Provision of an Examination of the Irish Aviation Authority in accordance with Section 32 of the Irish Aviation Authority Act, 1993

Examination of the IAA on behalf of DTTAS

March 2020
Document information

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Executive summary

Under Section 32 of the Irish Aviation Authority Act 1993, the Department of Transport, Tourism and Sport (DTTAS) is required to “appoint a person to carry out an examination of the performance by the company [IAA] of its functions in so far as they relate to the application and enforcement of technical and safety standards in relation to aircraft and air navigation”. This document is the final report summarising Helios and Egis Avia’s examination of the IAA’s performance carried out in Q2 and Q3 2019. It summarises the outcomes and recommendations of the independent examination.

The examination investigated the safety performance and safety monitoring processes implemented by both the regulator, Safety Regulation Division (SRD), and the Air Navigation Service Provider (ANSP) within the IAA. The scope of the examination focussed on assessing the IAA’s response to the recommendations from the previous Section 32 examination carried out in 2015 and evaluating its response to new regulatory developments that have come into force in the intervening period. Moreover, the analysis also took account of the external factors that may affect how the IAA performs its safety duties, such as the future restructuring of aviation regulatory functions, in line with the Irish government’s policy. The examination builds on the results of previous EASA standardisation inspections, rather than duplicating this work. It is based upon information obtained from a number of sources including, documentation provided by the IAA, and face to face meetings and teleconferences with a range of actors – the DTTAS, IAA staff, the staff of regulated entities and of other stakeholders that interface with the IAA. In total, eight Irish aviation stakeholders were consulted.

The context within which the IAA operates is changing, requiring the organisation to adapt accordingly. In particular, the IAA is preparing for the restructuring of the company which will bring about the separation of the IAA ANSP and SRD functions in line with a decision by the Government made in 2017. Brexit also generated some challenges for the IAA, to accommodate an influx of pilots and maintenance engineers wanting to transfer their licences. The IAA, in response to the introduction of new regulation such as the revised EASA Basic Regulation (Regulation (EU) 2018/1139) and new Europe-wide rules on drone activities, has had to reprioritise its resources. Considering the challenges faced by the IAA, we believe this reprioritisation has been effectively managed.

The IAA is a mature organisation in the way it applies and enforces technical and safety standards to aircraft and air navigation. In some areas, such as in the regulator’s development of organisation risk registers and the ANSP safety performance management, it is at the forefront of aviation safety. This is reflected in the consistently good scores obtained during EASA standardisation inspections and Civil Air Navigation Services Organisation (CANSO) evaluations. The organisation has implemented a comprehensive safety system, with qualified staff who possess relevant industry experience. This is supported by the organisation’s commitment to continuous training. SRD’s oversight approach is proportional to the size and remit of regulated entities and stakeholders reported a healthy relationship with inspectors.

In line with the IAA’s ethos of continual improvement, we observed notable changes since the previous Section 32 examination carried out in 2015. This includes the creation of key roles within the organisation (e.g. legal officer) and efforts to engage more actively with stakeholders in assisting them with the implementation of new regulations.

The IAA has multiple means of consultation with regulated entities on safety issues. The majority of consulted stakeholders had a positive view of the IAA and recognised the expertise and availability of its staff. Efforts by the IAA to support regulated entities to implement new regulatory requirements were particularly commended by the regulated entities that were consulted.
Most of the recommendations from the 2015 Section 32 examination have been completed. This included the recruitment of specified personnel (such as, an Aerodrome Department Manager) and the creation of new procedures (for example, the new communication policy).

Despite this progress, the IAA is facing significant challenges. Acknowledging this, in concluding our examination, we make 16 recommendations. The key areas we consider needing attention are developed in the remainder of this section.

**Separation should be expedited**

The decision made by the Irish government towards the legal separation of the IAA ANSP and SRD is consistent with best practices as recommended by ICAO and provides the regulator with a greater independence to deal with the various issues mentioned in the remainder of this section. Its relevance in the context of the Section 32 examination is to ensure that there is no loss of safety performance during the transition to the new regulator. At the time of our examination, both the IAA and consulted stakeholders mentioned that no degradation of safety levels as a result of preparations being made for the separation had been noted. To ensure that this remains the case, staff in charge of separation activities will need to remain conscious of the primacy of maintaining high safety standards as the project proceeds into implementation and transition. As set out in the Government’s National Aviation Policy (2015), safety is the priority for aviation in Ireland.

The pace of the separation project has been slower than DTTAS and some IAA executive directors expected. Some of the transition timescales are driven by legislation and therefore are outside of the direct control of the IAA, however this should not be an obstacle to developing detailed transition arrangements. It is also noted that the project is complex, and the impact on safety regulation today and the potential impact in the future must be considered in all decisions being made. The IAA is on record as being committed to deliver the proposed separation. However, at the time of the examination, there were uncertainties within the IAA over the transition towards the new regulator.

We recommend that the separation project is concluded quickly along agreed timelines and that meaningful transition arrangements are agreed and implemented by the IAA and the Commission for Aviation Regulation (CAR) – including in respect of preparing for the transfer of statutory responsibilities - while ensuring that safety levels are maintained throughout that process. We also recommend that clarity is provided on the legislative timetable.

**The establishment of an independent just culture body should be prioritised**

A history of discontent exists between a pilots’ union and the IAA. This was evident during the previous Section 32 examination carried out in 2015 and was again observed in 2019. The IAA has taken some measures since 2015 to address this matter. Although it is not uncommon for such ongoing tension in the relationship between unions and aviation safety regulators, the communication channels between the IAA and the union need to be maintained.

Regulation (EU) 376/2014 on the reporting, analysis and follow-up of occurrences in civil aviation mandates Member States under Article 16(12) to “designate a body responsible for the implementation” of certain functions in the delivery of just culture. This body shall monitor the application of just culture principles at State level and provide appropriate fines and penalties for transgressors. While this part of the requirement is currently not implemented in Ireland as the legislation to designate the body is not in place, we note that a statutory instrument by DTTAS designating the IAA as the Just Culture body is at an advance stage of drafting.

We recognise that the current aviation safety occurrence system operating in Ireland makes use of different avenues of reporting. It offers protections for occurrence reporters under Regulation (EU) 376/2014 and Irish national law under protected disclosures legislation to ensure confidentiality, protection of source and appropriate use of occurrence reporting data.
We recommend that a just culture body is implemented as soon as possible to bring Ireland fully in line with Regulation (EU) 376/2014. Giving the new structure a level of independence would support the building of additional trust with stakeholders.

**Appropriate level of resources for the regulator should be maintained**

The growth of regulated entities and added complexity of new regulations are factors which put pressure on resourcing, and this is also true for the SRD. The SRD is struggling to recruit which compounds the strain on resources. This has resulted in non-urgent tasks being de-prioritised in some cases. Some productivity gains may be achieved through the deployment of the IAA’s IT ‘digitalisation’ project, but its completion is several years away. The IAA could look to accelerate the deployment of the digitalisation project for the SRD to achieve productivity gains earlier. This would provide some mitigation for the difficulties encountered by the SRD in recruiting staff.

A human resources assessment carried out in 2018 by SRD shows some gaps in resources. We recommend that SRD follows through on its plan to increase staff count, independently of the progress achieved on the separation.

The planned additions in staffing are a positive step forward but will come with their own challenges. Large increases in staff may require updates to the working methods of the various SRD divisions, especially to ensure effective communication is maintained between different staff members. Perhaps more importantly, ensuring inspectors set consistent expectations and provide harmonised advice to all regulated entities will be crucial as discrepancies have been noted in the current setup.

**Planning for different Brexit scenarios**

The transition required for Brexit has put significant strains on the IAA to cope, in particular, with the increase in workload linked to large numbers of UK pilots and regulated entities applying for Irish licenses. Although the demand for licenses has reduced over the past months, the IAA expected an increase in the run up to Brexit. Establishing plans to cope with various possible Brexit scenarios and / or different levels of demand for Irish licences should be explored. That said, we recognise the difficulties associated with such planning given the uncertainty over the exact outcomes of Brexit.
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<td>RVSM</td>
<td>Reduced Vertical Separation Minimum</td>
</tr>
<tr>
<td>SAFE</td>
<td>Safety Assessment of Foreign Aircraft</td>
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<tr>
<td>SAFEs</td>
<td>Safety in Aviation Forum for Europe</td>
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<tr>
<td>SAR</td>
<td>Search And Rescue</td>
</tr>
<tr>
<td>SARPs</td>
<td>Standard and Recommended Practices</td>
</tr>
<tr>
<td>SES</td>
<td>Single European Sky</td>
</tr>
<tr>
<td>SERA</td>
<td>Standardised European Rules of the Air</td>
</tr>
<tr>
<td>SLA</td>
<td>Service Level Agreement</td>
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<tr>
<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>SMM</td>
<td>Safety Management Manual</td>
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<tr>
<td>SMS</td>
<td>Safety Management System</td>
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<td>SMU</td>
<td>Safety Management Unit</td>
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<tr>
<td>SPAS</td>
<td>State Plan for Aviation Safety</td>
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<tr>
<td>SPI</td>
<td>Safety Performance Indicators</td>
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<td>SPO</td>
<td>Special Operations</td>
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<td>SRD</td>
<td>Safety Regulation Division</td>
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<td>SSP</td>
<td>State Safety Programme</td>
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<tr>
<td>SYS</td>
<td>Systemic Enablers for Safety Management</td>
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<tr>
<td>TARGIT</td>
<td>TARGIT tool</td>
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<tr>
<td>TC</td>
<td>Type Certificate</td>
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<tr>
<td>TeB</td>
<td>Technical Body (EASA)</td>
</tr>
<tr>
<td>TOKAI</td>
<td>Tool Kit for ATM Occurrence Investigation</td>
</tr>
<tr>
<td>UCE</td>
<td>Unusual Circumstances and Emergencies</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>US</td>
<td>United States (of America)</td>
</tr>
<tr>
<td>USM</td>
<td>Unit Safety Manager</td>
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<tr>
<td>USMC</td>
<td>Unit Safety Management Committees</td>
</tr>
<tr>
<td>USOAP</td>
<td>Universal Safety Oversight Audit Programme</td>
</tr>
<tr>
<td>VFR</td>
<td>Visual Flight Rules</td>
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<tr>
<td>VOR</td>
<td>Voluntary Occurrence Report</td>
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</table>
Introduction

This document has been prepared by Helios and Egis Avia for the Department of Transport, Tourism and Sport (DTTAS). It summarises the outcomes and recommendations of the independent examination of the Irish Aviation Authority (IAA) in accordance with Section 32 of the Irish Aviation Authority Act 1993. The aim of the examination was to investigate the safety performance and safety monitoring processes implemented by both the regulator, Safety Regulation Division (SRD), and the Air Navigation Service Provider (ANSP) within the IAA. The scope of the examination focussed on assessing the IAA’s response to the recommendations from the previous Section 32 examination carried out in 2015 and evaluating its response to new regulatory developments that have come into force since. Moreover, the analysis also took account of the external factors that may affect how the IAA performs its safety duties, such as the future restructuring of aviation regulatory functions in line with the Government’s policy. The aim of the examination was not to duplicate other audits such as the EASA standardisation or ICAO audits, but to fill the gaps that those audits may not have covered. The examination builds on information obtained from documentation provided by the IAA and through face to face meetings and teleconferences with DTTAS, IAA staff, the staff of regulated entities and of other stakeholders that interface with the IAA.

1.1 Examination timeframes

Our team carried out the on-site examination at the IAA HQ in Dublin from 10th to 14th June 2019. This was followed by a presentation separately to the IAA and DTTAS in July 2019 concerning the examination framework. Follow-up queries were subsequently made to the IAA to clarify certain aspects and to add further detail.

The information contained in this report relates to the state of play encountered at the time of the examination. Our findings have not been updated to reflect changes that might have taken place between the time of the examination and the publication of our report.

1.2 Areas audited

Both SRD and the ANSP were audited as part of this examination. The specific domains that were examined are outlined below:

- Safety Regulation Division;
  - Aerodrome Division (AD);
  - Air Navigation Services Division (ANSD);
  - Airworthiness Department (AWSD);
  - Flight Operations Department (FOD); and

• Regulatory Performance Personnel Licensing Department (RPPLD).

• Air Navigation Service Provider
  – ATM Operations and Strategy;
  – Safety Management Unit (SMU);
  – Quality management.

1.3 Approach

This section provides an overview of the approach adopted for the examination. Additional details can be found in appendix C. The task flow used for conducting the examination is shown in Figure 1 below.

Figure 1: Approach used in the examination

The first level of examination was to review the recommendations from the previous Section 32 examination and assess how actions have been implemented (Task 2).

The second level of examination was to review the IAA’s response to regulatory changes stemming from updates to ICAO, EASA, EUROCONTROL standards, European Commission regulations, and other European best practices (Task 3). Where new regulatory provisions have been introduced, the examination of the regulator assessed whether mechanisms have been put in place or have been planned to ensure compliance with the new regulations. The examination of the service provider assessed whether the services provided are compliant with such regulations.

It was noted that a Review of the Oversight of Search and Rescue Aviation Operations in Ireland (2018) indicated a regulatory change through a number of recommendations addressed to the IAA. The examination team was unable to conclude its examination work with regard to the IAA SAR regulation, which will be the subject of a separate report to the Minister under the Section 32 provision of the 1993 Act.

Stakeholder consultations (Task 4) included meetings and interviews with a range of IAA staff and personnel from regulated entities to assess the elements described above in Tasks 2 and 3.
1.4 Stakeholders entities consulted during the examination

During this examination, Helios and Egis Avia consulted with eight entities that work directly or indirectly with the IAA. The intention was to consult with organisations from a wide breadth of sectors in the Irish aviation industry to allow for a representative view of the IAA’s performance in terms of delivering its statutory functions.

Feedback received from stakeholders was provided in confidence. This information has been treated confidentially and reported in such a way that it cannot be used to trace individuals or organisations. It has been disidentified throughout this report and entities are referred to by stakeholder groups rather than individual organisations, unless agreed with them.

The entities included those regulated by SRD (referred to as regulated entities in the remainder of the report) and other aviation stakeholders interfacing with the IAA. The stakeholder groups and the number of stakeholders consulted in each group is detailed in Table 1 below.

<table>
<thead>
<tr>
<th>Stakeholder group</th>
<th>Number of stakeholders interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airports</td>
<td>1</td>
</tr>
<tr>
<td>ANSPs</td>
<td>2</td>
</tr>
<tr>
<td>Lessors*</td>
<td>1</td>
</tr>
<tr>
<td>Flight Operators (including airworthiness specialists)</td>
<td>2</td>
</tr>
<tr>
<td>Maintenance and Training organisations</td>
<td>1</td>
</tr>
<tr>
<td>Unions*</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8</strong></td>
</tr>
</tbody>
</table>

Table 1: Stakeholder groups consulted (*non-regulated entities)

Some stakeholder groups are not regulated entities and therefore fall outside of the oversight of the IAA. However, consulting such organisations gives a wider breadth of views from the Irish aviation community. It should be noted that some of the concerns raised by non-regulated entities may be due to issues internal to these organisations or their relationships with their stakeholders (e.g. employers) and therefore outside of the control of the IAA and indeed outside the aviation safety regulatory framework. That said, we believe it is important to relay this feedback to provide opinions as to the current state of aviation safety in Ireland, of which the IAA is a key actor.

In this examination, Helios consulted with a group of stakeholders and representatives of stakeholders that were different to those consulted in 2015 for the previous Section 32 examination. The feedback given by stakeholders interviewed in 2019 provides a fresh perspective on the IAA’s activities.

Consultations took place through face to face meetings at the IAA’s HQ and by teleconferences (in some cases supported by the distribution of questionnaires to gather preliminary feedback). The stakeholder representatives interviewed had the required level of responsibilities and experience to comment on the activities and interactions that their organisations have with the IAA.

The feedback obtained through these consultations served as a body of opinions to evaluate the information received from the IAA. Moreover, it provided a set of industry
views on the way the IAA addressed the recommendations from the previous Section 32 examination, and on the regulatory changes that have entered into force since 2015.

Whereas in some instances, stakeholders provided some evidence or material to justify their comments, in most cases the feedback received was not validated. Therefore stakeholder views were considered, taking into account the focus that any individual stakeholder will have (as opposed to the IAA’s need to consider the view of the whole of regulated entities and to discharge its responsibilities as a civil aviation authorities), and the fact that regulation by its nature imposes controls, checks and audits on stakeholder activity which some stakeholders will not agree with.

The views raised by stakeholders were not discussed with the IAA, and although the IAA was given an opportunity to review this report, the company has not been given an opportunity to respond to these issues directly. The examination team considered this feedback as views expressed and has not attempted to verify them.

