Regulatory impact assessment

Executive summary

The aim of rulemaking task RMT.0379 'All-weather operations' is to ensure that the European Union (EU) regulatory framework in the area of all-weather operations (AWOs) provides for safety, efficiency and consistency across all aviation domains, relying on a performance- and risk-based approach; it should enable, among other things, manufacturers, air operators, aerodrome operators and air navigation service providers (ANSPs) to benefit from the safety and economic advantages that new technologies and operational experience offer.

Considering a performance- and risk-based development concept, all the requirements for operations with operational credits should be technology-independent. The performance required for certain types of operations with operational credits could be achieved with the use of the appropriate technologies (airborne or ground-based).

As this RMT introduces the possibility to use the new principles together with appropriate technologies without mandating neither equipment nor procedural elements, a light RIA may have sufficiently addressed such concept, focusing on enabling and not mandating. Nevertheless, a comprehensive approach has been applied to ensure an as complete overview as possible of the intended regulatory updates.

This regulatory impact assessment (RIA) identifies and assesses, according to the established principles for the impact assessment development, three options. It assesses and compares the impact of these three options on the following areas: safety, economy, environment, social aspects, general aviation (GA) and proportionality, and better regulation and harmonisation with other States.

The following options have been identified:

— Option 0: Take no regulatory action;

— Option 1: Enable the use of technologies in the domain of AWO operations, such as flight path control automation, new vision and flight guidance systems, etc., for operations with operational credit and ensure consistency of the AWO rules across all domains, as well as with ICAO and other States;

— Option 2: Mandate the use of new vision and flight guidance systems in certain areas, and ensure consistency of the AWO rules across all domains, as well as with ICAO and other States.

The RIA concludes with the selection of Option 1, which provides for the optimal combination of safety and efficiency benefits and offers the required flexibility for future technological advancements.

Enabling operations with operational credits would enhance the overall network efficiency because weather-based diversions to CAT II/III aerodromes could be effectively reduced. Lower minima could also benefit ANSPs by offering them more flexibility in selecting the most efficient arrival patterns to maximise arrival rates in reduced visibility conditions. Furthermore, it is assumed that air operators could greatly benefit from the reduction of significant costs incurred by weather-related delays, diversions and cancellations.

The RIA also contains aerodrome-related statistics for the European airspace. Currently, 480 out of 580 aerodromes support CAT I operations as their lowest approach category. This implies that there is a huge potential for operations with operational credits in Europe. It is assumed that more than 60 % of these CAT I aerodromes could support operations with significantly lower operating minima without major infrastructure investments — although some minor investments in aerodrome infrastructure (e.g. centre line lights) might be needed, if adequate information cannot be provided by new airborne technology.

This document also includes case studies for air operators to further assess the benefits and costs of operations with operational credits. These case studies are not a necessary element to support the conclusions, but add additional value to the document. Furthermore, this data can be used for the future implementation phase when the rules will have been already adopted. The public consultation should also be used as a means to collect additional data from stakeholders in order to further detail these case studies.

Table of contents

1. Introduction

Context

The term 'all-weather operations' comprises any taxiing, take-off or approach operations in conditions where visual reference is limited due to meteorological conditions.

RMT.0379 (AWOs) was initiated with the publication of the related ToR and Concept Paper RMT.0379 Issue 1 on 'AWOs'[1] on 9 December 2015.

Objectives of the rulemaking task

The overall objectives of the EASA system are defined in Article 2 of the Basic Regulation. This proposal will contribute to the achievement of the overall objectives by addressing the issues outlined below.

Furthermore, the following specific objectives have been defined as follows:

— The EU regulatory framework in the area of AWOs should provide for safety, efficiency and consistency across all aviation domains, relying on a performance- and risk-based approach; it should also be based on common operational concepts and a common method for systemic hazard assessments;

— Manufacturers, air operators and aerodrome operators should be able to benefit from the safety and economic advantages that new technologies and operational experience offer. Considering this, established industry standards should be taken into account;

— The AWO Project should be used to promote harmonisation with the ICAO Standards and Recommended Practices (SARPs) and documents, and with rule developments in the Federal Aviation Administration (FAA) and other major regulators, as far as possible.

The activities which are within the scope of the AWO Project are to address airworthiness, air operations, aircrew, and aerodrome design and operations aspects under this RMT (RMT.0379), and air traffic management (ATM)/air navigation services (ANS) under the currently ongoing RMT.0464 in the ATM/ANS domain[2] with the main goal to achieve a harmonised approach in all affected aviation domains.

Aim of this document

The RIA should identify policy options, which could be further assessed in order to tell how they could meet the objectives described above. It should in particular assess and compare the impact of these options on the following areas: safety, economy, environment, social aspects, GA and proportionality, and better regulation and harmonisation with other States.

[1] https://easa.europa.eu/document-library/terms-of-reference-and-group-compositions/tor-concept-paper-rmt0379

[2] Please refer to NPA 2016-09(A) 'Requirements for air traffic services' (available at https://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2016-09a), and to NPA 2016-09(B) 'Requirements for air traffic services' (available at https://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2016-09b).

This RIA includes case studies to further assess the benefits and costs. These case studies are not a necessary element to support the conclusions, but add additional value to the document. Furthermore, this data can be used for the future implementation phase when the rules will have been adopted.

The public consultation should also be used as a means to collect additional data from stakeholders in order to further detail these case studies.

Related documents

This document should be read together with the 'Explanatory note' and 'Description of operations' (DoOs). The latter describes the overall system for AWOs and how actors from different domains contribute to the achievement of the target level of safety. This document is the reference document for the hazard assessment and rule development, and should ensure that the regulatory framework provides for safety, efficiency and consistency, and that it offers the necessary flexibility for new technological developments and new types of operations.

The document contains, among other things:

— a description of the overall system of AWOs in terms of systems theory;

— a classification of standard operations across all domains;

— a description of the concept of operations with operational credits;

— a description of the system components for the different types of operations;

— a set of common definitions; and

— concept papers for special approval Category I (SA CAT I) approach operations and examples of approach operations using new technologies, such as enhanced flight vision systems (EFVSs)/combined vision systems (CVSs).

2. Issue analysis

Current deficiencies

The following deficiencies have been identified in the existing rules in the relevant aviation domains:

— They are not keeping pace with technological advancements: Current rules do not sufficiently address technological advancements and do not fully support new operational concepts, e.g. approach operations using new-generation technologies, such as adequate autoland capabilities, EFVSs, synthetic vision systems (SVSs), CVSs, the full potential of head-up displays (HUDs), etc.

— Lack of harmonisation with ICAO: In some areas, EU rules are not anymore aligned with the ICAO SARPs, thus unintentionally becoming more limiting. For example, the recent ICAO Annex 6 amendments, which introduced lower CAT II and CAT III minima, and regulated the concept of operational credits in particular for operations with vision systems, have not yet been transposed into the EU air operations (AirOPS) rules. Furthermore, the new ICAO approach classification needs to be transposed into all domains.

— Weaknesses of the existing domain-centric rules: Existing rules (conventional low-visibility operations (LVOs) as well as other AWOs) have been drafted in a domain-centric manner. This has resulted in a situation where occasionally rules are not fully consistent with each other across the

different domains. In some cases, rules are missing in one or more domains, which makes it inefficient, if not impossible, to use the full potential of certified products and systems and enjoy the full safety benefits of such new products and systems.

— Need of hazard assessments: Cross-domain hazard assessments have not been conducted in a consistent manner to guarantee that all safety risks have been identified, properly managed and mitigated across all domains.

— Implementation of the results from cooperation with non-EU countries: The results of harmonisation efforts with the FAA, especially the outcome of the All Weather Operations Harmonization Aviation Rulemaking Committee (AWOHARC), have not yet been transposed into the EU regulatory framework.

Aerodrome-related statistics

General statistics for Europe

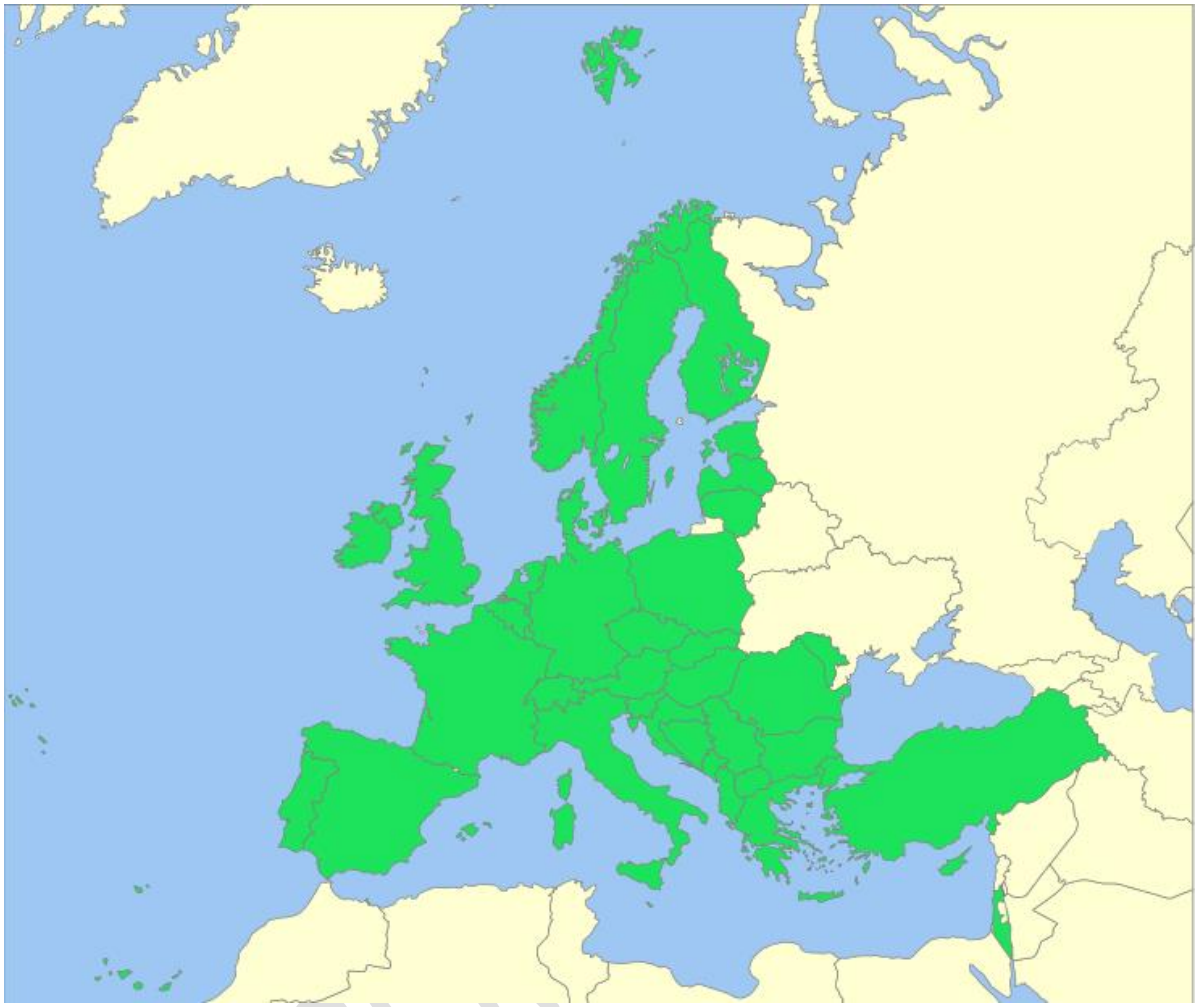
In order to understand well the number of aerodromes that could be affected by the above-mentioned issues, a table is provided which includes aerodromes per category. The following European aerodrome-related data has been provided by Lido and Jeppesen.

Category — navigation aid	Instrument approach procedures	Aerodromes (European region)	Aerodromes (European region) for CAT D aircraft
CAT I — ILS	847	580	560
CAT I — MLS	4	1	1
CAT I — GLS	22	8	8
CAT I — SBAS	4	1	1
CAT II — ILS	236	105	105
CAT III — ILS	166	61	61

The data covers aerodromes of the European airspace which are coded as Exxx and Lxxx aerodromes.

480 out of these 580 aerodromes support CAT I operations as their lowest approach category. This implies that there is a huge potential for operations with operational credits in Europe; nevertheless, some minor investments in aerodrome infrastructure (e.g. centre line lights) might be needed, if adequate information cannot be provided by new airborne technology. Annex II contains a detailed list with the relevant aerodrome data.

Figure 1: Aerodromes taken into consideration



Potential for SA CAT I operations for European CAT I aerodromes

The data also implies that the potential for SA CAT I operations can best be exploited if the procedure design is based on the use of a radio altimeter (RA) or equivalent system for the establishment of the decision altitude/height (DA/H).

Based on the currently applied height loss table of PANS-OPS Volume II, any CAT I instrument approach procedure (IAP) with an obstacle clearance altitude/height (OCA/H) of 200 ft based on the use of barometric altimeters would result in an OCA/H below 150 ft, if it is based on the use of a radio altimeter or equivalent system. Certainly, not all of these CAT I aerodromes would be eligible for the use of a radio altimeter. Nevertheless, even if a conservative assumption is made that only 75 % of these aerodromes could support the use of an RA, the potential number of 360 potentially eligible aerodromes for SA CAT I operations is very high. This would mean that more than 60 % of the current aerodromes would be enabled to support operations with lower minima without significant infrastructure investments, depending also on the capabilities of the on-board equipment to provide equivalent information to the crew, such as runway centre line (RWY CL) lights and simple touchdown zone (TDZ) lights. If the on-board equipment cannot provide equivalent information, adequate upgrading of the ground equipment would be needed.

Furthermore, probably almost all of the 105 aerodromes supporting CAT II approach operations (including the 61 aerodromes supporting also CAT III approach operations), could use SA CAT I as a backup solution in case CAT II/III facilities are downgraded.

Potential for operations using an operational credit based on EFVS/CVS at European aerodromes

The data implies that there is a huge potential for operations using an operational credit based on EFVS/CVS. Almost all of the 519 aerodromes supporting CAT I and CAT II operations could probably be eligible to support EFVS/CVS operations and could support lower aerodrome operating minima without significant infrastructure investments.

Assessment of occurrence data

The Agency performed a comparative analysis between accidents and serious incidents[3] related to loss of visual reference (LoVR) and those resulting from all other factors. The analysis included accidents and serious incidents stored in the IORS[4] database. The scope of the analysis was limited to the last 5 years (from 2011 to 2015) in the EU Member States (MSs). It included worldwide data and focused on commercial air transport (CAT) and non-commercial (NCC) operations with aeroplanes with an MTOM above 5 700 kg. The analysis showed that those occurrences attributed to LoVR represent 3 % of the total. However, the percentage of the fatal accidents related to LoVR was 78 %. This means that an accident related to LoVR does not occur often, although when it happens it is likely to be fatal. The results of the analysis are summarised in the table below.

	CAT aeroplanes (MTOM > 5 700 kg)	Thereof LoVR-related	% LoVR-related (% of total fatal)
Accidents (% fatal)	831 (22 %)	32 (78 %)	4 % (14 %)
Serious incidents	856	15	2 %
Total	1 687	47	3 %

With the purpose to enlarge the representativeness of the safety risk assessment for EU MSs, the analysis was extended to those accidents and serious incidents leading to runway excursion, runway incursion, controlled flight into terrain (CFIT) and undershoot[5], where visibility could have been a contributing factor.

[3] Accident and serious incident as defined in Commission Regulation (EU) No 996/2010 on accident investigation.

[4] The Internal Occurrence Reporting System (IORS) database is the EASA occurrence repository as per Commission Regulation (EU) No 966/2010, Commission Regulation (EU) No 376/2014 and Regulation (EC) No 216/2008.

[5] Runway excursion, runway incursion, controlled flight into terrain and undershoot, as defined by CICTT taxonomy on occurrence category.

The additional analysis resulted in a subset of data of 44 occurrences, related to weather, satisfying all the above criteria and limited to EASA MS air operator certificate (AOC) holders[6].

In order to put in context the operational impact caused by weather, the analysis additionally took into account those occurrences with operational consequences, such as diversions[7] and go-arounds[8]. According to ECR[9], from 2011 to 2015, 1 808 weather-related diversions were reported in the EASA MSs. The aforementioned number accounts almost for 30 % of all diversions reported by the EASA MSs, resulting in the main cause for diversions.

