given a prominent place in the further work on developing safety performance targets and focus areas for the aviation safety work.

[46] I.e. involving a foreign company (AOC/licence) or a non-commercial (private) aircraft registered abroad
[47] Commercial Air Transport (CAT) aircraft with a weight exceeding 5,700 kg.
[48] All commercial aviation involving non-CAT aircraft exceeding 5,700 kg. Thereby includes all commercial aviation involving non-CAT aircraft, and all commercial aviation involving CAT aircraft weighing less than 5,700 kg.

On 29 April 2016, 13 persons died in an offshore helicopter accident. Just over a month later, an accident occurred that resulted in material damage to an offshore helicopter, but no one was injured. No accidents involving offshore helicopters occurred between 2002 and 2016, and the previous fatal accident took place in 1997. The accidents in 2016 made it clear that improvements are needed in the sector; aviation safety cannot be taken for granted. However, history has shown that it is possible to avoid accidents with offshore helicopters for long periods. Based on the number of accidents/the accident frequency rate, the target is therefore zero accidents in the next five-year period (2017–2021). For the other segments of Norwegian commercial aviation, historical developments and targets for the five-year period are illustrated in the figures below.

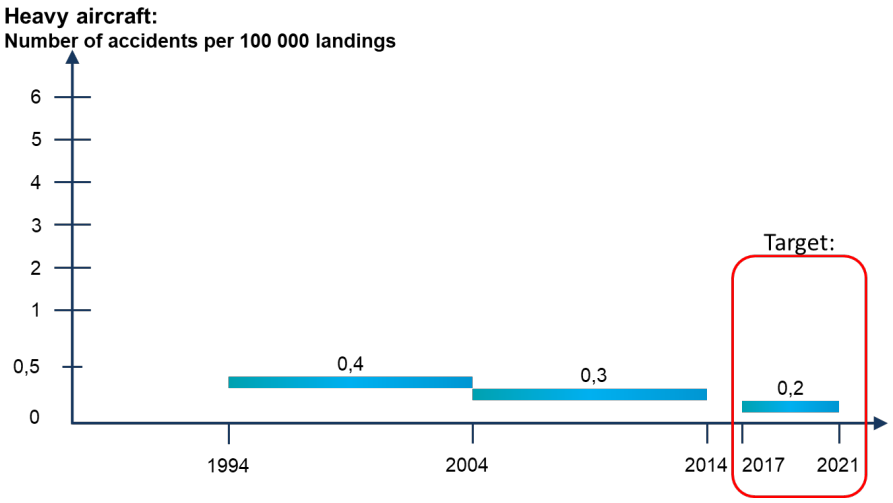

Figure 4: Historical accident frequency rates and target for the next five-year period, for commercial Norwegian aviation involving heavy aircraft.

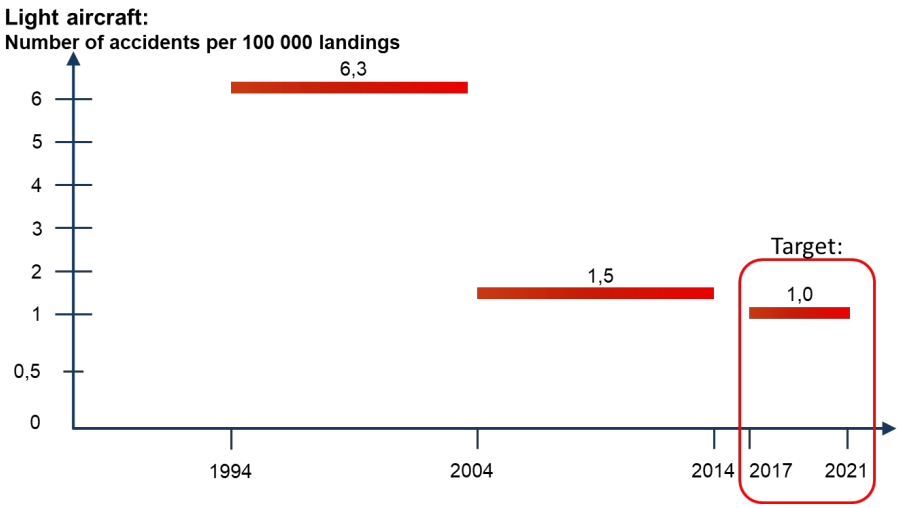

Figure 5: Historical accident frequency rates and target for the next five-year period, for commercial Norwegian aviation involving light aircraft.