1.5 Report structure

This report is structured into the following sections:

- Section 2 explores the current IAA organisation structure and the responsibilities of the different actors;
- Section 3 provides context to the examination and evaluates the operational landscape changes within the organisation over the course of the last four years since the previous Section 32 audit;
- Section 4 details the examination of the various IAA Safety Regulation Divisions, both in terms of how the recommendations from the previous examination were addressed and the IAA’s response to new regulatory requirements;
- Section 5 provides a similar analysis to the one detailed in section 4 but focusing on the IAA ANSP;
- Section 6 highlights the conclusions from the examination;
- Appendix A details recommendations for the IAA as a result of this examination;
- Appendix B summarises our assessment of how the IAA addressed the recommendations from the 2015 examination;
- Appendix C gives the approach to the examination.
2 IAA organisation

This section provides an insight into the current IAA organisation structure and the responsibilities of the different departments. It highlights the operational landscape changes within the organisation over the course of the last four years since the previous Section 32 audit in 2015.

An understanding of the IAA’s organisational structure is needed as it sheds light on reporting channels between departments, particularly from a safety perspective. Additionally, obtaining an insight into the evolving landscape in Ireland and the changing activities performed by the IAA provides some background to the current challenges faced by the organisation and sets the scene for the analysis and recommendations presented in the subsequent sections.

2.1 Organisation diagram

The IAA was established as a commercial, semi-state company under the Irish Aviation Authority Act, 1993. The organisation was formed on 1st January 1994 primarily to provide air traffic management in Irish-controlled airspace and to regulate safety standards within the Irish civil aviation industry. The IAA employs approximately 700 people in six locations around Ireland.

The organisational structure of the IAA is illustrated in Figure 2 below.

![IAA organisational structure](image)

**Figure 2: IAA organisational structure**

The IAA Board consists of nine members, including the Chief Executive and Chairman. All Board members except the Chief Executive are appointed directly by the Minister for Transport, Tourism and Sport with the consent of the Minister for Finance and Public Expenditure and Reform. These two Ministers are the sole shareholders of the IAA. The
Chief Executive is appointed by the IAA Board, but the decision goes through the Minister for Transport, Tourism and Sport for final consent.

One of the main functions of the Chief Executive is to advise the directors of the company (the IAA Board) on any matter relating to or affecting the general technical and safety standards in relation to aircraft and air navigation that the IAA applies and enforces in the performance of its functions.

The functions of the IAA are split into six divisions, namely:

- Safety Regulation: responsible for Safety Oversight and ATM safety regulation for Ireland in civil ATM (excluding military operations);
- Human Resources;
- Technology and Training;
- ATM Operations and Strategy: responsible for the provision of ANS;
- Corporate Affairs;
- Finance.

The senior management of the organisational divisions reports to the Chief Executive.

At the time of the examination the IAA comprised two civil aviation entities, the regulator, called the Safety Regulator Division, and the largest Air Navigation Service Provider in Ireland (IAA ANSP). Both entities share the IAA’s Human Resource and Technology and Training departments.

### 2.2 Roles and responsibilities

Under the Irish Aviation Authority Act, 1993, two primary functions of the IAA are laid down. These include:

a. regulating safety standards within the Irish civil aviation industry through:

   i. Certifying and registering aircraft airworthiness;
   
   ii. Licensing personnel and organisations involved in aircraft maintenance;
   
   iii. Licensing pilots, air traffic controllers and aerodromes;
   
   iv. Approving and monitoring air carrier operating standards; and
   
   v. Certification of and oversight of ANSPs and ATCO training organisations.

b. providing commercial air navigation services in Irish-controlled airspace (including terminal navigation services at the three State airports of Dublin, Cork and Shannon).

In January 2013 a third function was assigned to the IAA, which made the organisation responsible for the oversight of aviation security in Ireland under Regulation (EU) 300/2008.

SRD is designated as the ‘competent authority’ in Ireland for the purposes of the Basic Regulation (EU) 2018/1139, responsible for the safety oversight of the Irish civil aviation industry. Additionally, and in accordance with the regulation and by virtue of the designation by DTTAS under EU legislation of SRD, the competent authority is also the State National Supervisory Authority (NSA). Within SRD, ANSD undertakes the functions of the NSA including the certification and supervision of all ANSPs in Ireland.
2.2.1 Safety Regulation Division

The safety regulation function is undertaken by SRD. Its functions include:

- certifying and registering aircraft airworthiness;
- licensing personnel and organisations involved in aircraft maintenance;
- licensing pilots, air traffic controllers and aerodromes;
- approving and monitoring air carrier operating standards;
- providing safety oversight of ANS and aerodromes.

The oversight of civil aviation security involves inspections and audits of airports, air carriers, cargo companies, airport suppliers and suppliers of in-flight services.

SRD is made up of four Departments namely:

- Regulatory performance and personnel licensing;
- Airworthiness;
- Flight operations;
- Aeronautical services (which has three subdivisions);
  - Aerodromes;
  - Air Navigation Services;
  - Aviation Security.

2.2.2 IAA ANSP

The IAA is the main ANSP in Ireland. The en-route and terminal air navigation services for which the ANSP is responsible comprise:

- Air traffic services, such as the provision of flight information services, alerting services, air traffic advisory services and air traffic control services (aerodrome, approach and area control);
- Communication, navigation and surveillance services;
- Aeronautical information services; and
- Aeronautical meteorological services.

The main division within the IAA ANSP is the ATM Operations and Strategy division. Its Director is the ANSP certificate holder and thus accountable for the safe provision of ATM/ANS services. Moreover, it is responsible for the implementation of the safety management system in the ANSP. The ATM Operations and Strategy division is made of the following subdivisions:

- En-route services and AIS: responsible for management of safety of operations at Shannon Area Control Centre (ACC) and AIS;
- Terminal services: responsible for management of operations at Dublin, Cork Terminal and Shannon Terminal business units;
- Oceanic development and North Atlantic Communication Centre (NAC): responsible for the management of operations to provide communication services on the eastern half of the North Atlantic airspace (Shanwick Oceanic);
- Operational strategy and performance;
- Management of standards and procedures: responsible for national contingency operations, management and oversight of Unusual Circumstances and Emergencies (UCE) schemes and the endorsement of ATC standards and procedures;

- Safety Management Unit: responsible for the development and maintenance of the IAA Safety Management System including the safety investigation of occurrences.
3 Context

The Irish Aviation Authority Act 1993 details the functions of the IAA and how it is governed by the Minister for Transport, Tourism and Sport in Ireland.

Under Section 32(3)(a), the Minister of Transport, Tourism and Sport is expected to “at least once in the period of 3 years’, ‘appoint a person to carry out an examination of the performance by the company of its functions in so far as they relate to the application and enforcement of technical and safety standards in relation to aircraft and air navigation...”.

The objective of the examination is to review, report and if necessary, make recommendations from a safety performance perspective on how the IAA executes its statutory functions.

In terms of the value of the examination, it is acknowledged that the Irish Aviation Authority Act was enacted in 1993, a point in time when regulations were more prescriptive. Since then, regulations have become increasingly performance-based, giving a degree of flexibility in their implementation. To ensure that this flexibility does not compromise safety, the number of examinations conducted by the European Aviation Safety Agency in Europe (EASA) has gradually increased and the scope of the audits have expanded to a wider set of domains.

An initial gap analysis of EASA standardisation inspection reports allowed for the identification of areas recently covered by EASA. It was noted that the IAA has not had any ICAO audits since the previous Section 32 examination and thus a gap analysis on ICAO audits was not conducted. To avoid duplication, the 2019 Section 32 examination focused on areas that EASA audits did not cover. It also addressed the IAA’s preparation for future trends or developments in the industry and in regulations that are expected to come into force in the near future.

3.1 Changes in audit landscape

3.1.1 Aviation industry

Over the last three decades, numerous changes have shaped the aviation industry. These include the emergence of the hub and spoke model, the increased market share of low-cost carriers, new generations of narrow and wide body aircraft and closer cooperation between actors. The next three decades are expected to bring even more change, driven by a growing demand for air travel, technological advancements and the evolution of regulations\(^3\). IATA predicts that approximately 7.8 billion passengers will travel by air in 2036, a figure that is double compared with today’s levels\(^4\). The industry will need to plan for the challenges and opportunities presented by these changes whilst keeping a clear focus on safety.

In 2017, aviation contributed to over €4.1bn of the Irish economy, with more than 250 companies involved in the aerospace, aviation and space sectors in Ireland, providing employment to around 42,000 full-time workers\(^5\). Several of the global leaders in the

\(^3\) https://www.iata.org/policy/Documents/iata-future-airline-industry.pdf
\(^4\) https://www.iata.org/pressroom/pr/Pages/2017-10-24-01.aspx
\(^5\) https://www.irishtimes.com/special-reports/corporate-aviation/aviation-sector-contributes-more-than-4-billion-to-irish-economy-1.2931598
industry have a presence or are based in Dublin. The key drivers for the growth in Ireland’s aviation industry include:

- An increasing reputation for innovation and service excellence within aerospace and aviation⁶;
- The commercial success of Ireland’s biggest airlines;
- Continuous investment in developing the skills of a highly-educated and adaptable workforce⁷;
- Responsibility for managing 90% of all traffic that transits between Europe and North America⁸;
- Strong tradition and global reputation in the aircraft leasing industry in terms of portfolio value of aircraft leased - Ireland is second in the world behind the US. In 2016 the Irish aviation leasing industry contributed US$660 million to Ireland’s economy⁹.

The following trends indicate a promising future for aviation in Ireland¹⁰:

- The IAA has seen an increase in traffic handled by up to 3% in quarter one of 2019 compared to quarter one of 2018¹¹;
- A North runway at Dublin airport is being built to accommodate a growth in demand and expansion of current connection offerings;
- Some Irish airlines have expanded their transatlantic services to the US coasts and are transitioning their business models.

3.1.2 New regulations

Over recent months and in the near future, several key regulations have or will be introduced. These have a bearing on the functions and tasks of the IAA. These include the revised EASA Basic Regulation (BR) (EU) 2018/1139 that was published in Q4 2018, the Common Requirements Regulation (EU) 2017/373 and the new performance and charging scheme Regulation (EU) 2019/317. Other regulations such as Commission Delegated Regulation (EU) 2019/945 and Commission Implementing Regulation (EU) 2019/947 on drones or proposed cyber-security legislation (sometimes referred to as ‘cyber-security horizontal rule’) are likely to impact the roles and responsibilities of the IAA. In many instances, these new regulations will engender added costs for the IAA (e.g. more comprehensive oversight requirements or need for specialist resources).

The implementation of these regulations by the IAA, among others, is explored further in section 4.

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⁷ https://www2.deloitte.com/content/dam/Deloitte/ie/Documents/FinancialServices/IE_C_AviationLeasingIreland.pdf
⁹ https://www.irishtimes.com/special-reports/aviation-finance/high-flying-aviation-industry-one-of-Ireland-s-big-successes-1.3760055
3.1.3 Drones

Drones are increasingly being used in commercial operations and by hobbyists for recreational activities. As the user base expands and the number of drones in airspace increases, the safety risks associated with drones infringing airspace used by aircraft and airports will continue to grow.

Since 2015, drone operations in Ireland have been regulated by S.I. No. 563, Irish Aviation Authority Small Unmanned Aircraft (Drones) and Rockets Order. In June 2019 the European Commission published Regulation (EU) 2019/947 which details the common European rules on drones. The rules include technical and operational requirements for drones and outlines provisions to ensure that drone operations across Europe are not only safe and secure, but the sector continues to attract investment, innovation is promoted, and growth is supported.

In 2015 the IAA put in place processes to facilitate the registration of drones, which made Ireland one of the first European countries to introduce the requirement. As of June 2019 there were approximately 12,600 drones registered in Ireland. The IAA has created expert groups in the area and is currently working on U-space projects which will run for the next decade as well as projects with EASA to create drone corridors for manufacturer testing. Furthermore, to increase awareness and educate stakeholders on the subject, the IAA and DTTAS held a Drone Symposium in May 2019.

The IAA, like many other aviation authorities in the world, has faced issues with the growth of the drone market. In particular, airspace infringements have presented the organisation with challenges.

The implementation of Regulation (EU) 2019/947 is seen as a key driver for supporting the growth of drones while maintaining the safety of the Irish aviation system. The IAA does not expect to encounter significant challenges in the conversion process as the transition provisions from national to EU rules are essentially compatible with the 2015 IAA order.

3.1.4 Brexit

At the time of the examination, the United Kingdom (UK) was expected to come to a decision regarding Brexit on 31st October 2019. Three options were being considered including for the UK to accept the EU exit treaty, leave with no deal (the so-called “hard Brexit”) or cancel the departure. The impact of Brexit on British and EU civil aviation was not fully known but was seen as a key priority by the Irish government.

The IAA has advised and assisted DTTAS regarding Brexit preparations for the Irish aviation sector. The IAA has also taken guidance from DTTAS in relation to the Government’s approach to Brexit and discussions with stakeholders.

The IAA has created a Brexit monitoring group made up of the Chief Executive, ANS director, and SRD director and other senior staff as required. The group aims to assess and identify methods to mitigate the negative impact of Brexit on the IAA’s operations. Where appropriate, the IAA has worked closely with the UK Civil Aviation Authority on certain licencing matters. Discussions have revolved around the scenarios of a hard Brexit and work has been conducted with the European Commission and EASA to determine potential challenges and regulation induced changes that may arise.

In 2018 and early 2019 the IAA experienced a spike in the number of pilots and aircraft maintenance engineers license transfer requests from UK to Ireland, with British license
holders seeking to transfer their license to Ireland to continue to work in the EU post-Brexit. This increase in the applications for licenses has presented a challenge to the IAA. SRD has been coping with this growth but was under pressure to deal with requests due to the short time scales for approvals. The organisation redirected resources to support the processing of licenses, hence taking staff out of their current responsibilities and day-to-day activities. The IAA also brought in temporary resources to prioritise this issue, in particular taking note of guidance from the Irish Government which required all agencies of the State to prioritise Brexit preparations.

Brexit is also having an effect on Regulatory Performance and Personnel Licensing Department (RPPLD) resources assigned to Part-66 licenses. Processing the conversion of UK Part-66 licenses to Irish Part-66 licenses increased the workload in the department by 40%. As there was no increase in staff numbers, RPPLD chose to prioritise UK applicants and to assign administrative staff to offload technical staff for some of their duties. At the time of the examination, the IAA expected to address the application backlog in a few months.

The IAA was confident that this prioritisation had no impact on the functioning and the level of service provided by SRD. Before Brexit, the conversion process is relatively simple to manage and the IAA does not expect difficulties to cope with this transitional situation. After Brexit however, this situation may be more complex if UK licenses diverge from the EU system. Nevertheless, a pilot will still have the possibility to obtain and maintain both UK and EU licenses.

Although the number of applications has now reduced, the IAA expect an increase in the run up to Brexit. This is to accommodate applicants from third countries who traditionally looked to the UK for licenses but might consider Ireland instead as the only other native English-speaking nation in the EU. Depending on the nature of the future IE/UK (and EU/UK) relationship, there could be a significant impact on SRD, resulting in increased workload for its staff.

2019S32_IAA_01: The IAA to continue to monitor the potential workload increase for staff due to Brexit and implement adequate mitigating measures. As the outcome of Brexit is currently unknown, this planning exercise could for example be based on a worst-case scenario (by end of June 2020).

Stakeholders on the whole have expressed a desire for a formal communication mechanism between their organisations and the IAA related to Brexit timelines and the activities that need to be done from a regulatory point of view prior to and post Brexit, particularly related to pilot licenses.

The National Civil Aviation Development Forum (NCADF) Regulatory Framework Group provides a platform for consultation and coordination between aviation stakeholders and DTTAS on all emerging regulatory issues, including updates from the Department of Foreign Affairs and Trade on Brexit. While the Government is planning a high-level communication strategy for business and the general public, it remains the responsibility of all State agencies to communicate directly with relevant stakeholders on Brexit contingency and preparedness measures.
3.2 Separation status

3.2.1 Background

A decision was made by the Irish government in 2017 to separate the IAA service provider (ANSP) from the regulator (SRD). Its relevance in the context of Section 32 is to ensure that there is no loss of safety performance during the transition to the new regulator. To date, no degradation of safety levels has been noted as a result of the separation. To maintain this will require all sides (the Commission for Aviation Regulation (CAR), DTTAS and the IAA) to remain conscious of this issue and its primacy as the project proceeds into implementation and transition. Indeed this point also applies to the Government who will be responsible for establishing the new regulator.