As for go-arounds[10], although they appear to have a downward trend over the last 5 years, they account for 20 % of the total number of occurrences recorded in the EVAIR database. The contributing factor with the highest percentage is weather (20 %)[11].

EU survey on AWOs

The Agency conducted a stakeholder survey on AWOs from 19 November 2015 to 10 January 2016. Most of the conclusions of the survey confirm the results of the issue analysis, namely:

— The benefits of a cross-domain approach to AWOs seem to be strongly shared by stakeholders.

— The loss of situational awareness and spatial disorientation are seen as important hazards, which may trigger events such as CFIT, runway incursions, runway excursions, and mid-air or ground collisions. New vision systems (such as EFVS, SVS and CVS) and/or moving maps could effectively help avoid such events and potentially have significant safety benefits. In addition, these new vision systems may potentially bring sizeable economic benefits for both air operators and ADR operators.

— Different AWO-related rules in different regions create a hazard.

— It is acknowledged that in all domains amendments to rules are necessary.

6

	Number of occurrences in EASA MSs
LoVR	16
Runway excursion	14
Runway incursion	5
CFIT and undershoot	9

The 16 occurrences classified as 'LoVR' are also accounted for in the worldwide analysis and, therefore, are included in the total of 47 occurrences. In an effort to make a more comprehensive analysis for Europe, the data-set was expanded to other contributing factors as shown above.

7 Diversion is the decision to land the aircraft at a different aerodrome to the one initially planned. This decision may be made before or after initiating the approach to the planned destination.

8 Go-around means a transition from an approach to a stabilised climb. This includes manoeuvres conducted at or above DA/H and those conducted below DA/H ('baulked landings').

9 ECR stands for 'European Central Repository', which was established by Regulation (EU) No 376/2014.

10 Go-around is one of the safety issues identified as high priority in the EASA Safety Risk Portfolio for commercial air transport performed with fixed-wing aircraft. The inadequate handling of the go-around manoeuvre is one of the main safety issues associated to the loss of control in flight (LOCI).

11 EVAIR Safety Bulletin No 15 — 2010-2014. Available at http://www.eurocontrol.int/sites/default/files/publication/files/evair-bulletin-15.pdf.

— It is acknowledged that an incomplete and inconsistent regulatory framework, as well as rules which are difficult to be interpreted, create a hazard.

Baseline scenario

The baseline scenario is described and analysed within Option 0 'No regulatory action'.

3. Options

The following three options have been selected.

No	Short title	Description
0	No regulatory action	Baseline option: No rule change. No safety rules available for the use of new vision and guidance systems. New vision and guidance systems cannot be used for obtaining operational credits. AWO rules remain inconsistent and partly incomplete across domains. Rules remain not harmonised with ICAO standards and with rules of those States having a more developed regulatory framework.
1	Enable the use of new vision and flight guidance systems, and ensure consistency of the AWO rules across all domains, as well as with ICAO and other States	Develop a consistent regulatory framework across all domains for the use of new vision and flight guidance systems on a voluntary basis. Develop a regulatory framework for operational credits. Ensure consistency of the AWO rules across all domains through a common reference document which describes certain types of operations in a cross-domain manner. Ensure consistency with ICAO standards and with the rules of other States as far as possible.
2	Mandate the use of new vision and flight guidance systems in certain areas, and ensure consistency of the AWO rules across all domains, as well as with ICAO and other States	Develop a consistent regulatory framework across all domains for the mandatory use of new vision and flight guidance systems. Develop a regulatory framework for operational credits. Ensure consistency of the AWO rules across all domains through a common reference document which describes certain types of operations in a cross-domain manner. Ensure consistency with ICAO standards and with the rules of other States as far as possible.

4. Analysis of impacts

In the following sections the impact of the three policy options is assessed on the following areas: safety, economy, environment, social aspects, GA and proportionality, and better regulation and harmonisation with other States.

Safety impact

Option 0 'No regulatory action'

- *Overall system*

Benefits/opportunities offered	Safety concerns/loss of potential safety benefits
No further benefits are expected.	European air operators may not be allowed to take advantage of the safety benefits of new vision and flight guidance systems if the EU regulatory framework does not support certification of these products and their application. The current rules do not provide stakeholders with sufficient incentives to invest in systems which could further improve safety and could lead to a reduction of accidents and incidents. Furthermore, pilots would use operational rules which are not fully in compliance with ICAO standards with the potential of a negative safety impact when flying to regions where compliance with ICAO standards is fully applied and required.

Option 1 'Enable the use of new vision and flight guidance systems, and ensure consistency of the AWO rules across all domains, as well as with ICAO and other States'

- *Overall system*

Benefits/opportunities offered	Safety concerns/loss of potential safety benefits
This option would provide manufacturers, air operators, ATOs, aerodrome operators and ANSPs with incentives to further invest in equipment to enable air operations with enhanced vision and flight guidance systems using EFVS, SVS, CVS, HUDs or equivalent systems, autoland systems or hybrid systems of the systems already mentioned. These investments are considered to enhance safety. These systems will provide improved situational awareness to the flight crew and will be also (or primarily) used during normal operations,	This option would not raise safety concerns.

Benefits/opportunities offered	Safety concerns/loss of potential safety benefits
where operational credits are not needed. This is expected to reduce the number of accidents and incidents caused by the loss of situational awareness. Furthermore, operational rules would be aligned with the ICAO standards and would provide for a safe reference for global operations.	

Option 2 'Mandate the use of new vision and flight guidance systems in certain areas, and ensure consistency of the AWO rules across all domains, as well as with ICAO and other States'

- *Overall system*

Benefits/opportunities offered	Safety concerns/loss of potential safety benefits
This option would require manufacturers, air operators, ATOs, aerodrome operators and ANSPs to further invest in equipment to enable air operations with enhanced vision and flight guidance systems using EFVS, SVS, CVS, HUDs or equivalent systems, autoland systems or hybrid systems of the systems mentioned already. These investments are considered to enhance safety. These systems will provide improved situational awareness to the flight crew and will be also used during normal operations, and during operations where operational credits are applied. This is expected to reduce the number of accidents and incidents caused by the loss of situational awareness. Furthermore, operational rules would be aligned with the ICAO standards and would provide a safe reference for global operations.	This option would not raise safety concerns.

Economic impact

Option 0 'No regulatory action'

- *Manufacturers*

Benefits/opportunities offered	Costs/opportunities lost
This option does not provide benefits to airframe or avionics manufacturers.	Differences in the certification standards between EASA and other States would create additional transaction costs and uncertainties about the applicable certification basis. Furthermore, airframe as well as avionics manufacturers may not benefit from potential return on investments if the EU regulatory framework will not enable the efficient use of new technologies.

- *Air operators*

Benefits/opportunities offered	Costs/opportunities lost
This option does not provide any benefit to air operators.	EU air operators may face competitive disadvantages compared to air operators from other regions, which have a regulatory framework in place that allows the use of enhanced vision and flight guidance systems in a more efficient manner. Furthermore, even if new enhanced vision and flight guidance systems are certified, there is little or even no incentive for air operators to invest in such systems if the potential efficiency gains of such systems are not enabled.

- *Pilots, ATOs*

Benefits/opportunities offered	Costs/opportunities lost
This option does not provide benefits neither to pilots nor to ATOs.	Pilots may not be trained to use new technologies and may be less qualified compared to pilots from other States. Such pilots would suffer a competitive and consequently economic disadvantage. ATOs may not benefit from potential additional revenues by not expanding training to new technologies.

- *ANSPs, aerodrome operators*

Benefits/opportunities offered	Costs/opportunities lost
This option does not provide benefits neither to ANSPs nor to aerodrome operators.	Aerodrome operators may not benefit from potential return on investments if the EU regulatory framework will not enable the efficient use of new technologies and offer the possibility to improve access to their aerodromes during low-visibility conditions. Furthermore, aerodromes which are approved to support CAT II/III operations will not be allowed to support SA CAT I operations as a fallback solution whenever CAT II/III facilities are temporarily downgraded.

Option 1 'Enable the use of new vision and flight guidance systems, and ensure consistency of the AWO rules across all domains, as well as with ICAO and other States'

- *Manufacturers*

Benefits/opportunities offered	Costs/opportunities lost
This option provides manufacturers with the opportunity to better market newly developed vision and flight guidance systems. Furthermore, this option may provide manufacturers with the positive incentive to continue or even increase research and development investments in new technologies with the aim to increase safety and efficiency. In addition, updated and harmonised certification specifications will reduce costs for the certification of new products as well as for the development of new ones.	This option does not directly create costs because manufacturers will not be obliged to develop new vision and flight guidance systems or apply new certification standards for ongoing or completed certification projects. Moreover, several manufacturers have already developed new vision and flight guidance systems[12].

[12] A manufacturer provided figures on the extent to which EFVS/SVS/CVS/HUDs and autoland technologies are installed in its aircraft. As a result, HUDs are implemented in some aircraft types (and planning to install it in new types over the next years) while autoland is installed in all its aircraft delivered from 2015 onwards. As regards the cost, interesting figures have been provided; further reference is made in the case studies.

- *Air operators*

Benefits/opportunities offered	Costs/opportunities lost
Enabling operations with operational credits (such as SA CAT I, or operations using EFVS/CVS) would provide a greater availability of suitable destination and alternate aerodromes during periods of reduced visibility. This would effectively reduce the number of weather-related delays, cancellations or diversions of flights to CAT II/III aerodromes, would permit shorter routings and reduced fuel costs, a faster return to scheduled operations, and less passenger inconveniences. In the case study on weather-related diversion costs, a magnitude of costs is provided. In the scenario analysed, a total cost of EUR 5 615 309 for the period from January 2015 till May 2016 for air operators has been estimated. This shows the potential benefits for air operators that could avoid diversions by using new vision and flight guidance systems.	Since the investment in new vision systems is not mandated, this option would not directly create costs. However, if an operator wishes to perform operations with operational credits based on enhanced vision and flight guidance systems, additional costs would apply. These costs may vary for operators already approved or not for CAT II/III operations. For an air operator conducting CAT II operations, the incremental costs for commencing SA CAT I operations will be minimal provided that the same technology (e.g. autoland or HUD) is used for both types of operation. The only cost incurred in this scenario will be the management time taken to establish operating procedures, select suitable aerodromes, amend manuals, design training, and prepare an application for approval to the competent authority. For operators which are not approved for CAT II/III operations, additional costs would incur comparable to those for a specific approval for CAT II operations. The operator would have, among other things, to obtain a specific approval; cover potential additional investment and maintenance costs for vision and flight guidance systems; cover additional initial and recurrent training for pilots and other relevant personnel; and cover costs for potentially drafting new operating procedures and amending the minimum equipment list (MEL). As regards the additional costs for operations with operational credits based on EFVS, an estimate is provided in the case study on ‘Air operators’. The costs shown are quite low: initial costs EUR 21 624, and annual recurring costs EUR 1 002. In addition, for operations involving IAPs not based on standard PANS-OPS CAT I criteria or aerodromes not meeting Annex 14 standards for supporting CAT I operations, operational

Benefits/opportunities offered	Costs/opportunities lost
	assessment would be necessary. Costs incurred by rule changes for improving the overall consistency across domains and with ICAO standards are negligible. These changes may require minor amendments to the operations manual.

- *Pilots, ATOs*

Benefits/opportunities offered	Costs/opportunities lost
Pilots would be trained and qualified to use new technologies. Such pilots may benefit from a competitive and consequently economic advantage compared to pilots not trained in new vision and flight guidance systems. ATOs, in case they deliver training on behalf of the operator (in accordance with ORO.GEN.205), may benefit from potential additional revenues by expanding training to new technologies.	ATOs, in case they deliver training on behalf of the operator (in accordance with ORO.GEN.205), would have to prepare training material and equipment suitable for the training of operations with operational credits. It is assumed that the training costs for pilots for the use of new technologies will be borne by the air operator.

- *ANSPs, aerodrome operators*

Benefits/opportunities offered	Costs/opportunities lost
Airborne modern vision and flight guidance systems permit lower aerodrome operating minima on CAT I runways. Aerodromes which currently support only CAT I approach operations to a DA/H of 200 ft and an RVR of 550 m could support approach operations down to a DA/H of 150 ft and an RVR of 400 m (SA CAT I) and/or operations with a DA/H of 200 ft and an RVR of 300 m (EFVS & CVS) without the infrastructure investments and associated maintenance costs necessary for CAT II facilities. Therefore, these aerodrome operators could improve access to their aerodromes without significant additional investments and maintenance costs. Aerodromes which support CAT II/III approach operations could operate to SA CAT I minima instead of only CAT I minima in case CAT II/III	Since aerodrome operators and ANSPs are not obliged to support operations with operational credits based on enhanced vision and flight guidance systems, this option does not directly create costs. Costs incurred by rule changes for improving the overall consistency across domains and with ICAO standards are minor. These changes may require minor amendments to manuals. However, additional costs would apply if an aerodrome operator and an ANSP wish to support operations with operational credits based on enhanced vision and flight guidance systems, depending on whether the aerodrome has been already approved to support CAT II/III operations or not. For aerodromes which are already approved for CAT II/III operations, no significant additional costs

Benefits/opportunities offered	Costs/opportunities lost
facilities are downgraded. Furthermore, enabling SA CAT I or operations using EFVS/CVS on aerodromes only supporting CAT I operations, would enhance the overall network efficiency because weather-related diversions to CAT II/III aerodromes could be effectively reduced. Lower minima could also benefit ANSPs by offering them more flexibility in selecting the most efficient arrival patterns to maximise arrival rates in reduced visibility conditions.	would apply. For SA CAT I operations, it would be necessary to verify that the CAT II procedure can be applied and then to publish an SA CAT I procedure in the AIP. For operations using EFVS, the aerodrome should provide additional information in the AIP concerning the status of LED lights. For aerodromes which are not approved for CAT II/III operations, additional costs would apply — however, significantly less than for supporting CAT II operations. There should be no significant investment costs required for the facilities. The aerodrome operator together with the ANSP may have to ask for an amendment of their certificate to allow for operations in low-visibility conditions. This may involve the development of new or amendment of existing LVPs to support operations with operational credits. There may also be the need for additional training for the aerodrome operator and ANSP staff and for amendments to their manuals. Furthermore, the support of operations with operational credits should be mentioned in the AIP. SA CAT I operations will depend on the capabilities of the on-board equipment to provide equivalent information to the crew, such as runway centre line (RWY CL) lights and simple touchdown zone (TDZ) lights. If the on-board equipment cannot provide equivalent information, adequate upgrading of the ground equipment would be needed.

Option 2 'Mandate the use of new vision and flight guidance systems in certain areas, and ensure consistency of the AWO rules across all domains, as well as with ICAO and other States'

- *Manufacturers*

Benefits/opportunities offered	Costs/opportunities lost
This option provides manufacturers with the opportunity to better market newly developed vision and flight guidance systems. Furthermore, this option may provide manufacturers with a positive incentive to	This option does not directly create costs because manufacturers will not be obliged to develop new vision and flight guidance systems or to apply new certification standards for ongoing or completed certification projects.

Benefits/opportunities offered	Costs/opportunities lost
continue or even increase research and development investments in new technologies with the aim to increase safety and efficiency. In addition, updated and harmonised certification specifications will reduce the costs for the certification of new products as well as for the development of new ones.	Moreover, several manufacturers have already developed new vision and flight guidance systems. Therefore, the overall costs for manufacturers would be minor.

- *Air operators*

Benefits/opportunities offered	Costs/opportunities lost
Mandating the equipment eligible for operations with operational credits (such as SA CAT I operations; use of EFVS/CVS) would provide for a greater availability of suitable destination and alternate aerodromes during periods of reduced visibility. This would in turn reduce the number of weather-related cancellations of flights or diversions to CAT II/III aerodromes, would contribute to shorter routings and reduced fuel costs, to faster return to scheduled operations and less passenger inconveniences. In the case study on costs of weather-related diversions, a total cost of EUR 5 615 309 for air operators for the period from January 2015 till May 2016 has been estimated. The introduction of operations with operational credits may help reduce the number of such diversions.	Additional costs would apply for all operators which have not yet invested in new vision and flight guidance systems. These costs may vary for operators already approved or not for CAT II/III operations, and are already described under Option 1. However, mandating the use of such systems may require operators to make investments also for cases where it may not make economic sense, and may have a strong negative impact on such operators.