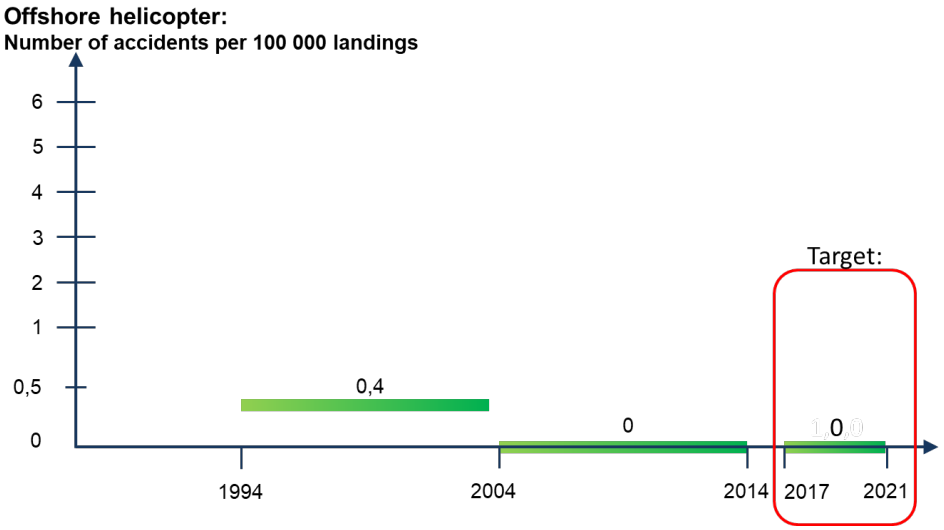

Figure 6: Historical accident frequency rates and target for the next five-year period, for commercial Norwegian aviation involving offshore helicopters.

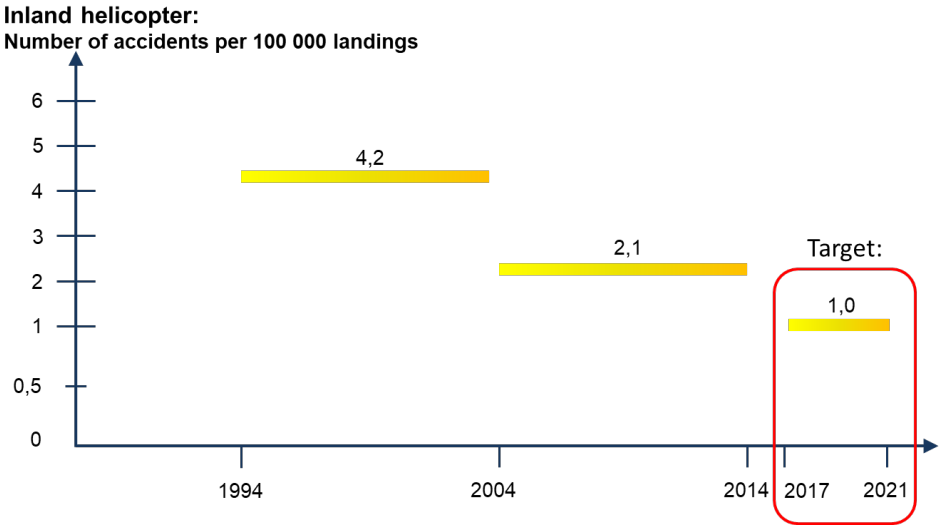

Figure 7: Historical accident frequency rates and target for the next five-year period, for commercial Norwegian aviation involving inland helicopters.