During this examination a high-level review of the preparation and progress for the separation was investigated with the aim to understand the impact the pre-separation, transition and post-separation phases would have on the regulator and ANSP’s ability to deliver their safety statutory functions. This exercise was not designed to be a detailed analysis of the separation process or of any risks which may exist to the delivery of safety statutory functions as a result of the transition to and implementation of the new structures.

3.2.2 Benefits

The decision made by the Irish government towards separation provides a greater independence for the new regulator.

All but one stakeholder consulted saw separation as a positive step to bring Ireland in line with other EU countries and provide added transparency. However, stakeholders were concerned that the restructuring of the IAA may result in an increase of charges, which could have an impact on their perception of ‘value for money’.

3.2.3 Progress

At the time of this review, no material changes to structures, procedures or practices affecting the IAA’s safety remit had been undertaken in the context of the restructuring. It will be important that a focus on safety assurance is maintained as responsibility transitions from the current structures to the new structures, in due course.

The IAA underlined its commitment to the restructuring process and has put some arrangements in place (e.g. internal working group) to facilitate implementation. The company demonstrated, through the senior resources that it has dedicated to the separation project and the level of knowledge of the process and its requirements, that it is committed to the project.

At the time of the examination, the IAA and CAR were jointly devising a proposed organisational structure for the new regulator, to identify which roles can be filled with existing personnel as well as gaps that will need to be filled through external recruitment. SRD HR ethos is such that inspectors are expected to have prior industry experience before joining the regulator. Such skills command high salaries to attract prospective candidates. There is a concern that competent inspectors on the regulator side may ‘jump’
to the ANSP or the wider industry post separation, leading to a shortage in knowledge and expertise. If it materialises, this could have a significant impact on the regulator, especially in SRD divisions where shortages of resources have been observed (see section 4.1.3).

Taking into account logistical aspects, the transition to the new regulator should be concluded quickly and along agreed timelines, with meaningful transition arrangements agreed and implemented by the IAA and CAR. Failure to do so may add uncertainty and increase the risk of staff leaving the organisation due to a lack of clear direction (e.g. to handle transient challenges such as Brexit). Some of the transition timescales are driven by legislation and therefore are outside of the direct control of the IAA, however this should not be an obstacle to developing detailed transition arrangements.

IAA staff felt that it was important for the integrity of the aviation safety regulatory structures that all of the key building blocks of the new regulator were in place before the actual transition to the new structures. This is important in terms of building upon the existing levels of safety provision. At the time of writing, the IAA was developing an implementation plan detailing the steps and activities required to separate the organisation. This document should be essential to plan safeguards ensuring safety levels are maintained, by identifying potential risks and mitigating measures.

Most stakeholders felt that so far the IAA has not adequately engaged with them in the separation process and more consultations were desired. Whilst there is necessarily a need for a certain level of confidentiality at different phases of such a process – which can limit what information can be shared – the separation process would be better served by more active and constructive engagement and communication by the IAA with its stakeholders.

Two stakeholders believed that the separation may result in a reorganisation of the way oversight is provided. Their view was that changes in processes and audit team could lead to inefficiencies in case the audit approach or the background knowledge of the new inspector(s) is different. Helios believe the IAA should be able to maintain its auditing standards throughout the transition, assuming adequate measures are taken (see recommendation 2019S32_SRD_05 in section 4.1.9).

The pace of the separation project has been slower than DTTAS and some IAA executive directors expected. It is also noted that the project is complex, and the impact on safety regulation today and the potential impact in the future must be considered in all decisions being made. The IAA is on record as being committed to deliver the proposed separation. However, at the time of the examination, there were uncertainties within the IAA over the transition towards the new regulator.

We recommend that the separation project is concluded quickly along agreed timelines and that meaningful transition arrangements are agreed and implemented by the IAA and CAR – including in respect of preparing for the transfer of statutory responsibilities - while ensuring that safety levels are maintained throughout that process. We also recommend that clarity is provided on the legislative timetable.

### 3.3 Relationship between the IAA and a pilots’ union

Generally, the IAA maintains a good relationship with the industry as illustrated on several occasions in the subsequent sections of this report. It should also be noted that the elements mentioned in the remainder of this section were only mentioned by a pilots’ union and were not seconded by any other consulted stakeholder.
However, it is notable that the relationship between a pilots’ union consulted and the regulator is poor. This was evident during the previous Section 32 examination and was again observed in 2019. Although such relationships between unions and regulators are not uncommon throughout Europe, it is noteworthy the situation has not improved. Despite closer coordination (6-monthly meetings) between the IAA and the pilots’ union since the previous Section 32 examination, which were welcomed by the union, some concerns remain. The communication channels between the IAA and the union need to be maintained.

The union raised a range of issues, the validity of which was not assessed by the examination team as they would have required detailed investigation of individual events. Our high-level review showed that most of the concerns exposed by the union to the IAA related to employer-employee matters. That said, the union also reported some concerns which deserved further investigation by the IAA, in particular to do with fatigue and flight time limitation matters. The examination team did not establish whether the IAA had indeed investigated these matters already. The examination team also could not investigate the accuracy and context of the events reported.

Regulation (EU) 376/2014 on the reporting, analysis and follow-up of occurrences in civil aviation mandates Member States under Article 16(12) to “designate a body responsible for the implementation” of certain functions in the delivery of just culture. This body shall monitor the application of just culture principles at State level and provide appropriate fines and penalties for transgressors. While this part of the requirement is currently not implemented in Ireland, as the legislation to designate the body is not in place, we note that a statutory instrument by DTTAS designating the IAA as the Just Culture body is at an advance stage of drafting.

We recognise that the current aviation safety occurrence system operating in Ireland makes use of different avenues of reporting and offers protections for occurrence reporters under Regulation (EU) 376/2014 and Irish national law\(^\text{12}\) under protected disclosures legislation to ensure confidentiality, protection of source and appropriate use of occurrence reporting data.

We recommend that a just culture body is implemented as soon as possible to bring Ireland fully in line with Regulation (EU) 376/2014. This will require the bringing into force of legislation. Giving the new structure a level of independence would support the building of additional trust with stakeholders.

\(^\text{12}\) Irish Aviation Authority Act of 1993, Art 35 addresses “unauthorised disclosure of information”; SI 285/2007 (Occurrence Reporting), Article 9(confidentiality), Article 11 (Protection of persons), Article 12 (Offences); Regulation (EU) 2016/679 (GDPR); Irish Protected Disclosures Act 2014 (Whistle-blowers)
plays a key role in the occurrence monitoring process. EASA was expected to review SRD’s implementation of Regulation 376/2014 as part of the SYS audit planned in Q3 2019.
4 Review of SRD and its divisions

4.1 Safety Regulation Division

4.1.1 Background

SRD’s mission, values, guiding principles and procedures are captured in procedure SRD.001. SRD.002 details the organisation, structure, functions and responsibilities of SRD. It also shows the interfaces with other SRD departments. Key staff roles, responsibilities and, competency are defined in SRD.005.

4.1.2 Cross domain regulatory changes since the previous Section 32 examination

The most significant cross domain regulatory change implemented since the previous examination is the revised EASA Basic Regulation which gave new competencies to EASA and EU Member States National Aviation Authorities (NAAs) to carry out oversight activities. It addresses:

- Cyber security;
- Unmanned aircraft;
- Introduction of the State Safety Programme into a European framework;
- Environmental constraints;
- Better use of limited resources from the EU Member States NAAs;
- Use of the European Risk Classification Scheme;
- Flexibility and performance-based approach.

New provisions have been made concerning the cooperation between Member States (mainly Articles 62-64 about the Pool of European Aviation Inspectors or the reallocation of responsibility upon request of Member States) however some issues still have to be resolved to allow practical implementation such as:

- Funding mechanisms;
- Accreditation of the inspectors performing such tasks who will have to be accredited by the NAA of the beneficiary Member State;
- Specific training.

The IAA expects to be able to provide oversight capability (on topics such as flight simulation training devices and airworthiness) to other Member States in the framework of new sharing of responsibilities provision when all clarifications will have been issued. However, the IAA was not approached yet to provide such assistance.

The safeguards provisions intended to address derogations of exemptions (previous Article 14 from Regulation (EU) 1592/2008 now replaced by Articles 70 and 71) clarify and simplify the process:

- It includes the obligation for the Member States’ NAAs to use the dedicated EASA portal, which provides full transparency for the use of these flexibility provisions by all the other Member States NAAs;
- EASA only investigates the use of such provisions if the associated period exceeds eight months.
4.1.3 Resources

An assessment of the SRD staffing levels started in 2017. Whereas some divisions had appropriate resources, gaps were identified. This section summarises our observations on the process and the level of resources of SRD.

Process

HR strategy for SRD is the responsibility of the Director of SRD, working with his management team and the Director of HR. In general terms, following an internal discussion on HR matters (vacancies, workload etc.) the Director of SRD engages with the Director of HR to develop a HR strategy for SRD (in line with the IAA governance policies and budgets). This includes an analysis of increased regulatory responsibilities, the prioritising of tasks and consideration of expected retirements during a given period. Alternatives to recruitment are examined to the extent that these options such as temporary resources, reprioritisation, reallocations or outsourcing have not already been utilised or examined.

State of play

The IAA noted that in the current context, the Director of SRD had had a number of discussions with HR and a HR Working Group has been established to analyse current and projected SRD HR needs.

This has led to a recruitment campaign for approximately 10 additional frontline resources. This is reflected in the Irish Performance Plan for RP3: “The NSA costs for RP3 reflect an increased headcount to take account of current and anticipated Regulatory oversight requirements. There is an element of “catch up” in play, with staffing levels for RP2 not approaching planned levels until recently. This is reflective of the difficulty in recruiting appropriately experienced staff and the lead time required before such staff can be deployed with maximum efficiency. The staff costs provided for in RP3 take account of the Eurocontrol NSA HR Application (N-HRA) database which facilitates NSAs to assess, monitor and report on Human Resources (HR) in the ANS Oversight Domain.”

The reasons for not addressing staffing shortages during RP2 are not clear, although the IAA stated:

- Staffing numbers are being increased in 2019 in response to current and future projected requirements. This implies the IAA did not see a need to recruit at the same rate in RP2. We agree that recent regulations (e.g. Regulation 2017/373) have significantly increased the scope of the activities of NSAs, which in turn would drive additional recruitment;

- Additional resources have been supplied across all areas of SRD over the past years however in some cases, these were cancelled out by staff leaving as well as increases in workload;

- The specialist nature of many of the SRD positions has made some of these positions difficult to fill (i.e. to source suitable candidates, e.g. PANS Ops inspectors).

Communication with DTTAS

Considering the scale of the resource deficit identified, DTTAS may have expected that the IAA would inform them of the situation. The IAA stated that various discussions had

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13 Irish RP3 Performance Plan Consultation Document, IAA, 8th August 2019
referenced or noted where there were resource constraints but that there was no requirement for a formal ‘communication’ to DTTAS as such resource management issues are seen as day-to-day management issues of any organisation. The IAA also noted that DTTAS might not have been able to assist given the nature of resource deficits in some areas (i.e. level of specialisation).

As safety levels were not reduced, we believe that the approach taken by the IAA with respect to communicating with DTTAS was appropriate. That said, some stakeholders noted a drop in the level of services delivered by SRD (see ‘Outcome of stakeholder consultations’ sub-sections throughout this report). DTTAS may want to be aware of such occurrences. It would be prudent for the IAA to communicate to DTTAS any significant resource issues that would prevent the organisation from performing its duties adequately. This is particularly relevant in the context of the separation of the IAA, to enable a monitoring of the level of resources available. DTTAS may therefore wish to review whether existing communication channels with the IAA are effective.

**Air Navigation Service Division**

Helios observed that ANSD has suffered from recent staffing shortages: an inspector left and another was on maternity leave at the time of the examination. Both roles were advertised but could not be filled. More generally, current staffing levels across ANSD were seen as not sustainable with resource shortages identified throughout the division. This resulted in:

- personnel having to work extended hours;
- a limitation of the ANSD’s engagement and the number of workshops held with stakeholders for the implementation of Regulation 2017/373;
- de-prioritisation of non-critical activities.

This lack of resources was highlighted in the latest EASA ATM/ANS standardisation inspection, cited for shortcomings found in MET arrangements as well as Aeronautical Information Service (AIS) oversight.

Analysis done by ANSD shows a diverging trend between available resources and resourcing needs stretching back since 2017. This analysis listed the tasks currently undertaken by ANSD alongside effort allocation required to perform each task. Planned changes to the role of ANSD inspectors (e.g. due to new regulatory requirements) were estimated with an indication of the number of days expected for each based on experience. Emerging areas that are not yet covered by existing regulations, such as U-space or commercial space flights, were not taken into account. This analysis was carried out using a MS Excel spreadsheet and validated through EUROCONTROL N-HRA tool.

This is being addressed through a recruitment plan. In June 2019, the plan showed ANSD requiring an extra 9.5 full-time employee (FTE) compared to the staffing levels at the time, as shown in Table 2. However, this resource increase was dependent on the approval of the RP3 performance plan, and therefore may not fully materialise.
<table>
<thead>
<tr>
<th>Inspectors</th>
<th>Current staffing level</th>
<th>Staffing proposed in HR plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATS</td>
<td>3</td>
<td>+3</td>
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<tr>
<td>CNS</td>
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<td>+2</td>
</tr>
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<td>Economics</td>
<td>0.5</td>
<td>+2.5</td>
</tr>
<tr>
<td>PANS-OPS</td>
<td>2</td>
<td>+2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>7.5</strong></td>
<td><strong>+9.5</strong></td>
</tr>
</tbody>
</table>

Table 2: ANSD staffing levels

ANSD recognises the importance of training staff and ensuring they hold adequate qualifications. This is particularly important as the introduction of new regulation can lead to the deskilling of inspectors as they have to adapt to the new regulatory provisions.

The planned increase in staffing is a positive but will come with its own challenges. Doubling the size of ANSD may require a revision to the working methods of the division, especially to ensure effective communication is maintained between different staff members. Perhaps more importantly, ensuring inspectors set consistent expectations and provide harmonised advice to all regulated entities will be crucial as discrepancies have been noted in the current setup by three stakeholders (as explored in section 4.1.9).

**Aerodrome Division**

Since the 2015 Section 32 examination, there are additional resources within AD; the Manager – Aerodromes position has been filled and two inspectors have been recruited. All three resources participate in the certification and safety oversight activities related to the certificated aerodromes in the State.

In November 2018, the AD manager conducted an assessment of the resources needed to cover the tasks assigned to AD. The assessment indicated a lack of staff, with the division requiring a total of 4.7 FTE. This situation forces AD to prioritise safety critical activities while less critical activities are postponed (e.g. reported delays responding to queries regarding aerodrome development plans, development of the internal procedures and guidelines for AD operators, etc.).

Due to significantly increased effort from all AD personnel, none of the safety critical activities, which were checked, had been compromised. However, that level of provided effort would not be sustainable and increased resourcing would assist in developing the overall efficiency and resiliency of the division.

**Flight Operations Department**

FOD staff composition was 14 Flight Operations Inspectors (FOI) (2 rotorcraft), 1 cabin inspector, 1 ground inspector, 2 managers (part time inspectors). 3 FOI positions have been opened. Compared to the figures of the previous audit (25 FOIs) this shows a significant reduction in the inspectors employed (18) for the new oversight activities.

A reduction in staffing was observed over the last four years during a period where there has been an increase in oversight activities imposed by EU regulations. We believe this should be evaluated to ensure the level of resources is commensurate to the oversight activities at hand.

2019S32_AD_01: SRD to hire additional AD inspectors to achieve the required 4.7 FTE to perform all tasks assigned to AD in timely manner (by end of June 2020).
4.1.4 Communication policy and dissemination of new regulatory information

Communication processes and roles

As a result of REC_SRD_2 from the 2015 Section 32 examination, SRD developed a Communication Policy (SRD.009) defining the main principles governing how SRD management and staff communicate both internally and externally. Communications related to changes in the regulatory environment are covered by this procedure.

Additionally, procedure SRD.111 details the processing of new or proposed amendments to a regulatory requirement. As shown in Figure 3, it documents the steps necessary to manage such changes from the initial trigger point (e.g. ICAO State letter) to the output which might include Irish regulations (Statutory Instrument, Direction), guidance to Irish industry on regulatory matters, new or amended internal policy, procedures and guidance on regulatory matters, or identification of additional resource or training needs for on regulatory matters.

Together these two procedures describe the communications mechanisms to ensure effective support to stakeholders during times of significant regulatory changes and as such support safety promotion (as required under the State Safety Programme).