- *Pilots, ATOs*

Benefits/opportunities offered	Costs/opportunities lost
Pilots would be trained and qualified to use new technologies. Such pilots may benefit from a competitive and consequently economic advantage compared to pilots of other regions where training in new vision and flight guidance systems is not mandatory. ATOs, in case they deliver training on behalf of the operator (in accordance with ORO.GEN.205), may benefit from potential additional revenues by	ATOs, in case they deliver training on behalf of the operator (in accordance with ORO.GEN.205), would have to prepare training material and equipment suitable for the training of operations with operational credits. It is assumed that the training costs for pilots for the use of new technologies will be borne by the air operator.

Benefits/opportunities offered	Costs/opportunities lost
expanding training to new technologies.	

- *ANSPs, aerodrome operators*

Benefits/opportunities offered	Costs/opportunities lost
Airborne modern vision and flight guidance systems permit lower aerodrome operating minima on CAT I runways. Mandating eligible aerodromes, which currently only support CAT I approach operations to a DA/H of 200 ft and an RVR of 550 m, to support approach operations down to a DA/H of 150 ft and an RVR of 400 m (SA CAT I) and/or operations with a DA/H of 200 ft and an RVR of 300 m (EFVS/CVS) would enhance access to their aerodromes without significant additional investment and maintenance costs. Furthermore, mandating eligible aerodromes, which support CAT II/III approach operations, to offer SA CAT I minima would allow lower aerodrome operating minima in case CAT II/III facilities are downgraded. Furthermore, mandating SA CAT I or operations using EFVS/CVS for eligible aerodromes, which currently only support CAT I operations, would enhance the overall network efficiency because weather-related diversions to CAT II/III aerodromes could be effectively reduced. Lower minima could also benefit ANSPs by offering them more flexibility in selecting the most efficient arrival patterns to maximise arrival rates in reduced visibility conditions.	The additional costs for mandating eligible aerodromes to offer services for SA CAT I and EFVS/CVS operations have been already described in Policy Option 1. However, mandating the use of such systems may require aerodrome operators and ANSPs to make investments also for cases where it may not make economic sense, and may have a strong negative impact on such organisations.

Environmental impact

Option 0 'No regulatory action'

- *Overall system*

Benefits/opportunities offered	Costs/opportunities lost
This option does not provide specific benefits nor opportunities.	The environmental impact due to longer routes, delays, diversions, additional fuel burn and consequential additional noise and gas emissions would continue. With the increasing air traffic, these negative impacts might increase as well.

Option 1 'Enable the use of new vision and flight guidance systems, and ensure consistency of the AWO rules across all domains, as well as with ICAO and other States'

- *Overall system*

Benefits/opportunities offered	Costs/opportunities lost
This option creates significant environmental benefits by enabling operations in shorter routes, and by reducing the number of delays and diversions, the consequential additional fuel burn, as well as noise and gas emissions.	This option does not create additional environmental impacts compared to Option 0.

Option 2 'Mandate the use of new vision and flight guidance systems in certain areas, and ensure consistency of the AWO rules across all domains, as well as with ICAO and other States'

- *Overall system*

Benefits/opportunities offered	Costs/opportunities lost
This option creates significant environmental benefits by requiring systems that could make routes shorter, reduce the number of delays and diversions, the consequential additional fuel burn, and noise and gas emissions.	This option does not create additional environmental impacts compared to Option 0 and 1.

Social impact

Option 0 'No regulatory action'

- *Overall system*

Benefits/opportunities offered	Costs/opportunities lost
This option does not offer additional benefits compared to the other policy options.	This option prevents pilots, aerodrome staff, ANSPs and training organisations from being trained in the use of new technologies and thus improving their qualifications and knowledge.

Option 1 'Enable the use of new vision and flight guidance systems, and ensure consistency of the AWO rules across all domains, as well as with ICAO and other States'

- *Overall system*

Benefits/opportunities offered	Costs/opportunities lost
Pilots would be trained to use new technologies and could improve their qualifications and knowledge. High-level jobs could be created through research and development activities for new technologies undertaken by manufacturers. Furthermore, also aerodrome staff, ANSPs and training organisations could improve their qualifications and knowledge through training in the use of new technologies. Should the new systems lead to an increase in efficiency for air operators and, as a consequence, an increase in business and flights, additional jobs could be created by the need of having additional pilots and flight crews. Accessibility to small aerodromes during marginal meteorological conditions could be improved and, therefore, this could provide a positive stimulus for the development of the respective regions. Furthermore, accessibility to heliports could be improved without major infrastructure investments (e.g. hospital heliports where a very limited number is equipped to accommodate IFR operations).	This option does not involve costs in terms of lost opportunities.

Option 2 'Mandate the use of new vision and flight guidance systems in certain areas, and ensure consistency of the AWO rules across all domains, as well as with ICAO and other States'

- *Overall system*

Benefits/opportunities offered	Costs/opportunities lost
Pilots would be trained to use new technologies and could improve their qualifications and knowledge. High-level jobs could be created through research and development activities for new technologies undertaken by manufacturers. Furthermore, also aerodrome staff, ANSPs and training organisations could improve their qualifications and knowledge through training in the use of new technologies. Should the new systems lead to an increase in efficiency for air operators and, as a consequence, an increase in business and flights, additional jobs could be created by the need of having additional pilots and flight crews. Accessibility to small aerodromes during marginal meteorological conditions could be improved and, therefore, this could provide a positive stimulus for the development of the respective regions. Furthermore, accessibility to heliports could be improved without major infrastructure investments (e.g. hospital heliports where a very limited number is equipped to accommodate IFR operations).	This option does not involve costs in terms of lost opportunities.

Impact on GA and proportionality issues

Option 0 'No regulatory action'

- *Overall system*

Benefits/opportunities offered	Costs/opportunities lost
This option does not provide specific benefits for GA.	This options involves costs for GA in terms of lost opportunities through the potential safety and economic benefits of enabling the use of new vision and flight guidance systems.

Option 1 'Enable the use of new vision and flight guidance systems, and ensure consistency of the AWO rules across all domains, as well as with ICAO and other States'

- *Overall system*

Benefits/opportunities offered	Costs/opportunities lost
For GA, and in particular for NCC operations, the use of new vision and flight guidance systems could provide safety and economic benefits as described above in the sections addressing safety and economic impacts.	The costs for investing in the use of new vision and flight guidance systems may not be economically feasible, in particular for NCO operations.

Option 2 'Mandate the use of new vision and flight guidance systems in certain areas, and ensure consistency of the AWO rules across all domains, as well as with ICAO and other States'

- *Overall system*

Benefits/opportunities offered	Costs/opportunities lost
For GA, and in particular for NCC operations, the use of new vision and flight guidance systems could provide safety and economic benefits as described above in the sections addressing safety and economic impacts.	The costs for investing in the use of new vision and flight guidance systems may not be economically feasible, in particular for NCO operations. For GA, the mandatory use of new vision and flight guidance systems would not comply with the principle of proportionality.

Impact on better regulation and harmonisation

Option 0 'No regulatory action'

- *Overall system*

Benefits/opportunities offered	Costs/opportunities lost
There are no specific benefits nor opportunities.	As described above, the current rules are not fully compliant with the ICAO provisions or harmonised with the provisions of other regulators; furthermore, they are partly inconsistent and incomplete across domains. In addition, existing rules are not drafted in a sufficient performance-based manner and should be clarified to avoid misinterpretations. This creates transaction costs.

Option 1 'Enable the use of new vision and flight guidance systems, and ensure consistency of the AWO rules across all domains, as well as with ICAO and other States'

- *Overall system*

Benefits/opportunities offered	Costs/opportunities lost
This option would allow to a much greater extent the application of globally harmonised rules. Furthermore, this option allows to draft rules in a more performance-based manner and to improve the provisions which could be misinterpreted.	This options creates development costs due to the revision of the rules.

Option 2 'Mandate the use of new vision and flight guidance systems in certain areas, and ensure consistency of the AWO rules across all domains, as well as with ICAO and other States'

- *Overall system*

Benefits/opportunities offered	Costs/opportunities lost
This option would allow to a greater extent the application of globally harmonised rules. Furthermore, this option allows to draft rules in a more performance-based manner and to improve the provisions which could be misinterpreted.	This options creates development costs due to the revision of rules.

Open question to stakeholders

Stakeholders are kindly invited to provide data on cost/benefit impacts created by this proposal, as well as any other quantitative information they may find necessary to bring to the attention of the Agency.

As a result, the relevant parts of the RIA might be adjusted on a case-by-case basis.

5. Conclusion

The following table provides an overview of the impact assessment.

Impact on…	**Policy Option 0** **'No regulatory action'**	**Policy Option 1** **'Enable the use of new vision and flight guidance systems, and ensure consistency of the AWO rules across all domains, as well as with ICAO and other States'**	**Policy Option 2** **'Mandate the use of new vision and flight guidance systems in certain areas, and ensure consistency of the AWO rules across all domains, as well as with ICAO and other States'**
Safety	–	+	+
Economy	–	+	–
Environment	–	+	+
Social aspects	–	+	+
GA and proportionality	–	+	–
Better regulation and harmonisation	–	+	+
Total	–	+	0/+

The analysis of impacts above clearly demonstrates that Policy Option 1 is the preferred one.

6. Annexes

Annex I: Case study 'Air operator — cost comparison between SA CAT I and CAT II operations'

Implementation of CAT II operations

The costs of implementing CAT II operations within a CAT operation have been estimated. The case study uses the example of a medium-sized European airline operating a fleet of 10 narrow-body jet aircraft in the 120–170 seat range[13]. The airline is assumed to operate short-haul routes and to have 5 flight crews per aircraft (100 pilots in total). It has been assumed that the aircraft are already equipped and certified for CAT II or III autoland operations. The costs have been categorised into initial costs of implementing CAT II operations and into annual recurring costs of maintaining such operations.

- *Initial costs*

The initial costs of commencing CAT II operations include management time and initial LVO training for flight crew. Management will need to prepare operating procedures, amend manuals, design training and prepare an application for approval by the competent authority. This is estimated to require 25 hours of work for a senior pilot-manager. It has been assumed that the flight simulation training device (FSTD) training programme will be validated requiring the technical manager and a simulator instructor to spend 2 hours in a full flight simulator. Each pilot will need to complete initial ground and FSTD training. It has been assumed that initial ground training will be delivered by means of computer-based training (CBT) and that 2 hours of FSTD training will be required for each pilot (4 hours per flight crew).

The initial costs of commencing CAT II operations are estimated as follows:

Management time:	27	hours	EUR 230	per hour	EUR 6 210
Ground school CBT	100	hours	EUR 39	per candidate	EUR 3 900
Simulator instructor	202	hours	EUR 276	per hour	EUR 55 752
FSTD usage ('dry lease')	202	hours	EUR 280	per hour	EUR 56 560
Captain's time	200	hours	EUR 255	per hour	EUR 51 000
First officer's time	200	hours	EUR 128	per hour	EUR 25 600
				TOTAL	**EUR 199 022**

[13] This case study considers a specific scenario; however, one should consider that for some airlines the recurrent training programme still accepts new items in the simulator programme and, therefore, the airline is able to roster the LVO training at the same time it rosters the recurrent training (ORO.FC.230 and AMC1 ORO.FC.230). This could result in much lower costs (e.g. instructor, FSTD, pilot and first officer) compared to the case shown in the case study.

- *Annual recurring costs*

The annual recurring costs of conducting CAT II operations include recurrent training for flight crew and continuous monitoring of operations by means of a reporting system. It has been assumed that recurrent FSTD training will be conducted during scheduled recurrent training/checking and will increase the time required for such training by 20 minutes on each FSTD detail (twice per year). It has been assumed that the operator will conduct 10 CAT II approaches per aircraft per month (this figure includes practice approaches), and that a technical manager will spend 5 minutes reviewing each report.

The annual recurrent costs of maintaining a CAT II operation are estimated as follows:

Management time:	100	hours @	EUR 230	per hour	EUR 23 000
Simulator instructor	33	hours @	EUR 276	per hour	EUR 9 108
FSTD usage (‘dry lease’)	33	hours @	EUR 280	per hour	EUR 9 240
Captain’s time	33	hours @	EUR 255	per hour	EUR 8 415
First officer’s time	33	hours @	EUR 128	per hour	EUR 4 224
				TOTAL	**EUR 53 987**

Implementation of SA CAT I operations

The costs of implementing SA CAT I operations within a CAT operation have been estimated. The case study uses the same example of a medium-sized European airline operating a fleet of 10 narrow-body jet aircraft in the 120–170 seat range. The airline is assumed to operate short-haul routes and to have 5 flight crew per aircraft (100 pilots in total). It has been assumed that the aircraft are already equipped and certified for CAT II or III autoland operations, but that the operator is not approved for CAT II or III operations. SA CAT I will be operated using autoland. The costs have been categorised into initial costs of implementing SA CAT I operations and into annual recurring costs of maintaining such operations.

- *Initial costs*

As for CAT II, the initial costs of commencing SA CAT I operations include management time and initial LVO training for flight crew. Management will need to prepare operating procedures, amend manuals, design training and prepare an application for approval by the competent authority. The operator will only select aerodromes which are suitable for SA CAT I operations and this is assumed to require additional desktop analysis taking 30 minutes per aerodrome. It has been assumed that the operator will analyse 20 aerodromes. The initial work for the pilot-manager is, therefore, estimated to require 35 hours. It has been assumed that the FSTD training programme will be validated requiring the technical manager and a simulator instructor to spend 2 hours in a full flight simulator. Each pilot will need to complete initial ground and FSTD training. It has been assumed that initial ground training will be delivered by means of CBT and that 2 hours of FSTD training will be required for each pilot (4 hours per flight crew).

The initial costs of commencing SA CAT I operations are estimated as follows:

Management time:	37	hours	EUR 230	per hour	EUR 8 510
Ground school CBT	100	hours	EUR 39	per candidate	EUR 3 900
Simulator instructor	201	hours	EUR 276	per hour	EUR 55 476
FSTD usage ('dry lease')	202	hours	EUR 280	per hour	EUR 56 560
Captain's time	200	hours	EUR 255	per hour	EUR 51 000
First officer's time	200	hours	EUR 128	per hour	EUR 25 600
			TOTAL		**EUR 201 046**

- *Annual recurring costs*

The annual recurring costs of conducting SA CAT I operations relate to recurrent training for flight crew. It has been assumed that recurrent FSTD training will be conducted during scheduled recurrent training/checking and will increase the time required for such training by 20 minutes on each FSTD detail (twice per year).

The annual recurrent costs of maintaining an SA CAT I operation are estimated as follows:

Simulator instructor	33	hours @	EUR 276	per hour	EUR 9 108
FSTD usage ('dry lease')	33	hours @	EUR 280	per hour	EUR 9 240
Captain's time	33	hours @	EUR 255	per hour	EUR 8 415
First officer's time	33	hours @	EUR 128	per hour	EUR 4 224
			TOTAL		**EUR 30 987**

Incremental cost of SA CAT I operations for an operator already conducting CAT II operations

The incremental costs for an operator already approved for CAT II operations and commencing SA CAT I operations will be minimal provided that the same technology (e.g. autoland or HUD) is used for both types of operation (as follows an overview of the technologies cost estimates). The only cost incurred in this scenario will be the management time taken to establish operating procedures, select suitable aerodromes, amend manuals, design training and prepare an application for approval by the competent authority.

Special focus on airborne systems that could allow the implementation of operational credits: overview of costs

The valuable input provided by one manufacturer has been carefully considered in creating an overview of the costs (average per aircraft) for the development, installation (on existing and new aircraft), maintenance, and training for the following technologies: EFVS, SVS, CVS, HUDs, autoland.

Autoland:

Autoland - Costs (average per aircraft)			
Autoland Development costs	**Installation costs on a newly manufactured aircraft**	**Installation cost on already manufactured aircraft**	**Training costs for pilots**
50M€	No extra cost for its installation on a newly or already manufactured aircraft, the autoland capability is issued with the CAT 2 / CAT 3 capabilities	No extra cost for its installation on a newly or already manufactured aircraft, the autoland capability is issued with the CAT 2 / CAT 3 capabilities	Part of global training

HUDs:

HUDs - Costs (average per aircraft)					
HUDs Development costs	Installation costs on a newly manufactured aircraft	Installation cost on already manufactured aircraft	Maintenance cost (e.g. XXX € per year/month)	Training costs for pilots	Training costs for maitenance
30M€	500k$ (Dual)	500k$ (Dual)	5k$/year/ac (Dual)	50k$	15k$

HUD systems are used by pilots, depending on route and weather, between 5 and 15 %[14].