At the time of the examination, a Legal Officer had been appointed by the IAA in October 2018 to support this process. The Officer was responsible for tracking and coordinating the regulatory change management aspects that stem from emerging European regulations (particularly through EASA mechanisms), ICAO Standard and Recommended Practices (SARPS) and through national legislation framework. This included contributing to pan-European regulation consultations such as EASA NPAs, assessing regulatory changes and updating a SharePoint management system which details the regulatory change and the expert that is expected to action the change. Beyond this, the Legal Officer was also involved in checking the flexibility of provisions under the EASA BR, ie procedural tools available to authorities on operational requirement exemptions.

This update of the IAA’s communication policy is a welcomed addition and addresses issues identified during the previous Section 32 examination. It is a comprehensive set of measures which we believe are adequate and have been received positively by stakeholders (see section 4.1.9).

Implementation of new regulations

Each regulated entity is assigned a nominated inspector who acts as a focal point. Regulated entities can therefore contact their nominated inspector in case of specific questions on new or amended regulations. The IAA’s website\(^\text{14}\) can also be used by regulated entities to ask questions. Primary and secondary points of contact/inspectors are assigned for each aerodrome operator and all AWSD regulated entities.

\(^{14}\) [https://www.iaa.ie/contacts](https://www.iaa.ie/contacts)
Figure 3: SRD.111 process flow chart
Review of internal procedures

The 2015 Section 32 examination recommended that internal procedures should be systematically reviewed by a third party to ensure that the contents are consistent and remain up-to-date, and that misprints are removed, prior to the validation by the ASD Assistant Director.

The latest AD procedures were developed by inspectors and reviewed by the head of the department. As defined in the SRD’s internal management processes, a compliance review of procedures is done during internal audits (e.g. for compliance with EU regulations or EASA AMCs).

The reports from the submitted internal audits indicate that review of process is thorough, and internal auditors are able to identify non-compliances with the applicable regulatory framework. This approach proved to be efficient on the procedures sampled.

Internal communication of new and updated procedures

New procedures and updates to existing procedures were communicated to staff using an alerting system embedded in the SRD’s internal IT system.

It was however acknowledged that this method was too generic (i.e. often alerted staff about information that was not relevant to them). This could lead to staff not being aware of latest development relevant to them until attending a department staff meeting.

This is mitigated by the fact that inspectors are expected to check they are using the most up-to-date procedure for the task they are about to perform. This dissemination of information therefore relies on the discipline of the inspectors. Recurrent training takes place for inspectors; this includes training on the ‘Management System’ which would include SRD-level procedures, such as the communications policy. Staff are required to bring any question to the attention of the department manager.

We have no reasons to believe that inspectors are not fully aware of new and updated procedures. We were however surprised not to see a more effective system in place to disseminate information.

SRD recognised this need several years ago and subsequently launched the ‘digitalisation project’ which was initiated through a tender process in Q4 2016. This IT project aims to enable a more efficient access and sharing of information. The IAA claims the primary business drivers for this project were:

- To maximise SRD’s operational efficiency in terms of handling the expected growth in activity;
- To improve the quality of the services and customer experience SRD offers to stakeholders and to allow them to conduct business electronically;
- To provide SRD with a scalable and flexible digital platform to offer services remotely on behalf of other jurisdictions.

It is expected to facilitate 24/7 access to information to stakeholders and include client management functions. SRD hoped the project would reduce some of the administrative burden associated with their current MS SharePoint system and release inspectors of certain tasks. At the time of the examination this initiative was under tender phase and was expected to be completed by mid-2021. The IAA could look to accelerate the deployment of the digitalisation to achieve productivity gains earlier. This would provide
some mitigation for the difficulties encountered in recruiting staff, as outlined in section 4.1.3.

4.1.5 Occurrence reporting

Occurrence reporting is undertaken according to the principles detailed in Regulation (EU) 376/2014 on the reporting, analysis and follow-up of occurrences in civil aviation. To assist industry stakeholders with the implementation of this regulation, SRD had several consultation meetings with regulated entities, both at sector level and individual organisation level, as well as with general aviation though the General Aviation Safety Council of Ireland (GASCI).

Feedback on occurrence reporting is part of a systematic process including public documents (Annual Safety Performance Review) as well as Safety Review Meetings at organisational and sector level. Cross domain sharing of safety information is provided through Cross Domain Safety Workshops, which is attended by SRD inspectors and the safety managers from AOC holders, airports and ANSPs in Ireland. This supports the sharing of information between stakeholders (including those who may not have been directly affected by the safety issue). Inspectors regularly inspect all safety reports in the European Coordination Centre for Accident and Incident Reporting Systems web portal (ECCAIRS)\(^\text{15}\), check whether the reports are complete, provide feedback to the report and monitor the status of implementation.

The investigation of mandatory occurrence reports (MORs) is reviewed before closure is accepted. Operator Safety Management Systems are required to demonstrate feedback loops to reporters. Reporters of voluntary occurrence reports (VORs) may indicate their wish to be contacted and be identified. Feedback from the IAA to voluntary reporters may be provided but was not guaranteed. All reporters receive an acknowledgement with reason why they may not be contacted. All reports which affect aviation safety are filed on the European Central Repository.

About 120 voluntary reports are received a year. This relates to over 550 large aircraft operated by Irish air carriers. The IAA should monitor if the level of reporting is matching the evolution of the activity of the Irish operators. This does not bring clear evidence of the adherence of the Irish aviation community to the system in place despite the IAA’s view that the confidence in the system is building up.

This could be done in the frame of the customer satisfaction survey of the quality assurance system.

The process and procedure in place for dealing with complaints and communication to stakeholders are described on the IAA website. It was updated with simpler instructions for potential reporters and includes assurances by SRD on how reports are treated, protected and maintained\(^\text{16}\).

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16 [https://www.iaa.ie/safety/safety-reporting](https://www.iaa.ie/safety/safety-reporting)
The IAA’s management of occurrence reporting is in line with typical implementations seen across Europe. They offer a number of channels for aviation professionals to submit occurrence reports. The one outstanding shortfall concerns the designation by DTTAS of a body responsible for the implementation of certain just culture functions, as previously explored in section 3.3.

4.1.6 Safety performance targeting and monitoring

Procedure SRD.200 ‘Safety Risk Management and Safety Assurance’ gives an overview of how systematic oversight of safety risk is implemented by the IAA. It outlines how the organisation:

1. Identifies safety issues;
2. Assesses safety issues;
3. Defines and programmes safety actions;
4. Implements and follows up on safety issues;
5. Measures and reports on safety performance.

The elements included within the IAA’s safety risk management are depicted in Figure 4:

The introduction of EASA’s revised Basic Regulation requires States to develop a State Safety Programme (SSP) and a State Safety Plan (known as State Plan for Aviation Safety (SPAS) in Ireland). The SSP should cover elements related to State safety management responsibilities described in international standards and recommended practices. The SSP acts as the framework to drive safety initiatives in Ireland. The SPAS identifies the main safety risks affecting the State’s national civil aviation safety system and sets out the necessary actions to mitigate those risks. It describes Safety Objectives with associated safety performance indicators (process-based (i.e. leading) and outcome-based (i.e. lagging)) and safety targets (see draft SPAS 2019-2022 – Appendix II).

SRD is responsible for the development and actioning of the State Safety Programme and State Safety Plan. Both documents are within the scope of EASA standardisation inspections and therefore subject to regular reviews. Additionally, some EASA
Implementing Rules include requirement for Management System across multiple domains. Ireland’s SSP was published in 2015 and assessed using the GAP analysis tool as part of the ICAO monitoring framework.

Several sources are used to identify the safety issues to be included in the SPAS such as occurrence reports, EASA priorities or feedback from stakeholders. The SPAS is developed in consultation with stakeholders and is updated every year, in response to the publication of EASA’s European Plan for Aviation Safety (EPAS).

This risk management activity is supported by Risk Registers, Organisation Risk Profiles, and Sector Risk profiles. Risk registers must be developed as part of the risk management system by organisations for their own operations and by States on a sector basis. SRD on behalf of the State populates sector-based risk registers from its own analysis of safety information (e.g. occurrence reporting, compliance oversight, safety information from EASA/other States etc.). Risk registers are used to support sector risk profiles which identify the priorities for the Irish SPAS. SRD also uses feedback from the oversight of individual organisations’ SMS and standing industry consultation working groups to verify its own conclusions. Cross-domain workshops are organised to discuss strategic risks and inform stakeholders of the process for developing and updating risk registers. Participants tend to be safety managers of all the regulated entities under SRD’s oversight. These tools were relatively new for SRD at the time of writing; they might therefore evolve quickly and significantly. Also risk registers for certain domains were missing (e.g. ATO, production organisation). Risk registers are not available publicly; only top risks may be published in the Annual Safety Performance Review. SRD communicates the relevant content of risk register to each regulated entity as part of its SMS oversight and assessment activities. The effectiveness of safety management is also assessed using EU Performance Scheme Effectiveness of Safety Management (EoSM) tool in ANS domain and the EASA MS Effectiveness Tool applicable to all other domains.

Regulated entities are obliged to implement their own Safety Objectives, Safety Performance Indicators and Safety Targets in a manner acceptable to SRD, in consideration of the State objectives. As a result the SPAS provides the basis for harmonisation of all regulated entities towards common safety objectives. This will allow SRD to establish baseline performance standards between different organisations within different sectors. Specific safety targets have been implemented to address the key safety performance indicators required under the EU regulatory performance scheme.

The latest edition of the SPAS (2019-2022) was being finalised at the time of the examination. Tools were expected to be implemented by SRD to monitor each indicator (at organisation-level, and State-level). SRD expected operators to update their SMS to feed the SSP targets over 2020.

SRD is involved on international and EU fora to remain abreast of the latest developments in terms of safety and in particular performance monitoring. This includes the Safety Management International Collaboration Group (SM ICG) and EASA Collaborative Analysis Groups (CAG), Member States’ Advisory Body (MAB) and Technical Bodies (TeB), Network of Analysts (NoA), Data4Safety (D4S) and Safety in Aviation Forum for Europe (SAFE).
The IAA is to be commended for its proactivity in identifying and managing safety risks. It deployed advanced tools and processes to collect and process information, and has established mechanisms to feed the results of this monitoring into activities at State level.

4.1.7 Quality assurance

The 2015 Section 32 examination identified that the quality assurance system used by SRD relied on ISO:9001 standards but lacked internal monitoring as per the requirements imposed by EU authority requirements.

In the first quarter of 2016, SRD established a compliance monitoring function with initial procedures based on the information and the expectations of EASA at the time. A two-year programme was developed and was applied to all applicable domains.

Following an internal audit of the compliance monitoring function (CMF) in Q1 2019, a number of improvements have been implemented, including a three-year audit cycle. The findings from the audits conducted by the CMF programme are outlined in an annual audit report.

This action plan has required auditors with varying expertise to be specifically trained to assess technical matters out of their normal field of competence. The EMPIC tool, which is a standard software for aviation regulators in the EU, has been deployed as part of the SRD’s oversight programmes and contains quality documentation such as checklist for the audits, the findings of audits and the corrective action plan with corresponding action owners.

The Director of SRD has oversight of the compliance monitoring programme and progress reports are submitted to SRD on an annual basis.

An issue identified with the EMPIC tool is that it does not have archiving capabilities where historic information can be easily retrieved and used in future oversight processes. In particular, SRD could not demonstrate that a copy of each previously granted authorisation was stored. According to §ARO.GEN.350 (b) and (c), that states that “A level 1/2 finding shall be issued by the competent authority when any non-compliance is detected with the applicable requirements…..with the organisation’s procedures and manuals or with the terms of an approval, certificate, specialised operation authorisation….”, the IAA may not be able to check compliance with the terms of previously delivered privileges and not be in position to issue such findings.

2019S32_SRID_03: SRD to ensure that a copy of all previous authorisations granted to operators before the implementation date of Regulation 965/2012 (28 October 2014) are available for continuous validity check (by end of June 2020).

4.1.8 Processes for addressing external recommendations

The IAA treats the management of external recommendations in the context of its generic safety risk oversight process, feeding into the State Safety Risk Profile (see section 4.1.6). Figure 4 on page 36 shows that findings from EASA standardisation inspections and ICAO Universal Safety Oversight Audit Programme (USOAP) serve as inputs into the State Safety Risk Profile, alongside internal conformance monitoring performed internally by the SRD. Safety recommendations from Aircraft Accident and Incident Investigation (ICAO Annex 13) are also fed into the profile. Recommendations coming from Section 32
examinations and the IAA’s ISO 9000:2015 approval are considered in the State Safety Risk Profile as macro-environmental factors. Procedure SRD.008 details the auditing activities (both internal and external) that are performed to ensure SRD’s policies and procedures are in compliance with applicable regulation.

Findings resulting from EASA standardisation inspections are dealt within the framework set in Regulation (EU) 628/2013. This includes the definition of corrective actions and set timelines for closing such actions. When findings imply activities to be undertaken by regulated entities, the IAA is responsible for monitoring the adequate completion of the corrective action by the regulated entity. Addressing each corrective action is the responsibility of the Assistant Director in the relevant SRD Department. This process is managed by a National Standardisation Coordinator.

For recommendations coming from Section 32 examinations, the IAA nominates a senior member of the management team to address the entire set of recommendations. That person may be assisted by the National Standardisation Coordinator, notably for SRD specific recommendations requiring internal coordination.

Recommendations emanating from ad-hoc reviews are dealt with on a case-by-case basis. This was for example the case for the Review of the Oversight of Search and Rescue Aviation Operations in Ireland commissioned by DTTAS and performed by Aerospace Qualified Entity (AQE) in 2018. This was addressed through a bespoke setup as it fell outside the ICAO, EASA/EU and national (i.e. IAA Act) regulatory framework within which the IAA operates.

Any external safety recommendations addressed to the IAA are included in the Directors’ report distributed on a weekly basis. All actions required to close off safety recommendations are stored on a MS SharePoint site to enable all relevant staff to access that information and monitor progress.

Procedure SRD.008 explicitly mentions who is responsible for implementing the auditing activities taking place within the IAA. In some instances, the procedure also describes who is responsible for acting on the results of these auditing activities (eg for ‘Internal Audit’, “Findings are recorded and sent to the relevant manager for remedial action to be taken”). However, that information is missing for some auditing activities. Although in practice there is a good understanding of the roles and responsibilities of the different actors involved in addressing recommendations from internal and external parties, SRD should review procedure SRD.008 to assess whether that information should be explicitly documented. This applies to all auditing activities, including for example external safety recommendations of ad hoc reviews.

The IAA demonstrated its capability to address findings raised on the organisation in an adequate manner (eg definition and actioning of Corrective Action Plans following EASA 2019S32_SRD_04: SRD to review procedure SRD.008 to assess whether the actors responsible for addressing recommendations from auditing activities should be explicitly documented (by end of June 2020).

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17 SRD.008 ‘Compliance Monitoring of SRD’
standardisation inspections). We commend the IAA’s establishment of well-defined and effective working arrangements, and the implementation of specific tools to support the timely completion of corrective actions.

4.1.9 Outcome of stakeholder consultations

Regulated entities noted significant improvements in the way SRD engaged with them during the implementation of new regulations. Most stakeholders praised the effort made by their assigned inspector to be available when required.

Smaller regulated entities noted increasing delays for carrying out certain tasks. For example the drafting of audit reports or the approval of corrective action plans by ANSD took longer than expected, which led to regulated entities having to delay the completion dates of their corrective actions. Aerodrome operators reported delays responding to queries regarding their development plans. This trend increased in the last 2 years. These observations are illustrations of the resources shortfalls identified by SRD (and explored in section 4.1.3) and emphasise the need for SRD to recruit additional staff.

Alignment of inspectors’ expectations

Differences in the background of inspectors mean they may have different priorities, views and interests. Three stakeholders highlighted the lack of consistency in the approach and feedback delivered by different inspectors. Some inspectors have expectations that stakeholders believed to be above and beyond of applicable regulations. We found no evidence that this phenomenon was due to a lack of resources; we believe it is the process that needs to be adjusted.

SRD could conduct an assessment of its processes (e.g. recurrent training, peer reviews, etc) to ensure consistent feedback is delivered. This is particularly important as the planned increase in staff count and the transition towards the new regulator will create challenges to maintaining a consistent level of expectations.

2019S32_SRD_05: SRD to review the need to update review criteria/processes adopted by inspectors and to align inspector expectations/requirements in each SRD division to provide consistent oversight feedback to stakeholders (by end of June 2020).

Specific feedback for Aerodrome Division

The consulted AD operator expressed that the requirements of Regulation (EU) 139/2014 were not properly communicated by the regulator when it was introduced in 2015-2016. It was seeking clarifications on some of the provisions which led to misunderstandings and complications in aerodrome certification, ultimately requiring increased effort from the aerodrome operator. Besides the EU regulatory change management process, the stakeholder would have appreciated if the IAA communicated the regulatory changes and new processes to all aerodrome operators explaining the objectives, expected added values and sufficient description of the process before the change becomes effective.

AD reported implementing extensive engagement with all affected aerodrome operators in 2017. In AD’s view the issues raised are related to historic resourcing issues early on in the conversion process which have since been addressed. Before a regulatory change is implemented across Europe, there is a lengthy consultation process run by EASA. Aerodrome operators can provide observations then and use this opportunity to understand the implications of proposed changes. AD reported providing support as necessary in terms of guidance for the implementation of the Implementing Rules,
Acceptable Means of Compliance, Guidance Material and Certification Specifications, and also providing the Competent Authority’s position with regard to the regulatory change.

Similarly, the AD operator stated that the process for consultation on new aerodrome developments (procedures for physical infrastructure structure) was not communicated to them adequately. Originally, the aerodrome operator liaised with the IAA as a single organisation and the IAA shared the proposed aerodrome development internally. As a result, the operator received a common statement from all relevant IAA departments. The new process requires the stakeholder to consult the proposed development individually with all relevant IAA departments which is seen to complicate and extend the process considerably. Additional clarity could have been provided by AD, notably the reasons for the change in process, SRD objectives and added value of the change was not explained.

In contrast to the stakeholder’s opinion, AD considers the updated process as more efficient and effective in reviewing aerodrome development proposals. The same approach is used in other domains within SRD. AD noted these changes were as a result of the conversion of the certificate under the European Regulation and the change process is now directly correlated with the requirements of the Implementing Rule – ADR.OR.B.040.

4.2 Airworthiness Department

4.2.1 Background

At the time of the examination, the Irish aircraft register featured a total of 1,422 aircraft which included:

- 894 large aeroplanes;
- 485 small aircraft (aeroplanes and gyrocopters); and
- 43 helicopters.

The total number of Irish registered aircraft in 2019 represents an 18% increase in comparison to the figure in 2015 when the previous Section 32 examination was performed.

236 large aircraft are operated by non-Irish air carriers in 2019, which represents a slight decrease when compared to the figures in 2015.

Small aircraft can be broken down into 139 EASA certified aircraft and 346 ‘Annex I aircraft’ such as amateur-built aeroplanes, microlights, gyroplanes or aircraft with no Type Certificate Holder (including vintage/historical or former military aircraft). These ‘Annex I aircraft’ are not covered by EASA Basic Regulation and are managed according to national regulations.

The breakdown of aircraft airworthiness regulated entities is shown below:

- 2 Production Organisations Approvals (POA);
- 9 Design Organisations Approvals (DOA) linked to air carriers;
- 25 Continuing Airworthiness Management Organisations (CAMO), 16 of which are linked to an air operator;
- 33 Part-145 approved maintenance organisations;
- 4 Part-M subpart F approved maintenance organisations;
• 5 organisations involved in airworthiness of non-EASA aircraft.

In addition to these regulated entities, SRD is contracted by EASA to perform certification of EASA Part-145 foreign approved maintenance organisations.

The functions associated with aircraft airworthiness, including aircraft registration, initial and continuing airworthiness, lies with Airworthiness Department (AWSD) which sits in SRD. The organisation and staffing of AWSD is shown in Figure 5 below:

![AWSD organisational structure](image)

**Figure 5: AWSD organisational structure**

AWSD is composed of three divisions namely, Aircraft Registration and Design Control Division, Airline Airworthiness Division and Air Operator and General Aviation Airworthiness Division. A noticeable feature of the organisation is that the inspector assigned to each division is changed every year to prevent any possible concerns of collusion.

It was noted that there were no changes to the structure and staffing of the division since the previous examination. The higher number of aircraft in the register and the increased participation in new activities such as the Drone Working Group is absorbed by the existing team. AWSD staff workload is assessed on a weekly basis with the relevant Director.

Regulatory training procedures were amended to include quarterly training sessions covering regulatory changes and specific areas of concerns.

Please refer to the 2015 examination report for further details on staffing, qualification criteria, training and procedures of AWSD.

**Summary of functions related to regulated aircraft**

A detailed summary of the aircraft regulatory functions of AWSD is shown below. The functions are delivered by the Aircraft Registration and Design Control Division:

- registration/deregistration of aircraft, engines & propellers;
- acceptance of aircraft Type Certificates for non EASA aircraft;
- issuance of aircraft individual Certificates of Airworthiness;
- issuance of the initial Airworthiness Review Certificates;
- issuance of Permits to Fly;
- issuance of noise certificates;
- implementation of Article 83bis agreements and schedules;
• acceptance of modifications and repairs for non EASA aircraft;
• audit and recommendation to EASA for the acceptance of major repairs and modifications;
• issuance of airworthiness directives in response to a safety concern;
• aircraft airworthiness oversight through the ACAM program (Aircraft Continuous Airworthiness Monitoring).

Summary of functions related to regulated organisations
AWSD is responsible for the following functions:

• certification and oversight of production organisations;
• audit and recommendation to EASA for the certification and oversight of production and design organisations.
• certification and oversight of Part-M subpart G approved CAMO;
• certification and oversight of organisation approved to issue and extend national Certificates of Validity associated with Permit to Fly (PtF);
• certification and oversight of Part-M subpart F and Part-145 approved maintenance organisations;
• airworthiness aspects related to specific authorisations (CAT II/III, ETOPS, RVSM, etc.);
• issuance and sampling of ARCs;
• annual renewal of CoA for Irish registered aircraft operated by non-EU air carriers subject to Article 83bis agreement;
• inspection programmes for Irish registered (ACAM programme) and foreign aircraft (SAFA programme);
• incidents and defects investigation.

EMPIC is fully deployed within AWSD and covers all approved organisations and the ACAM programme. However, Excel spreadsheets are still in use for easy access or back-up information, but all oversight records are kept on EMPIC.

While at the time of the examination the digitalisation project was not implemented at SRD level, AWSD had appointed a focal point for regulated entities in addition to the assigned inspector. Focal points are departmental managers whose contact details are on the IAA’s website. AWSD managers have good relations with regulated entities and have arrangements with stakeholders where managers can be contacted anytime on their cell phone as required.

4.2.2 Regulation covered
Under Section 14 of the Irish Aviation Authority Act, the functions of the IAA related to aircraft are to regulate the registration, airworthiness, operation and maintenance of aircraft and the competence of persons engaged in or associated with the design, manufacture, maintenance, repair and modification of aircraft.

EASA sets the regulations in the field of aircraft airworthiness, the Associated Means of Compliance (AMCs), guidance material and procedures for the competent authority (section B of the Implementing Rules).
The IAA retains full responsibility for civil aircraft not covered by EASA regulations and the organisations and persons involved in the operation, design, repair and modification of those aircraft.

**Aircraft registration**

The legal framework for aircraft registration falls under S.I. No. 107/2015 - Irish Aviation Authority (Nationality and Registration of Aircraft) Order 2015 which transposes requirements from ICAO Annex 7.

As aircraft registration involves airworthiness aspects the process is linked to the applicable national and EASA regulatory framework that is described in the sections hereafter.

**Initial and continuing airworthiness**


This Order also formalises the competency transfer from the IAA to EASA in the following areas:

- rulemaking related to initial airworthiness;
- certification of aircraft;
- acceptance of modification and repairs;
- issuance of airworthiness directives (as the State of Design).

As such Regulation (EU) 748/2012 (implementing rules for initial airworthiness), its Annex (Part-21), and EASA Certification Specification become binding for aircraft that fall under the Basic Regulation.


The regulatory framework applicable to organisations involved in aircraft airworthiness is further described below.


S.I. No. 563/2015 - Irish Aviation Authority (Small Unmanned Aircraft (Drones) and Rockets) Order 2015 sets out the registration requirement for unmanned aircraft of certain categories.
The regulatory context, including all applicable regulations with regards to aircraft airworthiness, is summarised in Figure 6 hereafter.
Figure 6: International, European and National regulations applicable to the aircraft airworthiness domain
4.2.3 Regulatory changes since the previous Section 32 examination

Implementation of the amendment to regulations on initial airworthiness

The amendment (Decision 2016/5 of 5 July 2016) made to Regulation (EU) 748/2012 regarding initial airworthiness mainly addressed the 2014 amendment to ICAO Annex 16 and other provisions such as flight testing and no impact on AWSD.

Implementation of the amendment to regulations on continuing airworthiness

Regulation (EU) 2014/1321 was amended three times since the previous examination:

- Regulation (EU) 2015/1088 applies from 27 July 2015, it addresses mainly:
  - Adapted requirements for ELA (European Light Aircraft) not involved in commercial operations and general aviation aircraft;
  - Possibility for Part-M subpart F and Part-145 approved maintenance organisations to hold airworthiness review staff;
  - Possibility for Part-M subpart F and Part-145 approved maintenance organisations to develop Aircraft Maintenance Programmes (AMP) for ELA 2 aircraft not involved in commercial operations.

This regulation had no impact on AWSD as Part-145 organisations were not interested in the airworthiness review privileges and Part-M subpart F maintenance organisation were already approved Part-M subpart G thus already had the privileges to perform airworthiness reviews on general aviation aircraft.

- Regulation (EU) 2015/1536 applies from 25 August 2015, it addresses:
  - New classification or CMPA “Complex Motor Powered Aircraft” in replacement of large aircraft;
  - A new Annex, subpart-T for non-EU registered aircraft operated by an EU operator whose oversight was not delegated to the EU Member State NAA.

The introduction of CMPA caused no classification problem to the IAA (due to the size of the country and fleet characteristics) while no operator applied for the provision of Part-T, mainly as Ireland has adequate fleet management and support for the registration of aircraft. Other technical requirements imposed less stringent requirements than what approved organisations have implemented.

Aircraft maintained according to an AMP not approved by the IAA brought no specific concerns. The AMP is reviewed during the airworthiness review of the aircraft and sampling is performed on these aircraft in the frame of the ACAM program, which revealed no specific issues.

- Regulation (EU) 2018/1142 applies from 5 March 2018, it addresses:
  - New B2L and L Part-66 licenses for non CMPA;
  - Risk mitigation for acceptance of components.

This new regulation had no impact on AWSD.

Preparation of upcoming regulations on continuing airworthiness

Important changes to the Regulation (EU) 1321/2014 are expected, changing the structure/content of the regulation itself:
• Annex Vb, Part-ML will supersede current Subpart G of Part-M with requirements that are proportional to the lower complexity and risks associated with the lighter end of the General Aviation (GA);

• Annex Vc: Part-CAMO will supersede the current subpart G of Part-M and will introduce the Safety Management System as well as Risk Based Oversight concepts;

• Annex Vd: Part-CAO will replace Part-M subpart F for other-than-complex motor-powered aircraft not listed in the AOC of an air carrier.

AWSD will be affected by these amendments even if there are some uncertainties about the exact scope of the changes. Adequate transition provisions and change management actions will need to be implemented, these include:

• appropriate information on the website;

• roadmap for the industry;

• IT system update;

• dedicated training for the inspectors (appropriate training is to be made available from EASA);

• Information leaflets.

AWSD is commended on its implementation of the latest amendments of EASA regulations on continuing airworthiness. Moreover, it is noted that AWSD conduct detailed analyses of all reported occurrences as required.

4.2.4 Standardisation inspections

AWSD is audited every two years by EASA with the latest audit performed in 2016. The audit confirmed that the IAA adhered to good performance standards and revealed only minor or isolated discrepancies.

No ICAO USOAP was performed since the previous Section 32 examination.

4.2.5 Outcome of stakeholder consultations

On the whole, the stakeholders consulted highlighted their close relationship with the IAA and the high technical expertise and support they have received from AWSD staff. This included an appreciation of the availability of inspectors, the proactive and detailed audit approach adopted and the information disseminated regarding regulatory changes.

While the high level of flexibility / availability of AWSD inspectors is generally praised by stakeholders, some inspectors appear to be less flexible than others to meet some of the industry’s requests. That said, one could also expect the industry to better anticipate its needs in coordination with the IAA to make sure resources are available at the right time. In these conditions, unplanned urgent application (or repetitive applications generating burden on the assigned inspectors working hours) may only be processed at the expense of another application being deprioritised. Thus, it can be understood that not all stakeholders are always satisfied.

All stakeholders expressed that investigations following safety reports were appropriately detailed and feedback was received in an adequate manner.

The workload of AWSD technical staff is currently deemed as ‘high’ by all stakeholders. But stakeholders clarified that this level of workload is not consistently seen on an ongoing basis.
The subdivision maintains good relationships with stakeholders and provides targeted and effective support to regulated entities.

4.3 Air Navigation Service Division

4.3.1 Background

ANSD covers all aspects of Air Traffic Services (ATS), Communication Navigation Surveillance (CNS), Aeronautical Information Services (AIS), flight procedure design (FPD) and charting, meteorological services (MET), the Aeronautical Rescue Coordination Centre (ARCC) element of SAR and airspace designation. Figure 7 gives the organisation of ANSD, including interfaces outside the division.

![ANSD organisation diagram]

Figure 7: ANSD organisation

The arrangements surrounding the oversight of MET have changed compared to 2015. Following a finding from EASA, ANSD are planning to conduct the oversight of MET directly instead of outsourcing services to assist in its oversight activity. This arrangement was expected to be in place by the end of 2019. ANSD already hold competence to conduct these oversight activities and external entities were only engaged as a method to supplement the pre-existing human resources within the ASD department.

4.3.2 Regulation covered

The examination focused on two regulations having regard to Regulation (EC) 2018/1139 (EASA Basic Regulation).

**ATCO licenses and certificates**

Commission Regulation (EU) 2015/340\(^\text{19}\) imposed new requirements relating to air traffic controllers’ licenses and certificates.

\(^{19}\) COMMISSION REGULATION (EU) 2015/340 of 20 February 2015 laying down technical requirements and administrative procedures relating to air traffic controllers’ licences and certificates pursuant to Regulation (EC) 216/2008 of the European Parliament and of the Council, amending
ANSD engaged a significant amount of effort in understanding the impact of the new regulatory requirements and assisting the industry implement the required changes.

This process started by an analysis of the training courses, training plans and competency schemes of regulated entities. This was followed by workshops with the industry. Recognising the fact that regulated entities may choose different approaches for implementing the requirements, ANSD organised nine workshops – three for each of the following groups: large ANSP, small ANSPs and training organisations. The aim of the workshops was to raise awareness of the new regulation and detail how regulated entities could demonstrate compliance in a manner acceptable to ANSD. ANSD developed a compliance matrix for regulated entities to use to that effect. Although encouraged, the use of this tool was not compulsory.

ANSD engaged with EASA throughout this process to clarify their interpretation of the requirements and propose solutions to shortcomings in the regulation. EASA commended ANSD for their implementation of the Regulation (EU) 2015/340 in the ATM/ANS standardisation inspection which took place in February 2019.

Common Requirements

ANSD was in the process of implementing the Common Requirements Regulation\(^2\) at the time of the examination. ANSD engaged with EUROCONTROL to gain knowledge of the regulation when it was first published.

A similar process to the implementation of Regulation (EU) 2015/340 was being followed by ANSD, including creating of mind maps (see section 4.3.3) and compliance matrices to support regulated entities. However, due to resource constraints, ANSD decided to limit engagement with stakeholders to large workshops with all regulated entities instead of meeting in smaller groups. To support this process, ANSD was preparing guidelines for the industry detailing its implementation plan for the regulation. Note that further engagement with the industry was planned in October 2019 to agree on audit schedules for 2020.

ANSD expected to meet the requirements of Part-ATM/ANS.AR in Q4 2019, with the help of EASA, and therefore be ready for the mandated implementation date in January 2020. Further training for inspectors was due to take place both in Dublin and through EUROCONTROL’s Institute for Air Navigation Services (IANS).

ANSD’s approach to implementing these regulations shows proactivity to support regulated entities from the onset and as such facilitate the smooth transition to the new regulatory regime. Significant efforts have been invested by the division to communicate and coordinate the roll out of the new regulation, and for the drafting of supporting documentation. We believe ANSD’s approach is well-suited to the Irish context and should be maintained.

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4.3.3 Regulatory changes since the previous Section 32 examination

ANSD remains involved in EU and international forums to keep abreast of the latest regulatory developments. It also participates in EASA activities, taking part in standardisation inspections led by the Agency. This helps maintain inspector competency as well as bringing extra revenues.