CVS:

CVS - Costs (average per aircraft)				
CVS Development costs	**Installation costs on a newly manufactured aircraft**	**Installation cost on already manufactured aircraft**	**Maintenance cost (e.g. XXX € per year/month)**	**Training costs for pilots**
5M€	300k$	300k$ to 500k$ depending on provisions	20k$/year/ac	5k$

SVS:

SVS - Costs (average per aircraft)				
SVS Development costs	**Installation costs on a newly manufactured aircraft**	**Installation cost on already manufactured aircraft**	**Maintenance cost (e.g. XXX € per year/month)**	**Training costs for pilots**
15M€	150k$	150k$	10k$/year/ac (Data base updates)	8k$

[14] Based on operator feedback.

EFVS:

EVS - Costs (average per aircraft)					
EVS Development costs	**Installation costs on a newly manufactured aircraft**	**Installation cost on already manufactured aircraft**	**Maintenance cost (e.g. XXX € per year/month)**	**Training costs for pilots**	**Training costs for maitenance**
15M€	250K$ with Ops Credit	250k$ to 400k$ depending on provisions	5k$/year/ac	5k$	1000$

From the data provided above, the following could be deduced:

— A relevant part of the cost for each of these technologies is represented by the development cost.

— The cost of installing a technology on already manufactured aircraft rather than on a newly manufactured one is quite similar.

— Low maintenance costs.

Annex II: Case study 'Air operator — additional costs for operations with operational credits based on the use of EFVS'

Implementation of operations with an operational credit for the use of EFVS

The costs of implementing EFVS operations within non-commercial operation have been estimated. The case study uses the example of a non-commercial operator operating large business jet. The operator is assumed to operate worldwide and to have four pilots. It has been assumed that the aircraft is already equipped with HUD and EFVS and appropriately certified for the intended operations. The costs have been categorised into initial costs of implementing EFVS operations and into annual recurring costs of maintaining such operations.

- *Initial costs*

The initial costs of commencing EFVS operations include management time and initial LVO training for flight crew. Management will need to prepare operating procedures, amend manuals, arrange training and prepare an application for approval by the competent authority. It has been assumed that training will be provided by an ATO that has ensured that the training programme and FSTD comply with the applicable requirements. The operator will need to select aerodromes suitable for EFVS operations and calculate the applicable operating minima for each. It has been assumed that this will take 1 hour per aerodrome and that 5 aerodromes will be evaluated. This is estimated to require 20 hours of work for a senior pilot-manager. Each pilot will need to complete initial ground and FSTD training. It has been assumed that initial ground training will be delivered by means of CBT and that 2 hours of FSTD training will be required for each pilot (4 hours per flight crew).

The initial costs of commencing EFVS operations are estimated as follows:

Management time:	20	hours	EUR 230	per hour	EUR 4 600
Ground school CBT	4	hours	EUR 250	per candidate	EUR 1 000
FSTD training	8	hours	EUR 1 620	per hour	EUR 12 960
Captain's time	8	hours	EUR 255	per hour	EUR 2 040
First officer's time	8	hours	EUR 128	per hour	EUR 1 024
				TOTAL	**EUR 21 624**

- *Annual recurring costs*

The annual recurring costs of conducting EFVS operations relate to recurrent training for flight crew. It has been assumed that recurrent FSTD training will be conducted during scheduled recurrent training/checking and will increase the time required for such training by 30 minutes on each FSTD detail (once per year).

The annual recurrent costs of maintaining an EFVS operation are estimated as follows:

FSTD training	0.5	hours	EUR 1 620	per hour	EUR 810
Captain's time	0.5	hours	EUR 255	per hour	EUR 128
First officer's time	0.5	hours	EUR 128	per hour	EUR 64
			TOTAL		**EUR 1 002**

Annex III: Case study 'Air operator — costs of weather-related diversions'

The impacts of adverse weather conditions include costs for operational disruptions. More precisely, bad weather conditions could potentially lead to flight cancellations, diversions and delays.

— In this section, total costs linked to diversions due to weather at destination aerodromes have been quantified in monetary terms also taking into consideration values provided by EUROCONTROL, including the study on 'Standard Inputs for EUROCONTROL Cost-Benefit Analyses' of November 2015[15].

— For the calculations below, the following information was considered:

- The average cost of a diversion of a flight to an airport other than the one initially planned amounting to circa EUR 22 231 (average value weighted by the respective percentage of the total diversions for the following types of flights: regional, continental, intercontinental and business);
- The average accommodation costs per diversion: It has been assumed that 20 % of the diverted flights would face this cost. The cost figure (EUR 16 000) was provided by an air operator. Final value considered for the table: 3 200 = (20 % × 16 000);
- The average spare aircraft costs per diversion, including positioning costs: It has been assumed that 20 % of the diverted flights would face this cost. The cost figure (EUR 15 000) was provided by an air operator. Final value considered for the table: 3 000 = (20 % × 15 000);
- The average delay compensation costs per diversion (more than 3 hours): It has been assumed that 55 %[16] of the diverted flights would face this cost. The cost figure (EUR 83 000) was provided by an air operator. Final value considered for the table: 45 650 = (55 % × 83 000);
- The number of diversions due to adverse weather conditions at destination aerodromes provided by EUROCONTROL, and it covers the time span from January 2015 until May 2016[17]. Only part of the total diversions has been considered, namely 10 %, as it is assumed that this percentage could reflect the diversions that could be prevented in the scenarios foreseen by SA CAT I.

[15] Available at https://www.eurocontrol.int/sites/default/files/publication/files/standard-input-for-eurocontrol-cost-benefit-analyses-2015.pdf.

[16] This figure has been calculated further to input received from an airline operator which provided a list of weather-diverted flights including the respective minutes of delay.

[17] Including diversions at al Exxx and Lxxx airports, plus GCxx and DAxx

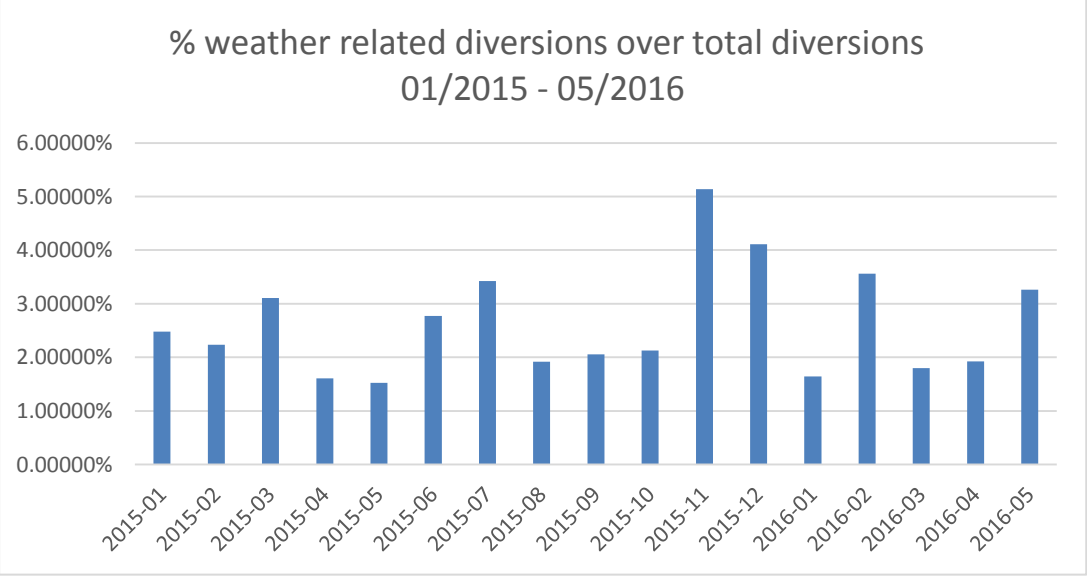
Figure 2: Total costs linked to diversions due to adverse weather conditions, period: 01/2015–05/2016

Month	Number of diversions (A)	Eurocontrol estimate A × EUR22230.6	Accommodation costs A × EUR3200	Spare aircraft including positioning A × EUR3000	Delay compensation A × EUR45650	Total costs (EUR)
2015-01	5	113,376	16,320	15,300	232,815	377,811
2015-02	4	80,030	11,520	10,800	164,340	266,690
2015-03	5	104,484	15,040	14,100	214,555	348,179
2015-04	2	48,907	7,040	6,600	100,430	162,977
2015-05	2	46,684	6,720	6,300	95,865	155,569
2015-06	4	86,699	12,480	11,700	178,035	288,914
2015-07	5	104,484	15,040	14,100	214,555	348,179
2015-08	3	64,469	9,280	8,700	132,385	214,834
2015-09	3	68,915	9,920	9,300	141,515	229,650
2015-10	4	80,030	11,520	10,800	164,340	266,690
2015-11	10	226,752	32,640	30,600	465,630	755,622
2015-12	10	215,637	31,040	29,100	442,805	718,582
2016-01	3	68,915	9,920	9,300	141,515	229,650
2016-02	6	135,607	19,520	18,300	278,465	451,892
2016-03	3	66,692	9,600	9,000	136,950	222,242
2016-04	3	60,023	8,640	8,100	123,255	200,018
2016-05	5	113,376	16,320	15,300	232,815	377,811
Total	76	1,685,079	242,560	227,400	3,460,270	5,615,309

Source: EUROCONTROL; Air Operator. Elaboration: EASA. Geographical scope: diversions at al Exxx and Lxxx airports, plus GCxx events and DAxx.

Looking at the diversions over time, it is possible to deduce some seasonal variation, e.g. quite high rates in the months of November and December. The value is quite high also in the month of July compared to other months possibly due to the presence of thunderstorms. In the figures below, it is possible to see the 'peak' value of the percentage of weather-related diversions over the total diversions.

Figure 3: Percentage of weather-related diversions



Source: EUROCONTROL. Elaboration: EASA. Geographical scope: diversions at al Exxx and Lxxx airports, plus GCxx and DAxx.

The above information (although rough estimates) shows the relevance of diversion costs. This should be taken into account when considering the potential benefits of diversions avoided when using EFVS/SVS/HUDs/autoland systems and/or by introducing SA CAT I category of aerodromes.

Annex IV: Aerodrome statistics *(A3 format)*

By courtesy of Lido and Jeppesen

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW29	EBAW	DEURNE	ANTWERP	1	1						200	200	200
RW22R	EBBE	BEAUVECHAIN	BEAUVECHAIN	1	1								
RW23R	EBBL	KLEINE-BROGEL	KLEINE-BROGEL	1	1								
RW01	EBBR	BRUSSELS NATIONAL	BRUSSELS	1	1						200	200	200
RW19	EBBR	BRUSSELS NATIONAL	BRUSSELS	1	1						200	200	200
RW25L	EBBR	BRUSSELS NATIONAL	BRUSSELS	3	1				1	1	200	200	200
RW25R	EBBR	BRUSSELS NATIONAL	BRUSSELS	3	1				1	1	200	200	200
RW25	EBCI	BRUSSELS SOUTH	CHARLEROI	3	1				1	1	200	200	200
RW26	EBCV	SHAPE AT CHIEVRES AB	CHIEVRES	1	1								
RW26R	EBFS	FLORENNES	FLORENNES	1	1								
RW05R	EBLG	LIEGE	LIEGE	1	1						177	187	197
RW23L	EBLG	LIEGE	LIEGE	3	1				1	1	200	200	200
RW23R	EBLG	LIEGE	LIEGE	1	1						202	212	212
RW08	EBOS	OSTEND	OSTEND-BRUGGE	1	1						200	200	200
RW26	EBOS	OSTEND	OSTEND-BRUGGE	1	1						200	200	200
RW22	EDAC	LEIPZIG-ALTENBURG	LEIPZIG-ALTENBURG	1	1						179	189	200
RW28	EDAH	HERINGSDORF	HERINGSDORF	1	1						218	228	238
RW26	EDBC	MAGDEBURG/COCHSTEDT	MAGDEBURG/COCHSTEDT	1	1						183	193	203
RW07L	EDDB	SCHONEFELD	BERLIN	3	1				1	1	152	162	172
RW25R	EDDB	SCHONEFELD	BERLIN	3	1				1	1	154	164	174
RW04	EDDC	DRESDEN	DRESDEN	1	1						154	164	174

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW22	EDDC	DRESDEN	DRESDEN	3	1				1	1	155	165	175
RW10	EDDE	ERFURT-WEIMAR	ERFURT-WEIMAR	1	1						168	178	188
RW28	EDDE	ERFURT-WEIMAR	ERFURT-WEIMAR	3	1				1	1	157	167	177
RW07C	EDDF	FRANKFURT/MAIN	FRANKFURT/MAIN	3	1		1		1	1	153	163	173
RW07L	EDDF	FRANKFURT/MAIN	FRANKFURT/MAIN	3	1		1		1	1	189	198	208
RW07L	EDDF	FRANKFURT/MAIN	FRANKFURT/MAIN	3	1				1	1	189	198	208
RW07R	EDDF	FRANKFURT/MAIN	FRANKFURT/MAIN	3	1		2		1	1	154	164	174
RW25C	EDDF	FRANKFURT/MAIN	FRANKFURT/MAIN	3	1		1		1	1	149	159	169
RW25L	EDDF	FRANKFURT/MAIN	FRANKFURT/MAIN	3	1		1		1	1	150	160	170
RW25R	EDDF	FRANKFURT/MAIN	FRANKFURT/MAIN	3	1		1		1	1	187	197	206
RW07	EDDG	MUNSTER/OSNABRUCK	MUNSTER/OSNABRUCK	1	1						158	168	177
RW25	EDDG	MUNSTER/OSNABRUCK	MUNSTER/OSNABRUCK	3	1				1	1	149	159	169
RW05	EDDH	HAMBURG	HAMBURG	1	1						197	207	217
RW15	EDDH	HAMBURG	HAMBURG	1	1						188	198	208
RW23	EDDH	HAMBURG	HAMBURG	3	1				1	1	227	237	247
RW14L	EDDK	COLOGNE-BONN	COLOGNE-BONN	3	1				1	1	148	177	187
RW24	EDDK	COLOGNE-BONN	COLOGNE-BONN	1	1						149	160	170
RW32R	EDDK	COLOGNE-BONN	COLOGNE-BONN	3	1				1	1	142	154	164
RW05L	EDDL	DUSSELDORF	DUSSELDORF	1	1						191	217	227
RW05R	EDDL	DUSSELDORF	DUSSELDORF	3	1				1	1	149	159	169
RW23L	EDDL	DUSSELDORF	DUSSELDORF	3	1				1	1	151	161	171
RW23R	EDDL	DUSSELDORF	DUSSELDORF	3	1				1	1	208	220	230

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW08L	EDDM	MUNICH	MUNICH	3	1				1	1	149	158	168
RW08R	EDDM	MUNICH	MUNICH	3	1				1	1	150	160	170
RW26L	EDDM	MUNICH	MUNICH	3	1				1	1	149	159	169
RW26R	EDDM	MUNICH	MUNICH	3	1				1	1	149	159	169
RW10	EDDN	NURNBERG	NURNBERG	1	1						152	162	172
RW28	EDDN	NURNBERG	NURNBERG	3	1				1	1	164	181	191
RW08L	EDDP	LEIPZIG-HALLE	LEIPZIG-HALLE	3	1				1	1	152	162	172
RW08R	EDDP	LEIPZIG-HALLE	LEIPZIG-HALLE	3	1				1	1	155	165	175
RW26L	EDDP	LEIPZIG-HALLE	LEIPZIG-HALLE	3	1				1	1	147	157	167
RW26R	EDDP	LEIPZIG-HALLE	LEIPZIG-HALLE	3	1				1	1	150	160	170
RW27	EDDR	SAARBRUCKEN	SAARBRUCKEN	1	1						161	171	181
RW07	EDDS	STUTTGART	STUTTGART	3	1				1	1	161	171	181
RW25	EDDS	STUTTGART	STUTTGART	3	1				1	1	162	172	181
RW08L	EDDT	TEGEL	BERLIN	3	1				1	1	173	183	193
RW08R	EDDT	TEGEL	BERLIN	1	1						255	265	275
RW26L	EDDT	TEGEL	BERLIN	2	1				1		251	261	270
RW26R	EDDT	TEGEL	BERLIN	3	1				1	1	230	239	249
RW09L	EDDV	HANNOVER	HANNOVER	3	1				1	1	149	159	169
RW09R	EDDV	HANNOVER	HANNOVER	1	1						156	166	176
RW27L	EDDV	HANNOVER	HANNOVER	1	1						156	166	176
RW27R	EDDV	HANNOVER	HANNOVER	3	1				1	1	155	186	196
RW09	EDDW	BREMEN	BREMEN	3	1		2		1	1	154	164	174
RW27	EDDW	BREMEN	BREMEN	3	1		2		1	1	155	165	175