ANSD adapts its approach to the implementation of new regulations based on their complexity. For complex regulations, ANSD creates mind maps, spider diagrams highlighting the key changes introduced by the new regulation and the actions to be undertaken by the division. For example this approach was chosen for the implementation of Regulation (EU) 2015/340 on ATCOs’ licenses and certificates and Regulation (EU) 2017/373 on Common Requirements.

The implementation of new regulation generally involves engagement with the industry. Where possible, the ANSD inspector tasked with coordinating the implementation of a new regulation also carries out the oversight. This ensures the best possible expertise is utilised to guarantee all requirements are met.

This process is defined in procedure SRD.111 and is scalable.

4.3.4 Standardisation inspections

EASA carried out a focused standardisation inspection on the activities of ANSD in February 2019. The scope of the inspection covered several regulations in the ATM/ANS domain with a particular focus on:

- Regulation (EU) 1034/2011 – Safety oversight in ATM/ANS;
- Regulation (EU) 1035/2011 – Common Requirements for the provision of ANS;
- Regulation (EU) 2015/340 – Technical requirements and administrative procedures relating to ATCOs’ licenses and certificates.

EASA visited several regulated entities (IAA ANSP, Knock ANSP and Met Éireann) to gain an indication of the effectiveness of the oversight activities undertaken by ANSD.

EASA commended ANSD for the competency of its staff, overall conduct of its oversight obligations, and for ANSD’s implementation of Regulation (EU) 2015/340.

Areas for improvements were mainly regarding quality aspects: adherence to own procedures, update of procedures and record keeping. This was largely attributed to ANSD’s lack of resources.

An upcoming standardisation inspection was going to take place in Q3 2019, focusing on Systemic Enablers for Safety Management (SYS). Regulation (EU) 376/2014 on the reporting, analysis and follow-up of occurrences in civil aviation was also expected to be audited as part of this activity.

4.3.5 Oversight activities

Oversight activities are planned and communicated to regulated entities through the annual audit programme. The oversight is adapted to the operations of each entity; whereas the IAA ANSP may be audited on specific aspects, smaller ANSPs tend to get audited on their entire remit. ANSD aims to visit each ANSP at least once a year.
4.3.6 Changes to functional systems

ANSD have access to the ANSP Document Audit And Management System (DAAMS) system to view ANSP documentation to support oversight activities. This tool is described in section 5.2.

ANSD expected the following changes to functional systems in the coming years: upgrade of the COOPANS ATM system, the installation of ATM simulators for training organisations, the construction of a North runway at Dublin airport by the end of 2021 and the associated new tower, ongoing remote tower trials including an initiative to run Shannon airport using the Ballycasey remote centre by the end of 2019 and the en-route contingency air traffic control centre (CEROC) at Ballygirreen, and the replacement of the datacom backbone network.

These changes will significantly impact the way operations are handled by operational staff. As a result, they will require close coordination between ANSD and the IAA ANSP to ensure these upgrades are assessed in an efficient and timely manner.

The decision to review the safety cases produced by the ANSP is based on the complexity of the change, according to the following criteria:

- (a) the severity assessment conducted in accordance with Annex II, point 3.2.4 of Regulation (EU) No 1035/2011 determines a severity class 1 or a severity class 2 for the potential effects of the hazards identified; or
- (b) the implementation of the changes requires the introduction of new aviation standards.

Minor changes classed as Level 1 and 2 are subject to a sampling assessment by ANSD whereas Level 3 and above trigger a full review of the safety assessment. This is aligned with strategies employed by other regulators across Europe and as such follows recognised practices. ANSD may also determine the need for a review in situations other than those referred to in points (a) and (b), where for example the change is complex or has an impact on interoperability.

4.3.7 Occurrences and safety performance

Occurrence monitoring is one of the methods used by ANSD as a tool to identify issues with regulated entities and to enable actions to be taken on specific topics. As part of the oversight programme, ANSD audits and conducts ongoing monitoring of ANSPs’ allocation of classification and severity to occurrences. Meetings take place between ANSD and ANSPs to clarify any disagreements regarding the classification of occurrences. This helps ensure that the number of occurrences reported by ANSD and ANSP align.

ANSD gives some flexibility to regulated entities to decide on the corrective actions they believe are necessary to address any non-conformance uncovered during audits. ANSD experienced delays in the implementation of agreed corrective action plans by some ANSPs. ANSD implemented dashboards to track the results of their oversight activities, for example informing of outstanding Corrective Action Plans (CAP) or Non-Conformance Report (NCR) due for closure in next 2 weeks. Interestingly, ANSD also monitors ‘how well’ each regulated entity implements CAPs (e.g. actions completed within the original timeframe). This in turn enables ANSD to place tighter controls and additional emphasis on entities that have previously missed agreed deadlines.
ANSD tracks lagging indicators defined in the Performance Scheme (i.e. Safety Key Performance Indicators) as well as addition indicators such as taxiway incursions.

Leading indicators are considered through EASA’s EoSM questionnaires which are filled by ANSPs and reviewed by ANSD. ANSD complete an EoSM questionnaire for the State, which is also submitted to EASA for validation review. It was noted that EASA never downgraded Ireland’s EoSM scores. In addition ANSD did an education piece to raise awareness of the importance of performing safety surveys in operational units.

ANSD’s approach to occurrence and safety performance was aligned with our expectations. Its implementation follows requirements prescribed in regulation and goes beyond what is strictly required in areas identified by the IAA needing additional monitoring.

4.3.8 Outcome of stakeholder consultations

ANSD’s approach balances regulatory compliance and practicality, with the two stakeholders consulted reporting that the ANSD’s audits were commensurate with the size and complexity of their operations. This has proven successful in engaging ANSPs to transition to new regulations (e.g. to Regulation 2015/340). Also, efforts have been made to engage more proactively with stakeholders when implementing new regulatory requirements for example through the organisation of workshops. This was beneficial from both the perspective of ANSD and regulated entities. It should continue in the future despite resources constraints that add pressure to limit this engagement (for example ANSD was not able to organise as many workshops for the implementation of Regulation 2017/373 compared to the Regulation 2015/340).

As noted in section 4.1.3, staff availability has been an ongoing issue, which has led to delays in the completion of certain tasks. The entry into force of more regulations, some expanding the remit of the regulator (e.g. cyber security), coupled with the fact that regulations tend to become more complex, has put a strain on ANSD’s resources. This is combined with increases reporting requirements.

4.4 Aerodromes

4.4.1 Background

The Aerodrome Department (AD) is responsible for the safety oversight of aerodromes. At the time of the examination, there were 22 certificated and licensed aerodromes in Ireland of which eight are certificated under European Regulation and the remaining 14 are licensed nationally based on ICAO provisions. Of those 14, five are publicly licensed aerodromes, including an aerodrome exempted from the European Regulation. A list of certified and licensed aerodromes is given in Table 3.

There are also many unlicensed aerodromes. The three main airports, Dublin, Cork and Shannon, are State-owned in accordance with a governmental policy to retain ownership of these infrastructures.

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<th>Aerodrome/Heliport name Location indicator</th>
<th>International /National (INTL – NTL)</th>
<th>IFR-VFR</th>
<th>Scheduled, Non-scheduled, Private, Military</th>
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</tbody>
</table>

Table 3: Irish aerodromes

The functions of AD are to:

- contribute to the development of standards for aerodromes and associated facilities;
- conduct the certification, licensing and functional supervision of aerodromes;
- conduct inspection of aerodromes and installations at aerodromes and other places used for the landing of aircraft;
- coordinate and approve the publication of relevant information in the Irish Aeronautical Information Publication (AIP);
• contribute in updates of the state Safety Program and State Safety Plan and support implementation of the tasks related to aerodrome safety;
• support promotion of aerodrome safety related activities;
• provide advice to DTTAS on issues relating to international airports or matters relating to aerodrome design.

Since the previous Section 32 examination two aerodrome inspectors with airport operations and management backgrounds have been hired.

4.4.2 Regulation covered

Authority requirements of EU regulation 139/2014

The part of the authority requirements audit was focused on those requirements which were relevant to AD department. The main areas were as follows:

- ADR-CA 2-020.b Documented policies and procedures;
- ADR-CA 2-020.c Allocation of responsibilities;
- ADR-CA 2-020.d Minimum content of the management procedures;
- ADR-CA 2-020.f Principles of managing exemptions, derogations, cases of equivalent level of safety, and special conditions;
- ADR-CA 2-020.g Qualifications and training of AD inspectors;
- ADR-CA 2-030.a and ADR-CA 2-040. Training programme, minimum training requirements and assessment of the trainee inspectors;
- ADR-CA 2-050. Assignment of privileges;
- ADR-CA 2-060 Compliance monitoring;
- ADR-CA 2-100. Record keeping.

For these elements, AD representatives demonstrated how the particular provisions were implemented and provided all requested evidence including training programmes and training records for both AD inspectors.

The selected documentation and the processes were defined to comply with the applicable authority requirements. Some EASA’s AMC were not fully reflected in the first issue of the procedures however these deviations were identified through AD’s internal audit process and corrected.

AD inspectors demonstrated that the processes are followed and all required records are stored on the IAA’s repository in electronic format.

Certification and oversight of aerodromes

As the previous examination identified some weaknesses in the preparation phase of the certification of aerodromes according to EU requirements, part of the 2019 examination was dedicated to the certification process and oversight of aerodromes, particularly the following provisions:

- ADR-CA 020 Notifications to EASA and Exemptions;
- ADR-CA 030 Conversion of certificates;
- ADR-CA 040 Deviations from certification specifications;
• ADR-CA 100 Information to EASA;
• ADR-CA 110.a Immediate reaction to a safety problem;
• ADR-CA-130 Use of an aerodrome by aircraft which are more demanding than aerodrome design and operating procedures;
• ADR-CA 3-010 Oversight;
• ADR-CA 3-020 Oversight programme and planning cycles;
• ADR-CA 3-030 a) and d) Initiation of certification process;
• ADR-CA 3-040 Certification basis;
• ADR-CA 3-050 Special conditions;
• ADR-CA 3-060 Issuance of certificates and publication of information.

The compliance with the aforementioned provisions was verified on the sample of aerodromes which passed the certification / certificate conversion process. AD representatives demonstrated the whole certification process and continuous oversight on a sample of aerodromes.

AD inspectors also demonstrated the management of non-compliances / findings identified through certification process and continuous oversight.

No deviations from the processes were identified on the selected sample.

**ICAO requirements – Annex 14 Vol. I**

Apart from certification of aerodromes which fall under EU regulation, licensing of aerodromes against ICAO requirements was checked on a sample of licensed aerodromes.

AD developed and applied procedures and guidance materials for the licensing of public and private aerodromes:

• Licensing Requirements for Public Aerodromes (ALM 002);
• Licensing Requirements for Private Aerodromes (ALM 003);
• Aerodrome License Application Process;
• Aerodrome License Application Form.

The supporting procedures and guidance materials for licensing aerodromes according to ICAO Annex 14 requirements were developed and are issued in the form of T-notices. The T-notices are published on the IAA’s website.

As verified on a sample of licensed aerodromes, public aerodromes which are not certified according to EU regulations are licensed. AD performs regular oversight in accordance with the oversight plan.

**S.I. No. 355 of 2008 and Annex 14 Vol. II**

S.I. No. 355 of 2008 on Aerodromes and Visual Ground Aids Article 5(1)(d) requires that in the case of a rotorcraft, where that [landing] place is of an elevated construction, located on the roof of a building or a structure, it shall also be licensed by the Authority under this Order for such use by that rotorcraft.

At the time of the examination, no process / procedure published by the IAA described licensing of elevated construction dedicated to landing and take-off of rotorcraft (elevated
The IAA noted that there were very few applications for approval of heliport in Ireland to date and therefore this task was low priority. However, in 2016 and 2017, Cork University Hospital was evaluating different options for the location of a Helicopter Emergency Medical Services helipad within the hospital property. At that time only AOM 08/00 Heliports – Guidelines for Heliport Site Owners/Occupiers and for Heliport Site-keepers was available, which was partly not in line with the international standard and recommended practices on heliports.

Due to lack of the relevant and clear guidance regarding the elevated (raised) landing sites, AD requirements were not always clear for instance regarding the format of the compliance statement and the training of rescue and firefighting personnel for elevated helipads. Recommendation 2019S32_AD_02 below has been developed to remedy this situation.

4.4.3 Regulatory changes since the previous Section 32 examination

At the time of the examination, AD was aware of existing gaps in inspector training and new European regulation on heliports on certified aerodromes and had already planned to train AD inspectors in the field of heliport planning and design by the end of 2019 (evidence by the approved training plan for 2019). It was also planned that after completion of the training, AD would develop and publish missing procedures for the certification of heliports on certified aerodromes and also for licensing elevated heliports/landing pads.

AD advised that notwithstanding the withdrawal of OAM 08/00, when proposals are presented to the authority in relation to helipads, the relevant provisions of ICAO Annex 14, Vol. II are utilised in terms of determining technical and operational requirements.

As AOM 008/2000 is no longer valid, AD should ensure that new guidelines for ground-based heliport site owners/occupiers and for heliport site-keepers are developed in compliance with the latest international standards and recommended practices.

2019S32_AD_02: AD to develop and publish procedures for certification of heliports on certified aerodromes and licensing of heliports, including guidelines for ground-based heliport site owners/occupiers and for heliport site-keepers (by end of June 2020).

4.4.4 Oversight activities

AD actions defined in the State Safety Plan

As stated in the State Safety Programme (State Safety Policy Statement), SRD should be innovative in embracing predictive strategies encouraging all stakeholders to understand the benefits of good safety practices and a positive organisation safety culture, based on sound safety management principles. SRD shall foster and assist stakeholders in developing comprehensive Safety Management Systems, and shall encourage safety information collection, analysis and exchange, amongst all relevant industry organisations and service providers in an environment of a just culture.

Based on the State Safety Programme, SRD issued a State Safety Plan 2018-2019 and defined objectives and actions to be performed by assigned parties. The following actions were dedicated to aerodromes and involved participation of the IAA:
<table>
<thead>
<tr>
<th>Reference</th>
<th>Description of the task</th>
<th>Estimated implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.010 c)</td>
<td>Develop the tools to support risk and performance-based oversight in air navigation services and aerodromes domains based on assessment of organisation risk profile, organisation compliance profile and organisation performance profile.</td>
<td>Q4 2018</td>
</tr>
<tr>
<td>M.006 b)</td>
<td>Implement an integrated audit management system in the domains of Aerodromes and Air Navigation Services</td>
<td>Q4 2019</td>
</tr>
</tbody>
</table>
| M.007     | Runway Incursions  
  b) The IAA will audit the effectiveness of the local runway safety teams (LRST) including effect effectiveness of SMS in reducing runway incursions precursor events.  
  c) The IAA will review the level of implementation of recommendations for service providers contained in the EAPRRI as part of the oversight cycle EPAS.  
  d) Review Version 3.0 of the EAPPRI and identify actions required to address the updated document. | Q4 2018                  |
| FOD.002   | c) Share actions and measures in use at national level to address this safety risk and participate in EASA initiatives to share best practice and coordinate actions.  
  j) The IAA will monitor the implementation of EAPPRE recommendations for service providers during oversight audits. | Q4 2018                  |
| AED.002   | c) The IAA will encourage ICAO (via ABIS representative at ICAO) to provide global statistics from the ICAO IBIS system and will review recommendations arising from the ICAO Wildlife Strike Reduction Symposium for application in Ireland. | Q4 2018                  |

Table 4: AD SSP actions and implementation deadline

The implementation of the above-mentioned actions was verified during the examination and AD representatives provided evidence that actions M.010 c), M.006 b), M.007 and FOD.002 were completed.

Only part of action AED.002 regarding recommendations arising from the ICAO Wildlife Strike Reduction Symposium for application in Ireland was not fully covered as the minutes from the National Bird Hazard Committee did not prove that the recommendations of ICAO Wildlife Strike Reduction Symposium had been discussed. Additional to that, no analysis of the ICAO Wildlife Strike Reduction Symposium conclusions/recommendations was provided during the examination.

AD noted that the 2008 - 2015 WILDLIFE STRIKE ANALYSES (IBIS) review circulated by ICAO was forwarded to all members of the National Bird Hazard Committee during 2017.

2019S32_AD_03: By analysing the conclusions / recommendations of ICAO Wildlife Strike Reduction Symposium, AD to make a proposal for implementation in Ireland (by end of April 2020) and communicate it through the next National Bird Hazard Committee and Annual Safety Forum.

### 4.4.5 Aerodrome training, procedures and arrangements

The content of the initial and recurrent training is defined in AD procedure ADR.109 and defines selection criteria and training requirements. ADR.109 complies with AMC1 ADR.AR.B.005. Both current inspectors passed the prescribed training. The training was defined in the training plan and the records of the passed trainings were showed during the audit as evidence.
The procedure for managing findings was developed in compliance with EASA AMCs and fully adopted. Examples of findings related to certified aerodromes were reviewed and all were treated according to defined procedure.

To inspect items impacting both safety and security, a two-way communication between AD and AvSec has been established for inspections mainly as AD and AvSec are under the same department and under Assistant Director Aerodromes, ATC and Security.

4.4.6 **Outcome of stakeholder consultations**

The following section summarises discussions with an aerodrome operator and reflects opinions of their representatives.

**Changes in AD since the previous audit in 2015**

The general perception of AD is positive and the interviewed aerodrome operator sees positive changes in the division. The operator noted that AD personnel chose to prioritise safety critical activities such as certification and licensing of aerodromes and oversight of aerodromes, and de-prioritise less critical activities such as providing statements to proposals for aerodrome developments which extends the process.

**Auditing (oversight)**

The stakeholder expressed satisfaction with the ongoing safety oversight. All steps of the oversight from notification, preparation, execution, definition of the non-compliances and communication related to mitigating measures significantly improved in last two years. The communication with AD inspectors is clear and concise.

The audit reports are received in reasonable time and inspectors set reasonable timeline to resolve findings. The overall perception of the oversight is that the process is fair and efficient.

**Safety management and occurrence reporting**

The aerodrome operator confirmed that the introduction and implementation of ECCAIRS was performed in a timely and efficient manner.

However, the stakeholder considers ECCAIRS as a very inefficient system because they invested a lot of effort in modifying their reporting system to align with ECCAIRS and still spend a lot of effort to enter all mandatory reports of occurrences. The operator receives limited support from AD and does not have access to other aerodrome safety related reports. This could help to proactively identify possible safety hazards by learning from other aerodrome operators and derive the safety trends in different areas of aerodrome operations. Although directly accessing other aerodromes data could be beneficial, sensitivities exist regarding the sharing of safety-related information. As the regulator SRD should be in a position identify trends and update the SPAS to implement adequate measures at national level. We believe this process is already ongoing, as detailed in section 4.1.6 on safety performance targeting and monitoring.

The stakeholder also reported that there was very limited consultation on the State Safety Programme and State Safety Plan especially when defining the safety performance indicators and actions. Consultations with stakeholders prior to updates of State Safety Programme and State Safety Plan would be much appreciated. As described in section 4.1.6, some mechanisms are in place to consult stakeholders. Other stakeholders did not report similar issues. That said, AD could make a concerted effort to engage with aerodrome operators in the upcoming round of consultation.
The Safety Management Meetings which are organised twice a year are considered to be high level and operators of smaller aerodromes feel that most of the issues discussed are related to ANSP and airlines, therefore more relevant to larger aerodromes. The aerodrome operator therefore highlighted their preference for similar meetings being organised but dedicated to aerodrome safety, for aerodrome operators. This would act as a forum for aerodrome safety managers, officers and experts to exchange their experiences from smaller aerodrome operations. We would support that idea as such operators tend to encounter different issues compared to larger aerodromes. For maximum focus, it might be relevant to have at least part of these meetings limited to aerodrome operators only (i.e. without other stakeholders such as airlines, ANSP, etc.). These meetings could be an opportunity for AD to run safety workshops / meetings for front line personnel so they could exchange practical experience at working level.

2019S32_AD_04: AD to review the need to organise safety meetings dedicated to smaller aerodrome operations, with attendance from front line aerodrome personnel to promote the exchange of practical experience (by end of June 2020).

**Personnel**

Generally, the stakeholder appreciates AD staff and sees them as being very knowledgeable professionals who are helpful when the support is needed. Their commitment was also commended.

### 4.5 Flight Operations

#### 4.5.1 Background

Flight Operations Department (FOD) activities have not changed since the previous Section 32 examination and thus are not repeated here.

FOD is responsible for the issuance and continuing oversight of Air Operators (including those holding an Air Operator Certificate (AOC), those holding a Special Operations (SPO) approval - including or not High Risk (SPO HR) operations - or those having Non Commercial Operation with Non Complex aircraft approvals (NCC).

<table>
<thead>
<tr>
<th>AOC</th>
<th>SPO</th>
<th>SPO HR</th>
<th>NCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>8</td>
<td>2</td>
<td>7</td>
</tr>
</tbody>
</table>

**Table 5: Number of AOCs, SPOs, SPO HR and NCC in 2019**

Flight and cabin crew training organisations: 23 ATOs, 6 CCTOs.

Compared to the previous Section 32 examination, the number of AOCs has reduced by one, but the new EU regulations on aerial work have created the need to oversee SPO and NCC organisations. This resulted in a significant increase in the number of organisations that need to be surveyed in accordance with EASA Part-ARO (Authority Requirements for Air Operations) regulations.

The financing of the oversight of these new organisations is complex, as, being non-commercial or small sized, their turnovers are not likely to generate income levels commensurate with the cost of an EASA-style oversight. This problem is widespread and present in several EU countries.
### 4.5.2 Regulation covered

<table>
<thead>
<tr>
<th>International level</th>
<th>Safety-related / Transverse</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICAO - Annex 19 Safety Management</td>
<td></td>
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<table>
<thead>
<tr>
<th>European level</th>
<th>Flight Operations</th>
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</thead>
<tbody>
<tr>
<td>Reg. (EU) 2018/1139 (as amended) Common rules in the field of civil aviation</td>
<td></td>
</tr>
<tr>
<td>Irish Aviation Authority (IAA) Act of 1993</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>National level</th>
<th>IAA, Air Operator Certificates Order (SI 420 of 1999)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reg. (EU) 965/2012 Implementing Rules for Flight Operations (Parts DEF, ARO, ORO, CTA, SPA, NCC, NGO, SPO)</td>
<td></td>
</tr>
<tr>
<td>EASA AMCs &amp; GM related to Flight Operations</td>
<td></td>
</tr>
</tbody>
</table>

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Figure 8: International, European and National regulations applicable to the flight operations domain
4.5.3 Regulatory changes since the previous Section 32 examination

Regulation (EU) 965/2012 Implementing rules for Flight Operations as amended by (main changes):

- Commission Regulation (EU) No 83/2014 Air Operations Regulation - Flight Time Limitations (FTL) and rest requirements for commercial air transport (CAT) operations with aeroplanes;
- Commission Regulation (EU) 2015/2338 Requirements for flight recorders, underwater locating devices and aircraft tracking systems;
- Commission Regulation (EU) 2017/363 CAT operations at night or in IMC using single-engined turbine aeroplanes;
- Commission Regulation (EU) 2018/1042 of 23 July 2018 amending Regulation (EU) No 965/2012, as regards technical requirements and administrative procedures related to introducing support programmes, psychological assessment of flight crew, as well as systematic and random testing of psychoactive substances to ensure medical fitness of flight and cabin crew members, and as regards equipping newly manufactured turbine-powered aeroplanes with a maximum certified take-off mass of 5 700 kg or less and approved to carry six to nine passengers with a terrain awareness warning system;

4.5.4 Standardisation inspections

FOD has been subject to one standardisation inspection by EASA in March 2016 since the previous Section 32 examination. The EASA audit alluded to a single non-compliance on crew training programmes, which was subsequently resolved by FOD.

4.5.5 Oversight activities

Communications, coordination with stakeholders: FOCG meetings

The IAA holds a meeting twice a year with the operator managers through a Flight Operations Coordination Group (FOCG) platform. The FOCG gives operators an opportunity to exchange on transversal safety matters and to address the future regulatory changes managed by EASA.

The inspector manual is composed of a series of procedures addressing each specific subject available on the IAA’s intranet. We could not complete a detailed review due to the time available but EASA’s standardisation inspection did not reveal any gap in the documentation.
AOC oversight methodology: EMPIC

Since the previous audit, the use of EMPIC for the management of the oversight of operators has been fully deployed. EMPIC has now been in use for 2 years.

The oversight programme in EMPIC is based on a cycle of 24 months for all AOCs.

The recurrent OPS oversight programme is composed of:

- A 5-day comprehensive audit covering 10 inspection domains followed by a debrief with the accountable manager, safety manager, compliance manager and all nominated post-holders;
- Additional inspections over the 8 EMPIC oversight domains distributed along the 24 months cycle;
- The oversight programme is approved by the assistant director. It is not communicated in advance to the operators.

The internal compliance monitoring programme of operators shall also address the same topics independently.

This is aligned with our experience auditing other regulators in Europe. Giving advance information of the oversight programme to operators could help optimise the internal compliance monitoring programme to facilitate the repartition of surveillance activities and programming the presence of the auditees.

EMPIC functionalities include detailed checklists and management of non-compliance. Findings are classified by the audit team members. EMPIC provides alerts on due times.

A meeting is organised with accountable managers following comprehensive audits to inform them of the safety performance and compliance issues.

Occurrence reports analysis

Each FOI receives occurrence reports in parallel to the MOR system on a monthly basis to make their own assessment and adapt the oversight of the operator. A meeting with the safety manager is held every month. The IAA is satisfied with the number of voluntary occurrence reports it receives, which has increased year on year and believes that confidence in the system is building.

SMS assessment

An SMS assessment tool was under development according to EASA recommendations. This tool was not in place at the time of the examination.

Flight data monitoring programme

Although, Flight Data Monitoring Programme (FDMP) is not a new addition to EU regulations, EASA has emphasised the value of this tool to detect operational risks and monitor crew performance. A workshop to produce recommendations and a symposium was held to sensitise operators and authorities on the efficiencies that can be derived from flight data monitoring programmes in terms of improving safety performance.

FDOD has a pure “compliance monitoring” approach to flight data monitoring and does not engage in the promotion of best practices and sharing of experiences among operators. Thus, recommendations of EASA Flight Data Monitoring (FDM) are left under the responsibility of operators and not used as a reference by FOD.
One stakeholder expressed a desire for a platform where operators can share experiences on FDM. The IAA is considered as a natural focal point for this initiative.

2019S32_FOD_02: FOD to consult with stakeholders to investigate the value of establishing a FDM platform where operators can share best practices and lessons learnt (by end of June 2020).

Flight and duty times limitations
Since the previous Section 32 examination, new EU Flight Time Limitations (FTL) regulations have come into force for aeroplane operators.

Where no EU regulation exists, the IAA has issued national FTL regulations:

- Irish National Flight Time Limitations applicable to Non-Commercial Operations, including Non-Commercial Specialised Operations with Complex Motor-Powered Aeroplanes, and Commercial Specialised Operations with Aeroplanes, Air Taxi, Emergency Medical Services and Single Pilot Commercial Air Transport;

- Flight Time Limitations (FTL) and Rest Requirements for crew members undertaking helicopter Commercial Air Transport (CAT) Operations and declared Commercial Specialised Operations (SPO) and Non-Commercial Operations with Complex Motor-Powered Helicopters (Part-NCC).

Observance of FTL regulation is covered under the regular oversight programme.

Although operations of Irish operators do not require Flight Risk Management Systems (FRMS), fatigue risk is considered as a risk in the SMS and occurrences in which fatigue could be a contributing factor are identified. This shows a proactive approach to this issue from FOD.

Upset Recovery Training
Training on Upset Recovery is addressed in a revision of Regulation (EU) 965/2012 applicable on 20th December 2019. Although this requirement is not applicable yet, operators have been informed of the existence of this new regulation in the FOCG.

Medical fitness
The obligation for authorities to implement medical support programmes, psychological assessment of flight crew, as well as systematic and random testing of psychoactive substances to ensure medical fitness of flight and cabin crew members, was introduced by a revision of Regulation (EU) 965/2012 dated 28 November 2018. The regulation will come into force on 14th August 2020. Application of this new regulation in Ireland necessitates a new law, which was under development at the time of writing.

Balloons and sailplanes
There is currently no balloon operation in Ireland, nor any commercial operations with sailplanes (special operations (SPO)).


marginal effect on private sailplanes operations in Ireland and is applicable from 9th July 2019.

**SPO (high risks)**

High-risk operations are identified in notice 078: ‘Notice to aircraft operators intending to conduct high risk commercial specialised activities including cross-border operations in Ireland.’

Two operators hold high risk SPO authorisation by FOD. Both are also holding an AOC for public transportation.

Oversight of SPO operations is integrated in the AOC surveillance programme with a 24-month cycle. Checklists and oversight programme are managed through EMPIC.

This conforms to standards practices.

**SPO (non-high risks)**

Eight operators have declared that they perform special operations.

Surveillance programmes are currently under development in EMPIC. The IAA will keep the same 24-months cycle. Non-compliances are difficult to manage in an environment that is not subject to authorisation. The only solution is to prohibit the operations where a particular risky situation is not properly addressed by the operator. Flexibility in the provisions of the EASA Basic Regulation shall be used in that case.

**NCC: Non-commercial activities with complex aircraft**

Operators are performing NCC operations.

NCC is also a declaration regime that shall be followed and is the same as SPO in EMPIC.

**EU Ramp Inspection Programmes**

Since the previous Section 32 examination, the EU SAFA system has evolved towards a streamlined distribution of ramp checks all over Europe by attributing a quota to each country. It is covering aircraft used by third country operators or used by community operators under the regulatory oversight of another EU Member State. The IAA is adhering to the central EU Ramp Inspection Programmes system and performs checks as required.

### 4.5.6 Outcome of stakeholder consultations

Operators praise the competence, skills and dedication of the IAA inspectors. It was noted that a single Cabin Crew Coordinator position existed, acting as subject matter expert and focal point for cabin operations activities in both the operations and CCTO domains. The cabin safety oversight elements of the oversight programmes (i.e. cabin inspections) can be completed by the assigned FOIs. Despite this, the FOI availability is reported as being very good throughout the year. One stakeholder noted that when the Cabin Crew Coordinator is not available, their functions are being covered but less efficiently.

The FOCG meeting is appreciated as a forum to exchange information on oversight. However, an additional initiative would be appreciated to exchange views on harmonised
flight data monitoring approach among operators (see recommendation 2019S32_FOD_02).

The biannual 'comprehensive audit' introduced by FOD since the previous Section 32 examination was considered as a positive step and has enabled effective channelling of availability of all needed resources in a limited period of time, allowing for an exhaustive assessment of the organisation. One operator regretted the lack of support from the IAA to promote regulatory changes to EASA that Irish operators would like to see implemented to accommodate their operational needs. Although understandable, channels exist for Irish airspace users to input into EASA's regulatory activities. As a result, we do not believe the IAA needs to change its current approach.

4.6 Personnel Licensing

4.6.1 Background

Personnel licensing management and oversight are shared between two departments:

- The Regulatory Performance and Personnel Licensing Department (RPPLD) manages Aircrew, ATC and aircraft maintenance engineer licences;
- The Flight Operations Department (FOD) manages the oversight of Approved Training Organisations (ATO) (Pilot Cabin Crews).

RPPLD is responsible for the issuance, revalidation and renewal of licenses, certificates and ratings for Aircrew, ATC controllers and maintenance engineers. The department conducts examinations of aircrew using an online platform. It also oversees Part-147 training organisations.

Ireland has 8 ATCO Training Organisations. One Initial ATCO Training Organisation moved to Sweden.

There is no language proficiency organisation in Ireland. Language proficiency is assessed by specifically authorised examiners.
### 4.6.2 Regulations covered

**International level**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety-related / Transverse</td>
<td>ICAO - Annex 19 Safety Management</td>
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</table>

**European level**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BR / Reg.(EC) 2018/1139 (as amended) Common rules in the field of civil aviation</td>
</tr>
<tr>
<td></td>
<td>Reg. (EU) 376/2014 Reporting, analysis &amp; follow-up occurrences</td>
</tr>
</tbody>
</table>

**National level**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Air Navigation &amp; Transport (AN&amp;T) Act of 1998</td>
</tr>
<tr>
<td></td>
<td>Irish Aviation Authority (IAA) Act of 1993</td>
</tr>
</tbody>
</table>

### 4.6.3 Regulatory changes since the previous Section 32 examination

Regulation (EU) 1178/2012 Implementing rules for Civil Aviation Aircrew as amended by:


Figure 9: International, European and National regulations applicable to the personnel licensing domain

IAA, Personnel Licensing, Order (SI 333 of 2000)

IAA, Personnel Licensing (amendment), Order (SI 683 of 2003)
• Commission Regulation (EU) 2018/1119 Declared training organisations;


• Commission implementing Regulation (EU) 2019/430 of 18 March 2019 amending Regulation (EU) No 1178/2011 as regards the exercise of limited privileges without supervision before the issuance of a light aircraft pilot license.