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW03	EDFH	FRANKFURT-HAHN	FRANKFURT-HAHN	1	1						158	168	178
RW21	EDFH	FRANKFURT-HAHN	FRANKFURT-HAHN	3	1				1	1	155	165	175
RW31	EDGS	SIEGERLAND	SIEGERLAND	1	1						233	243	
RW05	EDHI	FINKENWERDER	HAMBURG	1	1						205	215	225
RW23	EDHI	FINKENWERDER	HAMBURG	1	1						246	256	266
RW08	EDHK	HOLTENAU	KIEL	1	1						246		
RW26	EDHK	HOLTENAU	KIEL	1	1						217		
RW07	EDHL	BLANKENSEE	LUBECK	2	1				1		185	195	204
RW25	EDHL	BLANKENSEE	LUBECK	1	1						237	247	257
RW24	EDJA	MEMMINGEN	MEMMINGEN	1	1						169	179	189
RW13	EDLN	MONCHENGLADBACH	MONCHENGLADBACH	1	1						254	266	
RW31	EDLN	MONCHENGLADBACH	MONCHENGLADBACH	1	1						244	281	
RW06	EDLP	PADERBORN/LIPPSTADT	PADERBORN/LIPPSTADT	1	1						157	167	176
RW24	EDLP	PADERBORN/LIPPSTADT	PADERBORN/LIPPSTADT	1	1						177	187	197
RW27	EDLV	NIEDERRHEIN	NIEDERRHEIN	3	1				1	1	156	166	175
RW06	EDLW	DORTMUND	DORTMUND	2	1				1		163	173	183
RW24	EDLW	DORTMUND	DORTMUND	2	1				1		175	184	194
RW25	EDMA	AUGSBURG	AUGSBURG	1	1						238	250	
RW22	EDMO	OBERPFAFFENHOFEN	OBERPFAFFENHOFEN	1	1						202	212	222
RW06	EDNY	FRIEDRICHSHAFEN	FRIEDRICHSHAFEN	1	1						198	207	217
RW24	EDNY	FRIEDRICHSHAFEN	FRIEDRICHSHAFEN	3	1				1	1	185	264	274
RW24	EDOP	SCHWERIN-PARCHIM	SCHWERIN-PARCHIM	1	1						220	230	240
RW26	EDQM	HOF-PLAUEN	HOF-PLAUEN	1	1						292	304	

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW03	EDSB	KARLSRUHE/BADEN-BADEN	KARLSRUHE/BADEN-BADEN	1	1						154	163	173
RW21	EDSB	KARLSRUHE/BADEN-BADEN	KARLSRUHE/BADEN-BADEN	3	1				1	1	155	165	175
RW21	EDTL	LAHR	LAHR	1	1						163	173	183
RW28	EDTY	SCHWABISCH HALL	SCHWABISCH HALL	1	1						206	216	
RW26	EDVE	BRAUNSCHWEIG-WOLFSBURG	BRAUNSCHWEIG-WOLFSBURG	1	1						194	203	213
RW09	EDVK	KASSEL-CALDEN	KASSEL-CALDEN	1	1						152	162	172
RW27	EDVK	KASSEL-CALDEN	KASSEL-CALDEN	3	1				1	1	154	163	173
RW32	EDXW	SYLT	SYLT	1	1						189	199	209
RW06	EEEI	AMARI	AMARI	1	1						206	214	224
RW24	EEEI	AMARI	AMARI	1	1						250	258	268
RW17	EEKE	KURESSAARE	KURESSAARE	1	1						177	185	
RW08	EETN	LENNART MERI	TALLINN	1	1						182	191	201
RW26	EETN	LENNART MERI	TALLINN	1	1						188	196	206
RW26	EETU	TARTU	TARTU	1	1						223	231	
RW21	EFET	ENONTEKIO	ENONTEKIO	1	1						177	187	
RW26	EFHA	HALLI	HALLI	1	1						162	175	
RW04L	EFHK	VANTAA	HELSINKI	2	1				1		171	183	198
RW04R	EFHK	VANTAA	HELSINKI	1	1						164	177	192
RW15	EFHK	VANTAA	HELSINKI	1	1						172	185	199
RW22L	EFHK	VANTAA	HELSINKI	2	1				1		170	183	197
RW22R	EFHK	VANTAA	HELSINKI	2	1				1		163	174	187
RW22	EFIV	IVALO	IVALO	1	1						163	175	189
RW28	EFJO	JOENSUU	JOENSUU	1	1						163	174	187

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW30	EFJY	JYVASKYLA	JYVASKYLA	1	1						181	195	211
RW18	EFKE	TORNIO	KEMI	1	1						166	176	
RW07	EFKI	KAJAANI	KAJAANI	1	1						169	180	193
RW19	EFKK	KOKKOLA-PIETARSAARI	KOKKOLA-PIETARSAARI	1	1						159	170	183
RW12	EFKS	KUUSAMO	KUUSAMO	1	1						173	182	192
RW34	EFKT	KITTILA	KITTILA	1	1						193	210	229
RW33	EFKU	KUOPIO	KUOPIO	1	1						163	175	187
RW06	EFLP	LAPPEENRANTA	LAPPEENRANTA	1	1						167	177	187
RW21	EFMA	MARIEHAMN	MARIEHAMN	1	1						194	202	
RW11	EFMI	MIKKELI	MIKKELI	1	1						304	314	
RW12	EFOU	OULU	OULU	2	1				1		164	175	187
RW30	EFPO	PORI	PORI	1	1						158	168	
RW21	EFRO	ROVANIEMI	ROVANIEMI	2	1				1		180	192	206
RW12	EFSA	SAVONLINNA	SAVONLINNA	1	1						159	168	179
RW32	EFSI	SEINAJOKI	SEINAJOKI	1	1						236	244	
RW24	EFTP	PIRKKALA	TAMPERE	1	1						224	232	242
RW26	EFTU	TURKU	TURKU	1	1						171	183	196
RW25	EFUT	UTTI	UTTI	1	1						206	216	
RW16	EFVA	VAASA	VAASA	1	1						161	174	187
RW17	EGAA	ALDERGROVE	BELFAST	1	1						156	169	183
RW25	EGAA	ALDERGROVE	BELFAST	3	1				1	1	144	154	164
RW04	EGAC	BELFAST CITY	BELFAST	1	1						631	639	
RW22	EGAC	BELFAST CITY	BELFAST	1	1						596	607	

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW08	EGAE	EGLINTON	LONDONDERRY	1	1						241	241	241
RW26	EGAE	EGLINTON	LONDONDERRY	1	1						162	172	180
RW15	EGBB	BIRMINGHAM	BIRMINGHAM	3	1				1	1	171	182	184
RW33	EGBB	BIRMINGHAM	BIRMINGHAM	3	1				1	1	168	175	185
RW05	EGBE	COVENTRY	COVENTRY	1	1						167	175	185
RW23	EGBE	COVENTRY	COVENTRY	1	1						154	166	179
RW27	EGBJ	GLOUCESTERSHIRE	GLOUCESTERSHIRE	1	1						194	203	
RW05L	EGCC	MANCHESTER	MANCHESTER	3	1				1	1	168	180	193
RW05R	EGCC	MANCHESTER	MANCHESTER	1	1						152	164	178
RW23R	EGCC	MANCHESTER	MANCHESTER	3	1				1	1	160	172	186
RW02	EGCN	DONCASTER SHEFFIELD	DONCASTER SHEFFIELD	1	1						172	180	189
RW20	EGCN	DONCASTER SHEFFIELD	DONCASTER SHEFFIELD	3	1				1	1	160	169	179
RW23	EGDM	BOSCOMBE DOWN	BOSCOMBE DOWN	1	1								
RW30	EGDR	CULDROSE	CULDROSE	1	1								
RW27	EGDY	YEOVILTON	YEOVILTON	1	1								
RW12	EGFF	CARDIFF	CARDIFF	1	1						155	168	181
RW30	EGFF	CARDIFF	CARDIFF	1	1						175	187	198
RW09	EGGD	BRISTOL	BRISTOL	1	1						167	177	187
RW27	EGGD	BRISTOL	BRISTOL	3	1				1	1	158	167	178
RW09	EGGP	LIVERPOOL	LIVERPOOL	1	1						156	168	181
RW27	EGGP	LIVERPOOL	LIVERPOOL	2	1				1		160	172	185
RW08	EGGW	LUTON	LONDON	3	1				1	1	147	157	166
RW26	EGGW	LUTON	LONDON	3	1				1	1	148	158	170

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW08	EGHH	BOURNEMOUTH	BOURNEMOUTH	1	1						149	160	174
RW26	EGHH	BOURNEMOUTH	BOURNEMOUTH	3	1				1	1	171	179	189
RW20	EGHI	SOUTHAMPTON	SOUTHAMPTON	1	1						182	191	
RW12	EGHQ	NEWQUAY	NEWQUAY	1	1						157	168	180
RW30	EGHQ	NEWQUAY	NEWQUAY	3	1				1	1	162	171	181
RW09	EGJB	GUERNSEY	GUERNSEY	1	1						158	168	178
RW27	EGJB	GUERNSEY	GUERNSEY	1	1						164	174	184
RW08	EGJJ	JERSEY	JERSEY	1	1						154	166	179
RW26	EGJJ	JERSEY	JERSEY	1	1						171	179	189
RW21	EGKB	BIGGIN HILL	BIGGIN HILL	1	1						343	343	
RW08R	EGKK	GATWICK	LONDON	3	1				1	1	149	161	174
RW26L	EGKK	GATWICK	LONDON	3	1				1	1	148	160	174
RW09	EGLC	LONDON CITY	LONDON	1	1						414	444	
RW27	EGLC	LONDON CITY	LONDON	1	1						581	611	
RW06	EGLF	FARNBOROUGH	FARNBOROUGH	1	1						200	200	200
RW24	EGLF	FARNBOROUGH	FARNBOROUGH	1	1						145	156	169
RW09L	EGLL	HEATHROW	LONDON	3	1	1			1	1	153	164	178
RW09R	EGLL	HEATHROW	LONDON	3	1	1			1	1	150	162	176
RW27L	EGLL	HEATHROW	LONDON	3	1	1			1	1	161	171	183
RW27R	EGLL	HEATHROW	LONDON	3	1	1			1	1	156	169	184
RW05	EGMC	SOUTHEND	SOUTHEND	1	1						200	208	217
RW23	EGMC	SOUTHEND	SOUTHEND	1	1						166	176	185
RW21	EGMD	LYDD	LYDD	1	1						478	558	

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW28	EGNH	BLACKPOOL	BLACKPOOL	1	1						153	165	177
RW20	EGNJ	HUMBERSIDE	HUMBERSIDE	1	1						147	158	172
RW35	EGNL	WALNEY ISLAND	BARROW	1	1						164		
RW14	EGNM	LEEDS BRADFORD	LEEDS BRADFORD	1	1						161	171	181
RW32	EGNM	LEEDS BRADFORD	LEEDS BRADFORD	3	1				1	1	180	190	210
RW25	EGNO	WARTON	WARTON	1	1								
RW04	EGNR	HAWARDEN	HAWARDEN	1	1						499	499	
RW22	EGNR	HAWARDEN	HAWARDEN	1	1						373	383	
RW08	EGNS	ISLE OF MAN	ISLE OF MAN	1	1						291	291	291
RW26	EGNS	ISLE OF MAN	ISLE OF MAN	1	1						145	156	169
RW07	EGNT	NEWCASTLE	NEWCASTLE	3	1				1	1	176	184	195
RW25	EGNT	NEWCASTLE	NEWCASTLE	3	1				1	1	156	165	175
RW05	EGNV	DURHAM TEES VALLEY	DURHAM TEES VALLEY	1	1						167	177	190
RW23	EGNV	DURHAM TEES VALLEY	DURHAM TEES VALLEY	1	1						155	167	181
RW09	EGNX	EAST MIDLANDS	EAST MIDLANDS	1	1						151	162	177
RW27	EGNX	EAST MIDLANDS	EAST MIDLANDS	3	1				1	1	150	163	177
RW18	EGOS	SHAWBURY	SHAWBURY	1	1								
RW13	EGOV	VALLEY	VALLEY	1	1								
RW09	EGPA	KIRKWALL	KIRKWALL	1	1						154	163	
RW27	EGPA	KIRKWALL	KIRKWALL	1	1						183	191	
RW27	EGPB	SUMBURGH	SUMBURGH	1	1						246	246	
RW16	EGPD	DYCE	ABERDEEN	1	1						171	180	190
RW34	EGPD	DYCE	ABERDEEN	1	1						161	170	179

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW05	EGPE	INVERNESS	INVERNESS	1	1						169	179	
RW23	EGPE	INVERNESS	INVERNESS	1	1						166	178	
RW05	EGPF	GLASGOW	GLASGOW	3	1				1	1	236	246	256
RW23	EGPF	GLASGOW	GLASGOW	3	1				1	1	152	164	177
RW06	EGPH	EDINBURGH	EDINBURGH	3	1				1	1	142	152	161
RW24	EGPH	EDINBURGH	EDINBURGH	3	1				1	1	153	161	172
RW12	EGPK	PRESTWICK	PRESTWICK	1	1						152	164	177
RW30	EGPK	PRESTWICK	PRESTWICK	1	1						154	164	172
RW09	EGPN	DUNDEE	DUNDEE	1	1						290	300	
RW26	EGQL	LEUCHARS	LEUCHARS	1	1								
RW23	EGQS	LOSSIEMOUTH	LOSSIEMOUTH	1	1								
RW23	EGSC	CAMBRIDGE	CAMBRIDGE	1	1						158	170	186
RW27	EGSH	NORWICH	NORWICH	1	1						158	169	181
RW04	EGSS	STANSTED	LONDON	3	1				1	1	163	177	193
RW22	EGSS	STANSTED	LONDON	3	1				1	1	160	172	185
RW21	EGTC	CRANFIELD	CRANFIELD	1	1						165	174	
RW08	EGTE	EXETER	EXETER	1	1						146	158	172
RW26	EGTE	EXETER	EXETER	1	1						164	172	181
RW19	EGTK	KIDLINGTON	OXFORD	1	1						190	198	
RW19	EGUB	BENSON	BENSON	1	1								
RW06	EGUL	LAKENHEATH AB	LAKENHEATH	1	1								
RW24	EGUL	LAKENHEATH AB	LAKENHEATH	1	1								
RW11	EGUN	MILDENHALL AB	MILDENHALL	1	1								

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW29	EGUN	MILDENHALL AB	MILDENHALL	1	1								
RW23	EGUW	WATTISHAM	WATTISHAM	1	1								
RW09	EGVA	FAIRFORD AB	FAIRFORD	1	1								
RW27	EGVA	FAIRFORD AB	FAIRFORD	1	1								
RW07	EGVN	BRIZE NORTON	BRIZE NORTON	1	1								
RW25	EGVN	BRIZE NORTON	BRIZE NORTON	1	1								
RW27	EGVO	ODIHAM	ODIHAM	1	1								
RW25	EGWU	NORTHOLT	NORTHOLT	1	1								
RW25	EGXC	CONINGSBY	CONINGSBY	1	1								
RW16	EGXE	LEEMING	LEEMING	1	1								
RW03	EGXU	LINTON-ON-OUSE	LINTON-ON-OUSE	1	1								
RW21	EGXU	LINTON-ON-OUSE	LINTON-ON-OUSE	1	1								
RW20	EGXW	WADDINGTON	WADDINGTON	1	1								
RW26	EGYD	CRANWELL	CRANWELL	1	1								
RW24	EGYM	MARHAM	MARHAM	1	1								
RW28	EGYP	MOUNT PLEASANT	MOUNT PLEASANT	1	1								
RW06	EHAM	SCHIPHOL	AMSTERDAM	3	1				1	1	148	158	171
RW18C	EHAM	SCHIPHOL	AMSTERDAM	3	1				1	1	151	161	174
RW18R	EHAM	SCHIPHOL	AMSTERDAM	3	1				1	1	151	164	178
RW22	EHAM	SCHIPHOL	AMSTERDAM	1	1						155	165	178
RW27	EHAM	SCHIPHOL	AMSTERDAM	3	1				1	1	145	158	171
RW36C	EHAM	SCHIPHOL	AMSTERDAM	3	1				1	1	145	155	161
RW36R	EHAM	SCHIPHOL	AMSTERDAM	3	1				1	1	219	228	238

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW03	EHBK	MAASTRICHT-AACHEN	MAASTRICHT	1	1						158	168	178
RW21	EHBK	MAASTRICHT-AACHEN	MAASTRICHT	3	1				1	1	161	171	184
RW03	EHEH	EINDHOVEN	EINDHOVEN	1	1						175	185	195
RW21	EHEH	EINDHOVEN	EINDHOVEN	1	1						169	179	189
RW23	EHGG	EELDE	GRONINGEN	1	1						161	171	184
RW21	EHKD	DE KOOY	DE KOOY	1	1						175		
RW05	EHLW	LEEUWARDEN	LEEUWARDEN	1	1								
RW09	EHLW	LEEUWARDEN	LEEUWARDEN	1	1								
RW23	EHLW	LEEUWARDEN	LEEUWARDEN	1	1								
RW27	EHLW	LEEUWARDEN	LEEUWARDEN	1	1								
RW06	EHRD	ROTTERDAM	ROTTERDAM	1	1						174	184	191
RW24	EHRD	ROTTERDAM	ROTTERDAM	1	1						158	168	180
RW06L	EHVK	VOLKEL	VOLKEL	1	1								
RW24R	EHVK	VOLKEL	VOLKEL	1	1								
RW07	EHWO	WOENSDRECHT	WOENSDRECHT	1	1								
RW25	EHWO	WOENSDRECHT	WOENSDRECHT	1	1								
RW17	EICK	CORK	CORK	2	1				1		160	172	188
RW35	EICK	CORK	CORK	1	1						161	173	188
RW10	EIDW	DUBLIN INTL	DUBLIN	3	1				1	1	152	164	179
RW16	EIDW	DUBLIN INTL	DUBLIN	1	1						179	190	199
RW28	EIDW	DUBLIN INTL	DUBLIN	3	1				1	1	156	170	185
RW26	EIKN	KNOCK	IRELAND WEST	2	1				1		150	160	170
RW26	EIKY	KERRY	KERRY	1	1						158	168	

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW11	EIME	CASEMENT	BALDONNEL	1	1						163	173	184
RW06	EINN	SHANNON	SHANNON	1	1						150	162	176
RW24	EINN	SHANNON	SHANNON	2	1				1		150	162	176
RW21	EIWF	WATERFORD	WATERFORD	1	1						171		
RW10R	EKAH	AARHUS	AARHUS	1	1						190	199	209
RW28L	EKAH	AARHUS	AARHUS	2	1				1		189	198	208
RW09	EKBI	BILLUND	BILLUND	3	1				1	1	142	150	161
RW27	EKBI	BILLUND	BILLUND	3	1				1	1	142	150	161
RW04L	EKCH	KASTRUP	COPENHAGEN	2	1				1		214	222	233
RW04R	EKCH	KASTRUP	COPENHAGEN	1	1						180	191	203
RW12	EKCH	KASTRUP	COPENHAGEN	1	1						207	215	226
RW22L	EKCH	KASTRUP	COPENHAGEN	3	1				1	1	152	164	181
RW22R	EKCH	KASTRUP	COPENHAGEN	1	1						196	206	216
RW30	EKCH	KASTRUP	COPENHAGEN	1	1						206	214	225
RW08	EKEB	ESBJERG	ESBJERG	1	1						160	169	178
RW26	EKEB	ESBJERG	ESBJERG	1	1						164	173	182
RW09R	EKKA	KARUP AB	KARUP	1	1						142	151	161
RW27L	EKKA	KARUP AB	KARUP	2	1				1		142	151	161
RW24	EKOD	HANS CHRISTIAN ANDERSEN	ODENSE	1	1						143	153	
RW11	EKRK	ROSKILDE	COPENHAGEN	1	1						177	186	198
RW21	EKRK	ROSKILDE	COPENHAGEN	1	1						162	171	181
RW11	EKRN	RONNE	BORNHOLM	1	1						150	162	177
RW29	EKRN	RONNE	BORNHOLM	1	1						150	162	176

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW32	EKSB	SONDERBORG	SONDERBORG	1	1						203	212	222
RW26	EKSN	SINDAL	SINDAL	1	1						150	163	
RW10L	EKSP	VOJENS/SKRYDSTRUP AB	VOJENS/SKRYDSTRUP	1	1						144	153	163
RW28R	EKSP	VOJENS/SKRYDSTRUP AB	VOJENS/SKRYDSTRUP	1	1						140	151	161
RW30	EKVG	VAGAR	VAGAR	1	1								
RW08L	EKYT	AALBORG	AALBORG	1	1						186	197	209
RW26R	EKYT	AALBORG	AALBORG	2	1				1		156	168	181
RW06	ELLX	LUXEMBOURG	LUXEMBOURG	1	1								
RW24	ELLX	LUXEMBOURG	LUXEMBOURG	3	1				1	1			
RW25	ENAL	VIGRA	ALESUND	1	1						215	224	234
RW11	ENAT	ALTA	ALTA	1	1						550	563	577
RW07	ENBL	BRINGELAND	FORDE				1						
RW25	ENBL	BRINGELAND	FORDE				1						
RW07	ENBO	BODO	BODO	1	1						231	271	281
RW25	ENBO	BODO	BODO	1	1						347	411	477
RW17	ENBR	FLESLAND	BERGEN	1	1						193	201	212
RW35	ENBR	FLESLAND	BERGEN	1	1						210	218	228
RW04	ENCN	KJEVIK	KRISTIANSAND	1	1						313	331	349
RW22	ENCN	KJEVIK	KRISTIANSAND	1	1						178	193	210
RW28	ENDU	BARDUFOSS	BARDUFOSS	1	1						582	596	610
RW17	ENEV	EVENES	HARSTAD-NARVIK	1	1						657	689	702
RW01L	ENGM	GARDERMOEN	OSLO	1	1						174	182	193
RW01R	ENGM	GARDERMOEN	OSLO	3	1				1	1	191	199	210

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW19L	ENGM	GARDERMOEN	OSLO	1	1						147	157	168
RW19R	ENGM	GARDERMOEN	OSLO	3	1				1	1	156	169	183
RW14	ENHD	KARMOY	HAUGESUND	1	1						186	194	205
RW07	ENKB	KVERNBERGET	KRISTIANSUND	1	1						317	336	358
RW24	ENKR	HOYBUKTMOEN	KIRKENES	1	1						280	290	302
RW07	ENML	ARO	MOLDE	1	1						425	435	445
RW34	ENMS	KJAERSTAD	MOSJOEN				1						
RW35	ENNA	BANAK	LAKSELV	1	1						403	417	426
RW07	ENNM	NAMSOS	NAMSOS				1						
RW25	ENNM	NAMSOS	NAMSOS				1						
RW15	ENOL	ORLAND	ORLAND	1	1						193	236	247
RW33	ENOL	ORLAND	ORLAND	1	1						208	220	231
RW32	ENRO	ROROS	ROROS	1	1						516	526	
RW03	ENRS	ROST	ROST				1						
RW21	ENRS	ROST	ROST				1						
RW30	ENRY	RYGGE	MOSS	2	1				1		208	216	227
RW10	ENSB	LONGYEAR	SVALBARD	1	1						450	560	715
RW24	ENSG	HAUKASEN	SOGNDAL	1	1						890		
RW03	ENST	STOKKA	SANDNESSJOEN				1						
RW21	ENST	STOKKA	SANDNESSJOEN				1						
RW01	ENTC	LANGNES	TROMSO	1	1						345	358	375
RW19	ENTC	LANGNES	TROMSO	1	1						415	430	1018
RW18	ENTO	TORP	SANDEFJORD	1	1						196	205	215

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW36	ENTO	TORP	SANDEFJORD	1	1						240	248	258
RW09	ENVA	VAERNES	TRONDHEIM	1	1						712	720	731
RW27	ENVA	VAERNES	TRONDHEIM	1	1						237	247	259
RW11	ENZV	SOLA	STAVANGER	1	1						198	206	235
RW18	ENZV	SOLA	STAVANGER	2	1				1		161	174	186
RW36	ENZV	SOLA	STAVANGER	1	1						189	199	209
RW26	EPBY	SZWEDEROWO	BYDGOSZCZ	1	1						207	215	226
RW25	EPCE	CEWICE	CEWICE	1	1								
RW30	EPDE	DEBLIN	DEBLIN	1	1								
RW25	EPKK	BALICE	KRAKOW	1	1						210	218	229
RW29	EPKS	KRZESINY	POZNAN	1	1								
RW27	EPKT	PYRZOWICE	KATOWICE	1	1						220	228	239
RW25	EPLB	LUBLIN	LUBLIN	1	1						250	258	269
RW28	EPLK	LASK	LASK	1	1								
RW25	EPLL	LUBLINEK	LODZ	1	1						194	202	213
RW25	EPMB	MALBORK	MALBORK	1	1								
RW30	EPMI	MIROSLAWIEC	MIROSLAWIEC	1	1								
RW27	EPMM	MINSK MAZOWIECKI	MINSK MAZOWIECKI	1	1								
RW08	EPMO	MODLIN	WARSAW	2	1				1		199	207	218
RW31	EPOK	GDYNIA-OKSYWIE	GDYNIA-OKSYWIE	1	1								
RW28	EPPO	LAWICA	POZNAN	1	1						213	223	233
RW28L	EPPW	POWIDZ	POWIDZ	1	1								
RW31	EPSC	GOLENIOW	SZCZECIN	1	1						207	215	226

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW29	EPSN	SWIDWIN	SWIDWIN	1	1								
RW01	EPSY	OLSZTYN-MAZURY	OLSZTYN-MAZURY	1	1						208	216	227
RW11	EPWA	CHOPIN	WARSAW	2	1				1		209	219	229
RW33	EPWA	CHOPIN	WARSAW	2	1				1		195	203	214
RW29	EPWR	STRACHOWICE	WROCLAW	2	1				1		176	184	195
RW24	EPZG	BABIMOST	ZIELONA GORA	1	1						208	216	227
RW19	ESCF	MALMEN	LINKOPING	1	1								
RW01	ESDF	RONNEBY	RONNEBY	1	1								
RW19	ESDF	RONNEBY	RONNEBY	1	1								
RW03	ESGG	LANDVETTER	GOTEBORG	3	1				1	1			
RW21	ESGG	LANDVETTER	GOTEBORG	3	1				1	1			
RW01	ESGJ	JONKOPING	JONKOPING	1	1								
RW19	ESGJ	JONKOPING	JONKOPING	1	1								
RW19	ESGP	SAVE	GOTEBORG	1	1								
RW19	ESGR	SKOVDE	SKOVDE	1	1								
RW33	ESGT	TROLLHATTAN-VANERSBORG	TROLLHATTAN-VANERSBORG	1	1								
RW19	ESIB	SATENAS	SATENAS	1	1								
RW16	ESKM	SILJAN	MORA	1	1								
RW26	ESKN	SKAVSTA	STOCKHOLM	1	1								
RW19	ESMK	KRISTIANSTAD	KRISTIANSTAD	1	1								
RW16	ESMQ	KALMAR	KALMAR	1	1								
RW17	ESMS	MALMO	MALMO	2	1				1				
RW35	ESMS	MALMO	MALMO	1	1								

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW19	ESMT	HALMSTAD	HALMSTAD	1	1								
RW19	ESMX	KRONOBERG	VAXJO	1	1								
RW30	ESNG	GALLIVARE	GALLIVARE	1	1								
RW35	ESNK	KRAMFORS-SOLLEFTEA	KRAMFORS-SOLLEFTEA	1	1								
RW14	ESNL	LYCKSELE	LYCKSELE	1	1								
RW16	ESNN	SUNDSVALL-TIMRA	SUNDSVALL-TIMRA	1	1								
RW34	ESNN	SUNDSVALL-TIMRA	SUNDSVALL-TIMRA	1	1								
RW12	ESNO	ORNSKOLDSVIK	ORNSKOLDSVIK	1	1								
RW21	ESNQ	KIRUNA	KIRUNA	1	1								
RW28	ESNS	SKELLEFTEA	SKELLEFTEA	1	1								
RW14	ESNU	UMEA	UMEA	1	1								
RW32	ESNU	UMEA	UMEA	1	1								
RW28	ESNV	VILHELMINA	VILHELMINA	1	1								
RW12	ESNX	ARVIDSJAUR	ARVIDSJAUR	1	1								
RW30	ESNX	ARVIDSJAUR	ARVIDSJAUR	1	1								
RW12	ESNZ	ARE OSTERSUND	ARE OSTERSUND	2	1				1				
RW01	ESOE	OREBRO	OREBRO	1	1								
RW19	ESOE	OREBRO	OREBRO	1	1								
RW18	ESOH	HAGFORS	HAGFORS	1	1								
RW03	ESOK	KARLSTAD	KARLSTAD	1	1								
RW21	ESOK	KARLSTAD	KARLSTAD	1	1								
RW19	ESOW	VAESTERAAS	STOCKHOLM	1	1								
RW14	ESPA	KALLAX	LULEA	1	1								

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW32	ESPA	KALLAX	LULEA	2	1				1				
RW01L	ESSA	ARLANDA	STOCKHOLM	3	1				1	1			
RW01R	ESSA	ARLANDA	STOCKHOLM	3	1				1	1			
RW19L	ESSA	ARLANDA	STOCKHOLM	3	1				1	1			
RW19R	ESSA	ARLANDA	STOCKHOLM	1	1								
RW26	ESSA	ARLANDA	STOCKHOLM	1	1								
RW12	ESSB	BROMMA	STOCKHOLM	1	1								
RW30	ESSB	BROMMA	STOCKHOLM	1	1								
RW32	ESSD	BORLANGE	BORLANGE	1	1								
RW18	ESSK	GAVLE	GAVLE	1	1								
RW11	ESSL	SAAB	LINKOPING	1	1								
RW29	ESSL	SAAB	LINKOPING	1	1								
RW09	ESSP	KUNGSANGEN	NORRKOPING	1	1								
RW27	ESSP	KUNGSANGEN	NORRKOPING	1	1								
RW36	ESSU	ESKILSTUNA	ESKILSTUNA	1	1								
RW21	ESSV	VISBY	VISBY	1	1								
RW14	ESTA	ANGELHOLM	ANGELHOLM	2	1				1				
RW29L	ESTL	LJUNGBYHED	LJUNGBYHED	1	1								
RW33	ESUD	STORUMAN	STORUMAN	1	1								
RW11	ESUP	PAJALA	PAJALA	1	1								
RW33	ESUT	HEMAVAN TARNABY	HEMAVAN TARNABY	1	1								
RW18	EVRA	RIGA	RIGA	2	1				1				
RW36	EVRA	RIGA	RIGA	2	1				1				

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW08	EYKA	KAUNAS INTL	KAUNAS	1	1								
RW26	EYKA	KAUNAS INTL	KAUNAS	2	1				1				
RW19	EYPA	PALANGA INTL	PALANGA	1	1								
RW14L	EYSA	SIAULIAI	SIAULIAI	1	1								
RW32R	EYSA	SIAULIAI	SIAULIAI	1	1								
RW02	EYVI	VILNIUS INTL	VILNIUS	2	1				1				
RW20	EYVI	VILNIUS INTL	VILNIUS	1	1								
RW18	LATI	TIRANA	TIRANA	1	1								
RW22	LBBG	BURGAS	BURGAS	1	1								
RW30	LBPD	PLOVDIV	PLOVDIV	1	1								
RW09	LBSF	SOFIA	SOFIA	1	1								
RW27	LBSF	SOFIA	SOFIA	3	1				1	1			
RW09	LBWN	VARNA	VARNA	1	1								
RW22	LCLK	LARNACA INTL	LARNACA	1	1								
RW29	LCPH	PAFOS INTL	PAFOS	1	1								
RW28	LCRA	AKROTIRI	AKROTIRI	1	1								
RW12	LDDU	CILIPI	DUBROVNIK	1	1								
RW29	LDOS	KLISA	OSIJEK	1	1								
RW27	LDPL	PULA	PULA	1	1								
RW14	LDRI	KRK ISLAND	RIJEKA	1	1								
RW05	LDSP	KASTELA	SPLIT	1	1								
RW05	LDZA	PLESO	ZAGREB	3	1				1	1			
RW23	LDZA	PLESO	ZAGREB	1	1								

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW14	LDZD	ZEMUNIK	ZADAR	1	1								
RW09	LEAB	ALBACETE	ALBACETE	1	1								
RW27	LEAB	ALBACETE	ALBACETE	1	1								
RW10	LEAL	ALICANTE-ELCHE	ALICANTE	1	1								
RW25	LEAM	ALMERIA	ALMERIA	1	1								
RW29	LEAS	ASTURIAS	ASTURIAS	3	1				1	1			
RW12	LEBB	BILBAO	BILBAO	1	1								
RW30	LEBB	BILBAO	BILBAO	1	1								
RW02	LEBL	EL PRAT	BARCELONA	1	1								
RW07L	LEBL	EL PRAT	BARCELONA	3	1				1	1			
RW07R	LEBL	EL PRAT	BARCELONA	3	1				1	1			
RW25L	LEBL	EL PRAT	BARCELONA	3	1				1	1			
RW25R	LEBL	EL PRAT	BARCELONA	3	1				1	1			
RW31	LEBZ	TALAVERA LA REAL	BADAJOZ	1	1								
RW06	LECH	CASTELLON	CASTELLON	1	1								
RW21	LECO	A CORUNA	A CORUNA	2	1				1				
RW31	LEDA	ALGUAIRE	LLEIDA	1	1								
RW20	LEGE	GIRONA	GIRONA	3	1				1	1			
RW09	LEGR	FEDERICO GARCIA LORCA	GRANADA	1	1								
RW05	LEGT	GETAFE	MADRID	1	1								
RW06	LEIB	IBIZA	IBIZA	1	1								
RW24	LEIB	IBIZA	IBIZA	1	1								
RW20	LEJR	JEREZ	JEREZ	1	1								

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW05R	LELC	SAN JAVIER	MURCIA	1	1								
RW23L	LELC	SAN JAVIER	MURCIA	1	1								
RW23	LELN	LEON	LEON	1	1								
RW18L	LEMD	ADOLFO SUAREZ MADRID-BARAJAS	MADRID	3	1				1	1			
RW18R	LEMD	ADOLFO SUAREZ MADRID-BARAJAS	MADRID	3	1				1	1			
RW32L	LEMD	ADOLFO SUAREZ MADRID-BARAJAS	MADRID	3	1				1	1			
RW32R	LEMD	ADOLFO SUAREZ MADRID-BARAJAS	MADRID	3	1				1	1			
RW12	LEMG	COSTA DEL SOL	MALAGA	1	1								
RW13	LEMG	COSTA DEL SOL	MALAGA	1	1								
RW31	LEMG	COSTA DEL SOL	MALAGA	1	1								
RW01	LEMH	MENORCA	MENORCA	1	1								
RW19	LEMH	MENORCA	MENORCA	1	1								
RW20	LEMO	MORON AB	SEVILLE	1	1								
RW06L	LEPA	PALMA DE MALLORCA	PALMA DE MALLORCA	1	1								
RW24L	LEPA	PALMA DE MALLORCA	PALMA DE MALLORCA	3	1				1	1			
RW24R	LEPA	PALMA DE MALLORCA	PALMA DE MALLORCA	1	1								
RW15	LEPP	PAMPLONA	PAMPLONA	1	1								
RW29	LERJ	LOGRONO	LOGRONO	1	1								
RW25	LERS	REUS	REUS	1	1								
RW10	LERT	ROTA	CADIZ	1	1								
RW21	LESA	MATACAN	SALAMANCA	1	1								

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW17	LEST	SANTIAGO	SANTIAGO	3	1				1	1			
RW35	LEST	SANTIAGO	SANTIAGO	1	1								
RW22	LETO	TORREJON	MADRID	1	1								
RW12	LEVC	MANISES	VALENCIA	1	1								
RW30	LEVC	MANISES	VALENCIA	1	1								
RW23	LEVD	VILLANUBLA	VALLADOLID	3	1				1	1			
RW04	LEVT	VITORIA	VITORIA	2	1				1				
RW19	LEVX	VIGO	VIGO	3	1				1	1			
RW29	LEXJ	SEVE BALLESTEROS-SANTANDER	SANTANDER	1	1								
RW30R	LEZG	ZARAGOZA	ZARAGOZA	1	1								
RW09	LEZL	SEVILLE	SEVILLE	1	1								
RW27	LEZL	SEVILLE	SEVILLE	1	1								
RW24	LFAC	CALAIS-DUNKERQUE	CALAIS-DUNKERQUE	1	1						192	200	
RW27	LFAQ	BRAY	ALBERT	1	1						190	198	209
RW13	LFAT	COTE D'OPALE	LE TOUQUET	1	1						197	205	
RW29	LFBA	LA GARENNE	AGEN	1	1						193	207	
RW24	LFBC	CAZAUX	CAZAUX	1	1						150	162	175
RW23	LFBD	MERIGNAC	BORDEAUX	3	1				1	1	145	158	173
RW29	LFBD	MERIGNAC	BORDEAUX	1	1						154	166	180
RW27	LFBE	ROUMANIERE	BERGERAC	1	1						174	184	
RW23	LFBG	CHATEAUBERNARD	COGNAC	1	1						145	158	171
RW27	LFBH	ILE DE RE	LA ROCHELLE	1	1						149	163	
RW21	LFBI	BIARD	POITIERS	1	1						162	172	181

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW21	LFBL	BELLEGARDE	LIMOGES	3	1				1	1	166	178	192
RW27	LFBM	MONT-DE-MARSAN	MONT-DE-MARSAN	1	1						145	155	167
RW14L	LFBO	BLAGNAC	TOULOUSE	1	1						175	192	210
RW14R	LFBO	BLAGNAC	TOULOUSE	3	1				1	1	166	179	192
RW32L	LFBO	BLAGNAC	TOULOUSE	1	1						172	189	205
RW32R	LFBO	BLAGNAC	TOULOUSE	1	1						169	184	199
RW31	LFBP	PAU/PYRENEES	PAU/PYRENEES	3	1				1	1	182	192	201
RW20	LFBT	LOURDES-PYRENEES	TARBES	1	1						561	571	581
RW28	LFBU	BRIE CHAMPNIERS	ANGOULEME	1	1						143	153	
RW29	LFBX	BASSILLAC	PERIGUEUX	1	1						286	298	
RW27	LFBZ	PAYS BASQUE	BIARRITZ	1	1						176	191	206
RW14	LFCK	CASTRES-MAZAMET	CASTRES-MAZAMET	1	1						313	327	
RW31	LFCR	AVEYRON	RODEZ	1	1						178	186	
RW30	LFDN	CHARENTE-MARITIME	ROCHEFORT	1	1						178	186	
RW05	LFGJ	TAVAUX	DOLE	1	1						171	181	191
RW22	LFJL	METZ-NANCY/LORRAINE	METZ-NANCY/LORRAINE	3	1				1	1	163	176	190
RW26	LFJR	MARCE	ANGERS	1	1						165	176	
RW34	LFKB	PORETTA	BASTIA	1	1						229	239	249
RW23	LFKF	FIGARI/SUD CORSE	FIGARI/SUD CORSE	1	1								
RW02	LFKJ	NAPOLEON BONAPARTE	AJACCIO	1	1						1047	1332	1342
RW18	LFKS	SOLENZARA	SOLENZARA	1	1								
RW18	LFLB	AIX-LES-BAINS	CHAMBERY	1	1								
RW26	LFLC	CLERMONT-FERRAND/AUVERGNE	CLERMONT-FERRAND/AUVERGN	3	1				1	1	268	276	273

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW18L	LFLL	SAINT EXUPERY	LYON	1	1						155	168	183
RW36L	LFLL	SAINT EXUPERY	LYON	3	1				1	1	171	183	194
RW36R	LFLL	SAINT EXUPERY	LYON	3	1				1	1	185	196	206
RW33R	LFLN	SAINT YAN	SAINT YAN	1	1						155	165	
RW04	LFLP	MEYTHET	ANNECY	1	1						1001	1114	
RW09	LFLS	ISERE	GRENOBLE	1	1						268	276	287
RW15	LFLW	AURILLAC	AURILLAC	1	1						311	219	
RW21	LFLX	DEOLS	CHATEAUROUX	1	1						169	176	185
RW34	LFLY	BRON	LYON	1	1						148	160	
RW18	LFMH	LOIRE	ST ETIENNE	1	1						295	303	
RW15	LFMI	LE TUBE	ISTRES	1	1								
RW13L	LFML	MARSEILLE/PROVENCE	MARSEILLE/PROVENCE	3	1				1	1	201	210	223
RW13R	LFML	MARSEILLE/PROVENCE	MARSEILLE/PROVENCE	1	1						235	243	254
RW31R	LFML	MARSEILLE/PROVENCE	MARSEILLE/PROVENCE	1	1						278	291	307
RW04L	LFMN	NICE/COTE D'AZUR	NICE/COTE D'AZUR	1	1						203	274	287
RW04R	LFMN	NICE/COTE D'AZUR	NICE/COTE D'AZUR	1	1						250	253	264
RW14	LFMO	CARITAT AB	ORANGE	1	1								
RW33	LFMP	RIVESALTES	PERPIGNAN	1	1						148	160	174
RW30R	LFMT	MONTPELLIER/MEDITERRANEE	MONTPELLIER/MEDITERRANEE	1	1						188	196	206
RW17	LFMV	CAUMONT	AVIGNON	1	1						198	208	
RW16	LFMY	SALON	SALON	1	1								
RW24	LFOA	AVORD	AVORD	1	1						201	209	218
RW12	LFOB	TILLE	BEAUVAIS	3	1				1	1	153	164	175

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW30	LFOB	TILLE	BEAUVAIS	1	1						166	180	190
RW22	LFOE	FAUVILLE	EVREUX	1	1						145	156	170
RW25	LFOJ	BRICY	ORLEANS	1	1						202	210	220
RW10	LFOK	VATRY	CHALONS	3	1				1	1	169	171	184
RW28	LFOK	VATRY	CHALONS	1	1						195	205	219
RW22	LFOP	ROUEN/VALLEE DE SEINE	ROUEN/VALLEE DE SEINE	1	1						148	157	
RW20	LFOT	VAL DE LOIRE	TOURS	1	1						165	177	189
RW07	LFPB	LE BOURGET	PARIS	1	1						316	316	325
RW27	LFPB	LE BOURGET	PARIS	1	1						152	167	177
RW25	LFPC	CREIL	CREIL	1	1						217	226	233
RW08L	LFPG	CHARLES-DE-GAULLE	PARIS	3	1			1	1	1	171	189	200
RW08R	LFPG	CHARLES-DE-GAULLE	PARIS	3	1			1	1	1	155	182	191
RW09L	LFPG	CHARLES-DE-GAULLE	PARIS	3	1				1	1	151	179	189
RW09R	LFPG	CHARLES-DE-GAULLE	PARIS	3	1				1	1	162	180	190
RW26L	LFPG	CHARLES-DE-GAULLE	PARIS	3	1			1	1	1	152	178	188
RW26R	LFPG	CHARLES-DE-GAULLE	PARIS	3	1			1	1	1	157	182	190
RW27L	LFPG	CHARLES-DE-GAULLE	PARIS	3	1				1	1	159	180	190
RW27R	LFPG	CHARLES-DE-GAULLE	PARIS	3	1				1	1	154	176	187
RW25R	LFPN	TOUSSUS-LE-NOBLE	TOUSSUS-LE-NOBLE	1	1						169	184	
RW02	LFPO	ORLY	PARIS	1	1						153	168	175
RW06	LFPO	ORLY	PARIS	3	1				1	1	148	163	173
RW24	LFPO	ORLY	PARIS	1	1						161	175	180
RW26	LFPO	ORLY	PARIS	3	1				1	1	144	156	166

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW05	LFPT	CORMEILLES-EN-VEXIN	PONTOISE	1	1						145	155	
RW09	LFPV	VELIZY	VILLACOUBLAY	1	1						150	160	
RW27	LFPV	VELIZY	VILLACOUBLAY	1	1						159	172	
RW17	LFQB	BARBEREY	TROYES	1	1						154	162	
RW01	LFQE	ROUVRES	ETAIN	1	1								
RW24	LFQP	BOURSCHEID	PHALSBOURG	1	1								
RW26	LFQQ	LESQUIN	LILLE	3	1				1	1	156	169	183
RW22	LFQT	CALONNE	MERVILLE	1	1						190		
RW25L	LFRB	BRETAGNE	BREST	3	1				1	1	160	177	191
RW28	LFRC	MAUPERTUS	CHERBOURG	1	1						160	174	188
RW30	LFRG	NORMANDIE	DEAUVILLE	1	1						168	182	195
RW25	LFRH	LANN-BIHOUE	LORIENT	1	1						154	166	180
RW26	LFRJ	LANDIVISIAU NAVY	LANDIVISIAU	1	1								
RW31	LFRK	CARPIQUET	CAEN	1	1						143	153	160
RW28	LFRN	ST JACQUES	RENNES	1	1						162	170	179
RW29	LFRO	LANNION	LANNION	1	1						187	197	
RW28	LFRQ	PLUGUFFAN	QUIMPER	1	1						190	198	
RW03	LFRS	NANTES/ATLANTIQUE	NANTES/ATLANTIQUE	3	1				1	1	161	178	192
RW26	LFRZ	MONTOIR	ST NAZAIRE	1	1						161	171	181
RW15	LFSB	BASLE-MULHOUSE	BASLE-MULHOUSE	3	1				1	1	156	180	191
RW33	LFSB	BASLE-MULHOUSE	BASLE-MULHOUSE	1	1						194	209	221
RW35	LFSD	LONGVIC	DIJON	1	1						152	164	177
RW26	LFSG	MIRECOURT	EPINAL	1	1						198	208	218

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW29	LFSI	ROBINSON	ST DIZIER	1	1								
RW29	LFSL	SOUILLAC	BRIVE	1	1						160	174	
RW20	LFSO	OCHEY AB	NANCY	1	1								
RW05	LFST	ENTZHEIM	STRASBOURG	1	1						153	166	177
RW23	LFST	ENTZHEIM	STRASBOURG	3	1				1	1	156	172	186
RW11	LFSX	ST SAUVEUR	LUXEUIL	1	1								
RW05	LFTH	LE PALYVESTRE NAVY	HYERES	1	1						338	348	358
RW26	LFVP	ST PIERRE	ST PIERRE I	2	1				1				
RW03L	LGAV	ELEFTHERIOS VENIZELOS INTL	ATHENS	2	1				1				
RW03R	LGAV	ELEFTHERIOS VENIZELOS INTL	ATHENS	2	1				1				
RW21L	LGAV	ELEFTHERIOS VENIZELOS INTL	ATHENS	2	1				1				
RW21R	LGAV	ELEFTHERIOS VENIZELOS INTL	ATHENS	2	1				1				
RW26	LGBL	NEA ANCHIALOS	ALMIROS	1	1								
RW36	LGEL	ELEFSIS	ELEFSIS	1	1								
RW35L	LGKL	KALAMATA	KALAMATA	1	1								
RW25	LGRP	DIAGORAS	RODOS	1	1								
RW16	LGTS	MAKEDONIA	THESSALONIKI	2	1				1				
RW13L	LHBP	LISZT FERENC INTL	BUDAPEST	2	1				1				
RW13R	LHBP	LISZT FERENC INTL	BUDAPEST	2	1				1				
RW31L	LHBP	LISZT FERENC INTL	BUDAPEST	2	1				1				
RW31R	LHBP	LISZT FERENC INTL	BUDAPEST	3	1				1	1			
RW05R	LHDC	DEBRECEN	DEBRECEN	1	1								
RW12	LHKE	KECSKEMET	KECSKEMET	1	1								

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW30	LHKE	KECSKEMET	KECSKEMET	1	1								
RW16	LHPA	PAPA	PAPA	1	1								
RW34	LHPA	PAPA	PAPA	1	1								
RW34	LHPP	POGANY	PECS	1	1								
RW30	LHPR	GYOR-PER	GYOR-PER	1	1								
RW16	LHSM	BALATON	HEVIZ	1	1								
RW07	LIBD	PALESE	BARI	1	1								
RW35	LIBG	GROTTAGLIE	TARANTO	1	1								
RW22	LIBP	PESCARA	PESCARA	1	1								
RW31	LIBR	CASALE	BRINDISI	1	1								
RW28	LICA	LAMEZIA TERME	LAMEZIA TERME	1	1								
RW05	LICB	COMISO	COMISO	1	1								
RW08	LICC	FONTANAROSSA	CATANIA	1	1								
RW26	LICG	PANTELLERIA	PANTELLERIA	1	1								
RW20	LICJ	PUNTA RAISI	PALERMO	1	1								
RW25	LICJ	PUNTA RAISI	PALERMO	1	1								
RW31L	LICT	BIRGI	TRAPANI	1	1								
RW10R	LICZ	SIGONELLA	CATANIA	1	1								
RW20	LIEA	FERTILIA	ALGHERO	1	1								
RW32	LIEE	ELMAS	CAGLIARI	1	1								
RW05	LIEO	COSTA SMERALDA	OLBIA	1	1								
RW23	LIEO	COSTA SMERALDA	OLBIA	1	1								
RW17L	LIMC	MALPENSA	MILAN	1	1								

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW35L	LIMC	MALPENSA	MILAN	3	1				1	1			
RW35R	LIMC	MALPENSA	MILAN	3	1				1	1			
RW28	LIME	ORIO AL SERIO	BERGAMO	3	1				1	1			
RW36	LIMF	CASELLE	TORINO	3	1				1	1			
RW28	LIMJ	SESTRI	GENOA	1	1								
RW36	LIML	LINATE	MILAN	3	1				1	1			
RW35	LIMN	CAMERI	CAMERI	1	1								
RW20	LIMP	PARMA	PARMA	1	1								
RW27	LIMW	AOSTA	AOSTA	1	1								
RW21	LIMZ	LEVALDIGI	CUNEO	1	1								
RW05	LIPA	AVIANO AB	AVIANO	1	1								
RW12	LIPE	BORGO PANIGALE	BOLOGNA	3	1				1	1			
RW30	LIPE	BORGO PANIGALE	BOLOGNA	1	1								
RW07	LIPH	S.ANGELO	TREVISO	2	1				1				
RW12	LIPK	FORLI	FORLI	1	1								
RW32	LIPO	MONTICHIARI	BRESCIA	3	1				1	1			
RW09	LIPQ	RONCHI DEI LEGIONARI	TRIESTE	2	1				1				
RW31	LIPR	RIMINI	RIMINI	1	1								
RW04	LIPX	VILLAFRANCA	VERONA	3	1				1	1			
RW22	LIPY	FALCONARA	ANCONA	1	1								
RW04R	LIPZ	TESSERA	VENICE	3	1				1	1			
RW15	LIRA	CIAMPINO	ROME	1	1								
RW31	LIRE	PRATICA DI MARE	PRATICA DI MARE	1	1								

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW16C	LIRF	FIUMICINO	ROME	1	1								
RW16L	LIRF	FIUMICINO	ROME	1	1								
RW16R	LIRF	FIUMICINO	ROME	3	1				1	1			
RW25	LIRF	FIUMICINO	ROME	1	1								
RW34C	LIRF	FIUMICINO	ROME	1	1								
RW34L	LIRF	FIUMICINO	ROME	1	1								
RW34R	LIRF	FIUMICINO	ROME	1	1								
RW06	LIRN	CAPODICHINO	NAPLES	1	1								
RW24	LIRN	CAPODICHINO	NAPLES	1	1								
RW04R	LIRP	SAN GIUSTO	PISA	1	1								
RW05	LIRQ	PERETOLA	FLORENCE	1	1								
RW01	LIRZ	SAN FRANCESCO	PERUGIA	1	1								
RW30	LJLJ	BRNIK	LJUBLJANA	3	1				1	1			
RW32	LJMB	OREHOVA VAS	MARIBOR	1	1								
RW31	LKCV	CASLAV	CASLAV	1	1								
RW24	LKKB	KBELY	KBELY	1	1								
RW29	LKKV	KARLOVY VARY	KARLOVY VARY	1	1								
RW22	LKMT	MOSNOV	OSTRAVA	2	1				1				
RW31	LKNA	NAMEST	NAMEST	1	1								
RW27	LKPD	PARDUBICE	PARDUBICE	1	1								
RW06	LKPR	RUZYNE	PRAGUE	1	1								
RW12	LKPR	RUZYNE	PRAGUE	1	1								
RW24	LKPR	RUZYNE	PRAGUE	3	1				1	1			

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW30	LKPR	RUZYNE	PRAGUE	1	1								
RW27	LKTB	TURANY	BRNO	1	1								
RW28	LKVO	VODOCHODY	PRAGUE	1	1								
RW08	LLBG	BEN GURION	TEL AVIV	1	1								
RW12	LLBG	BEN GURION	TEL AVIV	2	1				1				
RW21	LLBG	BEN GURION	TEL AVIV	1	1								
RW26	LLBG	BEN GURION	TEL AVIV	1	1								
RW30	LLBG	BEN GURION	TEL AVIV	1	1								
RW21R	LLOV	OVDA	OVDA	1	1								
RW13	LMML	LUQA	MALTA	1	1								
RW31	LMML	LUQA	MALTA	1	1								
RW35C	LOWG	GRAZ	GRAZ	3	1				1	1			
RW26	LOWI	INNSBRUCK	INNSBRUCK	1	1								
RW28R	LOWK	KLAGENFURT	KLAGENFURT	3	1				1	1			
RW08	LOWL	LINZ	LINZ	1	1								
RW26	LOWL	LINZ	LINZ	3	1				1	1			
RW15	LOWS	SALZBURG	SALZBURG	3	1				1	1			
RW11	LOWW	SCHWECHAT	VIENNA	3	1				1	1			
RW16	LOWW	SCHWECHAT	VIENNA	3	1				1	1			
RW29	LOWW	SCHWECHAT	VIENNA	3	1				1	1			
RW34	LOWW	SCHWECHAT	VIENNA	3	1				1	1			
RW18	LPAZ	SANTA MARIA	SANTA MARIA	1	1								
RW19R	LPBJ	BEJA AB	BEJA	1	1								

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW28	LPFR	FARO	FARO	2	1				1				
RW15	LPLA	LAJES AB	LAJES	1	1								
RW33	LPLA	LAJES AB	LAJES	1	1								
RW01	LPMR	MONTE REAL AB	MONTE REAL	1	1								
RW19	LPMR	MONTE REAL AB	MONTE REAL	1	1								
RW26	LPMT	MONTIJO AB	MONTIJO	1	1								
RW36	LPOV	OVAR	OVAR	1	1								
RW30	LPPD	JOAO PAULO II	PONTA DELGADA	1	1								
RW17	LPPR	FRANCISCO SA CARNEIRO	PORTO	2	1				1				
RW03	LPPT	LISBON	LISBON	1	1								
RW21	LPPT	LISBON	LISBON	3	1				1	1			
RW17	LQBK	BANJA LUKA	BANJA LUKA	1	1								
RW34	LQMO	MOSTAR	MOSTAR	1	1								
RW12	LQSA	SARAJEVO	SARAJEVO	1	1								
RW09	LQTZ	TUZLA	TUZLA	1	1								
RW27	LRAR	ARAD	ARAD	2	1				1				
RW34	LRBC	BACAU	BACAU	1	1								
RW10	LRBM	BAIA MARE	BAIA MARE	2	1				1				
RW07	LRBS	BANEASA-AUREL VLAICU	BUCHAREST	2	1				1				
RW25	LRBS	BANEASA-AUREL VLAICU	BUCHAREST	2	1				1				
RW36	LRCK	MIHAIL KOGALNICEANU-CONSTANTA	CONSTANTA	1	1								
RW25	LRCL	AVRAM IANCU	CLUJ-NAPOCA	2	1				1				
RW27	LRCV	CRAIOVA	CRAIOVA	2	1				1				

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW14	LRIA	IASI	IASI	2	1				1				
RW19	LROD	ORADEA	ORADEA	1	1								
RW08L	LROP	HENRI COANDA	BUCHAREST	3	1				1	1			
RW08R	LROP	HENRI COANDA	BUCHAREST	3	1				1	1			
RW26L	LROP	HENRI COANDA	BUCHAREST	1	1								
RW26R	LROP	HENRI COANDA	BUCHAREST	1	1								
RW27	LRSB	SIBIU	SIBIU	2	1				1				
RW19	LRSM	SATU MARE	SATU MARE	2	1				1				
RW34	LRTC	DELTA DUNARII	TULCEA	1	1								
RW07	LRTM	TRANSILVANIA-TARGU MURES	TARGU MURES	2	1				1				
RW11	LRTR	TRAIAN VUIA	TIMISOARA	2	1				1				
RW29	LRTR	TRAIAN VUIA	TIMISOARA	3	1				1	1			
RW24	LSGC	LES EPLATURES	LES EPLATURES	1	1								
RW05	LSGG	GENEVA	GENEVA	1	1								
RW23	LSGG	GENEVA	GENEVA	3	1				1	1			
RW25	LSGS	SION	SION	1	1								
RW29	LSMD	DUBENDORF	DUBENDORF	1	1								
RW22	LSME	EMMEN	EMMEN	1	1								
RW05	LSMP	PAYERNE	PAYERNE	1	1								
RW23	LSMP	PAYERNE	PAYERNE	1	1								
RW01	LSZA	LUGANO	LUGANO	1	1								
RW14	LSZB	BELP	BERN	1	1								
RW14	LSZH	ZURICH	ZURICH	3	1		1		1	1			

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW16	LSZH	ZURICH	ZURICH	3	1				1	1			
RW28	LSZH	ZURICH	ZURICH	1	1								
RW34	LSZH	ZURICH	ZURICH	1	1								
RW10	LSZR	ALTENRHEIN	ST GALLEN	1	1								
RW03L	LTAC	ESENBOGA	ANKARA	1	1								
RW03R	LTAC	ESENBOGA	ANKARA	3	1				1	1			
RW21L	LTAC	ESENBOGA	ANKARA	1	1								
RW21R	LTAC	ESENBOGA	ANKARA	1	1								
RW11	LTAD	ETIMESGUT	ANKARA	1	1								
RW03	LTAE	AKINCI	ANKARA	1	1								
RW05	LTAF	ADANA	ADANA	1	1								
RW05	LTAG	INCIRLIK AB	ADANA	1	1								
RW23	LTAG	INCIRLIK AB	ADANA	1	1								
RW31R	LTAH	AFYON	AFYON	1	1								
RW18C	LTAI	ANTALYA	ANTALYA	1	1								
RW36C	LTAI	ANTALYA	ANTALYA	1	1								
RW36R	LTAI	ANTALYA	ANTALYA	2	1				1				
RW28L	LTAJ	GAZIANTEP	GAZIANTEP	1	1								
RW01L	LTAN	KONYA	KONYA	1	1								
RW05	LTAP	MERZIFON	AMASYA	1	1								
RW01	LTAR	NURI DEMIRAG	SIVAS	1	1								
RW21L	LTAT	MALATYA	MALATYA	1	1								
RW25	LTAU	KAYSERI	KAYSERI	1	1								

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW24	LTAY	CARDAK	DENIZLI	1	1								
RW11	LTAZ	KAPADOKYA	KAPADOKYA	1	1								
RW05	LTBA	ATATURK	ISTANBUL	3	1				1	1			
RW17L	LTBA	ATATURK	ISTANBUL	1	1								
RW23	LTBA	ATATURK	ISTANBUL	1	1								
RW35L	LTBA	ATATURK	ISTANBUL	1	1								
RW35R	LTBA	ATATURK	ISTANBUL	2	1				1				
RW36	LTBG	BANDIRMA	BALIKESIR	1	1								
RW04	LTBH	CANAKKALE	CANAKKALE	1	1								
RW16L	LTBJ	ADNAN MENDERES	IZMIR	1	1								
RW34R	LTBJ	ADNAN MENDERES	IZMIR	2	1				1				
RW17	LTBL	CIGLI	IZMIR	1	1								
RW27	LTBQ	CENGIZ TOPEL	KOCAELI	1	1								
RW25R	LTBR	YENISEHIR	BURSA	1	1								
RW01	LTBS	DALAMAN	MUGLA	1	1								
RW05	LTBU	CORLU	TEKIRDAG	1	1								
RW09	LTBY	HASAN POLATKAN	ESKISEHIR	1	1								
RW13	LTBZ	ZAFER	ZAFER	2	1				1				
RW31	LTBZ	ZAFER	ZAFER	2	1				1				
RW25	LTCA	ELAZIG	ELAZIG	1	1								
RW28	LTCB	ORDU-GIRESUN	ORDU-GIRESUN	1	1								
RW34	LTCC	DIYARBAKIR	DIYARBAKIR	1	1								
RW08L	LTCE	ERZURUM	ERZURUM	1	1								

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW26R	LTCE	ERZURUM	ERZURUM	1	1								
RW06	LTCF	KARS HARAKANI	KARS	1	1								
RW11	LTCG	TRABZON	TRABZON	1	1								
RW02	LTCJ	BATMAN	BATMAN	1	1								
RW29R	LTCK	MUS	MUS	1	1								
RW16	LTCO	AHMED-I HANI	AGRI	1	1								
RW04	LTCS	GAP	SANLIURFA	1	1								
RW12	LTCU	BINGOL	BINGOL	1	1								
RW11	LTCV	SERAFETTIN ELCI	SIRNAK	1	1								
RW22	LTDA	HATAY	HATAY	1	1								
RW05	LTFD	KOCA SEYIT	BALIKESIR	1	1								
RW10L	LTFE	BODRUM	MILAS	2	1				1				
RW28R	LTFE	BODRUM	MILAS	2	1				1				
RW13	LTFH	CARSAMBA	SAMSUN	2	1				1				
RW06	LTFJ	SABIHA GOKCEN	ISTANBUL	2	1				1				
RW24	LTFJ	SABIHA GOKCEN	ISTANBUL	1	1								
RW33	LUBL	BALTI INTL	BALTI	1	1								
RW08	LUKK	CHISINAU INTL	CHISINAU	2	1				1				
RW26	LUKK	CHISINAU INTL	CHISINAU	1	1								
RW01	LWOH	ST PAUL THE APOSTLE	OHRID	1	1								
RW34	LWSK	ALEXANDER THE GREAT	SKOPJE	1	1								
RW12	LYBE	NIKOLA TESLA	BELGRADE	3	1				1	1			
RW30	LYBE	NIKOLA TESLA	BELGRADE	1	1								

Total	580			1249	847	4	22	4	236	166	408		
RUNWAY	**ICAO**	**Airport**	**Location**	**LOC CAT**	**ILS CAT I**	**MLS CAT I**	**GLS CAT I**	**SBAS CAT I**	**ILS CAT II**	**ILS CAT III**	**ILS CAT I OCH B**	**ILS CAT I OCH C**	**ILS CAT I OCH D**
RW12L	LYBT	BATAJNICA	BELGRADE	1	1								
RW36	LYPG	PODGORICA	PODGORICA	1	1								
RW22	LZIB	M.R. STEFANIK	BRATISLAVA	1	1								
RW31	LZIB	M.R. STEFANIK	BRATISLAVA	3	1				1	1			
RW01	LZKZ	KOSICE	KOSICE	2	1				1				
RW01	LZPP	PIESTANY	PIESTANY	1	1								
RW36	LZSL	SLIAC	SLIAC	1	1								
RW27	LZTT	TATRY	POPRAD	1	1								
RW06	LZZI	ZILINA	ZILINA	1	1								