Regulation (EU) 2018/1142 applies from 5 March 2018, it mainly addresses:

• New B2L and L Part-66 licenses for non CMPA;

• Risk mitigation for acceptance of components.

This new regulation had limited impact on RPPLD. The procedures for processing the application to Part-66 B2L or L category licenses are in place but it is noted that no entity in Ireland has applied for this thus far. The amendments to Regulation (EU) 1321/2014 also had little impact. As an example, the only B3 category Part-66 licenses issued so far resulted from conversion of national licenses.

4.6.4 Standardisation inspections

Since the previous Section 32 examination, the personnel licensing domain has been subject to an FCL (Flight Crew Licenses) EASA standardisation inspection in June 2017, a Medical standardisation inspection in June 2016, and a Flight Training Synthetic Devices standardisation inspection in May 2017.

These standardisation inspections were positive: no findings were found on FCL, one finding in MED that was addressed by hiring one medical secretary, and one finding on an FSTD organisation that was also fixed.

The 2016 standardisation inspection of Regulation (EU) 1321/2014 about personnel licensing revealed non-significant findings or isolated cases.

4.6.5 Oversight activities

### Regulated personnel and entities

<table>
<thead>
<tr>
<th>Aircrews</th>
<th>ATPL (A)</th>
<th>CPL (A)</th>
<th>PPL (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aeroplanes</td>
<td>1392</td>
<td>4140</td>
<td>825</td>
</tr>
<tr>
<td>Helicopters</td>
<td>274</td>
<td>71</td>
<td>82</td>
</tr>
<tr>
<td>Microlights</td>
<td>87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cabin Crews (IAA)</td>
<td>361</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Table 6: Number of Personnel Licensing entities*
### Aircraft training organisations

<table>
<thead>
<tr>
<th>ATO type</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATO airplane initial</td>
<td>2</td>
</tr>
<tr>
<td>ATO Helicopter initial</td>
<td>2</td>
</tr>
<tr>
<td>ATO aeroplane type rating</td>
<td>5</td>
</tr>
<tr>
<td>ATO helicopter type rating</td>
<td>2</td>
</tr>
<tr>
<td>CCTO</td>
<td>6</td>
</tr>
</tbody>
</table>

**Table 7: Aircraft training organisations**

### Aircraft maintenance engineer licensing and related training organisations

At the time of the examination there were 2110 licensed AMEs (Aircraft Maintenance Engineers), with approximately 300 pending, which represents an important increase when compared to 2015 figures (1468 licensed AMEs).

The breakdown of AME licenses is as follows:

- Part-66 B1 category: 1833;
- Part-66 B2 category: 500;
- Part-66 B3 category: 25;
- Part-66 C category: 543;
- Part-66 A category: 210 (standalone);

Some categories (B1/B2, B1/C, B1/B2/C) can be combined and explain why the total AME licenses exceed the AME number.

There was a new Part-147 approved MTO (Maintenance Training Organisation) leading to a total of nine Part-147 MTO regulated by RPPLD.

The mobilisation of available internal resources and prioritisation of the processing of UK AME applicant addressed the needs to absorb the 40% additional workload induced by fears of a hard Brexit.

RPPLD has managed to address an important number of UK-origin Part-66 AME license holder applications through short term actions that have addressed the situation. However, for the long term, RPPLD should assess the impact of the AME license holder increased volume in regard of staffing. This should be addressed through recommendation 2019S32_IAA_01 (see section 3.1.4).

### Balloons and sailplanes license conversion process

There was no balloon license in Ireland at the time of the examination. Therefore there was no need for a conversion process.

Gliders licenses are currently issued by the Gliders association under delegation of the IAA. This will change as a result of the requirement for authorities to issue licenses in an attempt to harmonise EU rules. The conversion of glider pilot licenses into EU licenses is particularly complex since, at present, gliders licenses are not issued by the IAA. The Gliders association has initiated the development of a conversion report for EASA for implementation before 8th April 2020.
Oversight of flight and cabin crew training organisations

The Flight Operations Department is in charge of the oversight of Flight Crew Training organisations and Cabin Crew Training organisations. ATOs are subject to a 24-month recurrent oversight programme implemented in EMPIC. The use of EMPIC serves as valuable support to the organisation in terms of follow-up of ATO and DTOs oversight activities in accordance with the EU regulations. EMPIC shall be developed further to accommodate the new surveillance obligations introduced by EU regulations.

2019S32_RPPLD_01: RPPLD to continue to develop the EMPIC tool to address the new surveillance requirements introduced by EU regulations (by end of June 2020).

Examiners are nominated by FOD. Senior examiners are responsible for checking on behalf of the IAA that examiners are conforming to IAA requirements.

Setting up the management of the oversight of Declared Training Organisations, as per the requirements of the most recent revision of Regulation (EU) 1178/2011 was under process.

4.6.6 Outcome of stakeholder consultations

Consulted stakeholders were not directly interviewed in relation to the activities of RPPLD. Stakeholders were given the opportunity to comment on licensing matters during the consultation but did not raise elements of concern.
Air Navigation Service Provider

5.1 Background

Within the IAA ANSP, the Safety Management Unit (SMU) is responsible for the promulgation, development, maintenance and promotion of the Safety Management System. This is to ensure it continues to meet the IAA’s needs, ICAO and EASA regulatory requirements, and recommended practices applicable to SMS. The SMU also provides independent safety management guidance, support, and advice to the Director of Operations and Strategy as necessary. As shown in Figure 10, the Head of SMU has direct reporting lines to the Director of ATM operations and strategy and to the Chief Executive. Communication generally takes place on a monthly basis. The SMU staff head count has increased from 3 to 6 people.

![ATM operations & strategy organigram](image)

Figure 10: ATM operations & strategy organigram

The IAA Organisation ATM Safety Committee (OASC) is responsible for the development of the safety management policy, principles and procedures of the ANSP. It meets every three months. In addition, Unit Safety Management Committees (USMC) exist for each ATS units. They advise the unit management to remain proactive in safety management and draw attention to issues that may affect the integrity of the unit safety performance. USMCs meet quarterly.

5.2 Safety methodology, planning and training

The ANSP’s Safety Management Manual processes have been updated to highlight interdependencies between the requirements for risk assessments, requirements for notification of changes and guidance on the conduct and timing of hazard assessments / brainstorming sessions. It highlights steps for initiating hazard assessments in line with EUROCONTROL Safety Assessment Methodology (SAM) guidance and includes example templates (provided on DAAMS, see section 5.3). Figure 11 shows the structure of the ANSP procedures and how they contribute to the development of various safety products.
Each ATS unit owns and manages Unit hazard logs and Unit Safety Cases. These are on a portal for access by both SMU and other Units, as required. At the time of the examination the ANSP was working on the development of a central hazard log. This should allow assessment of whether hazards identified at an ATS unit also apply to other units. We believe this is a positive step. Several of the larger European ANSPs have similar initiatives in place, with varying degrees of maturity.

The ANSP benchmarked its SMS against CANSO’s Standard of Excellence in SMS. The added stringency of the most recent version of the standard resulted in a drop in the score of participating ANSPs by about 20%. Although the IAA ANSP is a joint top performer with respect to this safety maturity performance measure, maintaining level ‘E’ is expected to require sustained and additional effort as a consequence. This, and the increased level of detail of new regulatory requirements, has required the ANSP to deploy additional resources.

The SMM recognises the bow-tie risk assessment process as an established, regulatory-approved procedure to assess risks associated with planned changes to functional systems. It can be used in workshops for assessing hazards identified by occurrence investigations and surveys. The use of bow-tie methodology is at the discretion of the staff responsible for conducting each safety assessment. This is determined based on the type and complexity of the change. For example, operational changes tend to be assessed using bow-tie methodology. This approach is consistent with the latest developments being rolled out in other mature European ANSPs. The ANSP is commended for its use of bow-tie models.
The timescales required by ANSD for reviewing changes to functional systems have increased to 30 working days. This forced the ANSP to update its internal timescales to meet this requirement.

SMU staff reported a good relationship with the regulator. ANSD oversight places considerable demands on the ANSP processes and resources.

Staff have been trained at unit level to conduct assessments using this process. Refresher training courses have been provided in addition to the three initial practitioner training courses (externally provided).

The ANSP acquired an eLearning Management System (eLMS) to provide operational staff access to online education and qualification. The eLMS policy and process align with relevant ICAO Safety Management System / Safety Risk Management training and IAA ANSP-specific SMS modules. eLMS is also used for TARO (radio officers) SMS training. User feedback was used to enhance the content and interface of the courses. The platform is also being utilised to design new SMS modules to meet the necessary requirements for Regulation (EU) 2017/373 refresher (SMS & HF).

5.3 Safety performance

Safety occurrences are investigated using EUROCONTROL’s TOKAI (ToolKit for ATM Investigations) investigation tool which was deployed by the ANSP in Q2 2018. This was in response to the implementation of Regulation (EU) 376/2014 requiring the roll out of a specific ECAIRS-compliant data format for occurrence reporting and investigations. All operational personnel can submit an occurrence. When this happens, investigators, the SMU and the original reporter have access to view, amend and investigate the occurrence in TOKAI. Management are provided with a copy of the report.

Safety dashboards are built using the TARGIT tool, based on information from TOKAI. This provides ‘live’ data dashboards as well as monthly and quarterly safety performance reports. Information about occurrences only becomes visible in TARGIT when entered into TOKAI by inspectors. That data may also be used to support the hazard identification phase of certain safety cases. Some of developments envisaged by the ANSP were to create a dashboard for executive staff and automate some of the safety reports.

The monitoring of safety risks is done using EUROCONTROL’s Aerospace Performance Factor (APF) tool. This tool collates occurrences and provides an illustration of the level of risk nationally or by ATS unit. If this level exceeds pre-defined (ICAO recommended) standard deviation thresholds, the ANSP conducts an assessment into the cause and corrective actions are taken. As this tool contains data from 2013 onwards, it allows for an assessment of performance over a short- or longer-term period. APF performance is reported on in the IAA quarterly safety performance reports. In addition to this, five safety performance indicators (SPI) are monitored and trended over a two-year period. Where an SPI is trending negatively, the concerned ATS unit is expected to implement corrective actions.

TARGIT also interfaces with the ANSP’s internal audit tracking process which is conducted through Document Audit And Management System (DAAMS). This internal ANSP tool supports the centralisation of all audit findings (e.g. through the creation of interactive dashboards). At the time of the examination the ANSP was in the process of enhancing the system to migrate all ANSP audits conducted by external parties into the DAAMS tool to facilitate their tracking, monitoring and management. DAAMS provides
These processes and their integration were recognised by CANSO as best practices in the industry.

5.4 Human Performance and fatigue risk management system

The ANSP published its Fatigue Risk Management System (FRMS) policy in 2018. This was developed with the help of a FRMS specialist consultancy contracted to initiate FRM assessment of ATCOs, supported by a member of the IAA Operations Directorate with a qualification in Human Factors (HF).

The ANSP created a specific HF expert post (fulltime) in the SMU to develop and manage Human Factors, including the FRMS. This was filled by a Human Factors expert in January 2019. The ANSP HF policy, strategy and procedures were being updated to include specific references to fatigue so as to ensure compliance with the regulatory requirements from Regulation 2017/373. Additionally, some training and awareness raising activities were being planned to explain the changes introduced by the new regulation.

At operational level, staff were in place at each unit to work on and act as focal points on Human Factor issues (including fatigue). These staff were employed by the IAA Operations Directorate but supported the SMU HF expert in the assessment of changes, safety survey and occurrence investigation.

So far the ANSP mainly used EUROCONTROL’s guidelines for Human Performance to develop their processes. Their intention was to strengthen their procedures by deploying the principles recommended in CANSO’s Standard of Excellence in Human Performance Management, hence adopting the latest best practices in this domain.

The ANSP has invested significant effort and resources to improve its Human Performance capability since the previous Section 32 examination. This is a welcomed development which brings the ANSP on par with the more advanced European ANSPs in that domain.

5.5 Interoperability

The need for interoperable ATM/ANS systems is defined in the EASA Basic Regulation to ensure the seamless operation of the European air traffic management network (EATMN) at all times and for all phases of flight.

The ANSP’s technology directorate established engineering procedures for managing changes to EATMN systems and identifying the appropriate acceptable Means of Compliance to demonstrate these systems are interoperable. Technical Files and Declaration of Verifications are produced by the ANSP and reviewed by ANSD before any systems enters operations.

Through attendance at User Group the technology directorate is made aware of future changes to interoperability legislation. Additionally many of the changes mandated are in relation to FDP systems which are managed as part of the COOPANS roadmap.

5.6 Involvement in EU and international initiatives

The ANSP remained involved in technological and training partnerships. From a technical perspective, the IAA was a key contributor to COOPANS, with representation on the
COOPANS Board, Operational Harmonisation Group, Strategic Development Group, SESAR Group and System Realisation Management Groups. Engagement in this forum was used to shape the strategic direction and procurement of the IAA’s ATM system.

The IAA were represented on the EPN Board and used EPN Ireland to train their Air Traffic Controllers.

The IAA were represented on the Borealis Alliance Board, the Alliance Reps Group as well as working groups. The Borealis Alliance was used as a forum to discuss operational matters with neighbouring ANSPs.

The IAA maintained its involvement in the UK-IR FAB, with representation on the Management Board. Some uncertainty remained over the nature of the relationship with NATS in a post-Brexit environment. At the time of the examination, the ANSP believed Brexit would have a limited impact on the IAA’s relationship with NATS. It was seen as unlikely that Brexit would prompt major changes in operational or Safety Management System procedures.

The IAA expected to continue to attend and contribute to major international safety initiative and CANSO Safety activities.

5.7 Resilience

Resilience was ranked amongst the highest priorities for the IAA ANSP customers in the IAA’s customer care survey in 2018. The ANSP suffered two separate system failures to its COOPANS ATM system in recent years after a number of years of uninterrupted service. On these occasions, contingency measures were deployed and worked successfully with no impact on safety. Normal operations were restored quickly. As established in the IAA’s crisis management processes, crisis meetings were organised during the incident which involved several senior SRD managers.

Failures were caused by a combination of factors which were traced and addressed. At the time of the examination, work was ongoing with the ATM system manufacturer Thales and COOPANS partners to review the design standards employed in the development of the system and ensure they were implemented effectively.

Although safety was not compromised, these events highlighted the importance of constantly reviewing the system and improving system resilience. Following these occurrences, the ANSP commenced a full review of system resilience to identify and mitigate against any potential system weaknesses. This work was ongoing at the time of the examination and may result in additional investment in a more enhanced back-up system to clear the sky, EASDS. The works also included a review of all CNS/ATM systems to identify potential single points of failure.

Advances in resilience included the construction of the IAA’s custom-built contingency centre at Ballygirreen. Data Networks and infrastructure are another important source of resilience for both the main ATM system and IT connectivity. The IAA established SLAs with telecom suppliers. The ANSP is planning on further investing in resilience, subject to approval by Airspace Users during the RP3 performance plan consultation process.

System failures affecting ANSP operations are a common occurrence in ATM. We are satisfied that the ANSP responded to these events in a safe manner, according to their procedures. We are encouraged by the ANSP’s proactiveness in reviewing the resilience of its systems.
5.8  Cyber security

5.8.1  Context
The cyber risk profile of the ANSP is increasing as its systems become more interconnected and based on commercial-off-the-shelf products. It displays a proactive approach to cyber security which relies on identifying and mitigating risks at an early stage. Cyber is seen as more of a risk to business continuity than to safety.

Close ties exist between the ANSP and the IAA’s ICT department which is part of the Technology and Training Directorate. The experience and insights gathered by the ICT department are utilised and applied to the relevant elements of the ANSP’s systems, recognising that the cyber requirements for both domains differ and differences when developing systems need to be factored (e.g. open vs closed networks resulting in different threat levels). Cooperation also exists between the ANSP and partner ANSPs, as well as telecommunication providers.

The ANSP expects to invest significantly in cyber security. In 2018, the ANSP Operations Department created a specific cyber security group composed of six full time cyber experts. The organisation is looking to grow this group and has increased the funding allocated within RP3.

5.8.2  Audits and regulatory provisions
In January 2019 the ANSP was designated as an Operator of Essential Services under the Network Information Systems (NIS) Directive (EU 2016/1148). This mandates the organisation to implement security guidelines and mandatory reporting of incidents (outages). The governance structure and coordination mechanisms with other risk management processes were still to be developed at the time of the examination.

Compliance with the NIS Directive is jointly audited by the Department of Communications, Climate Change and Environment (DCCAE) and the Irish National Cyber Security Centre (NCSC). There is a recognition that the ANSP implementation of the NIS Directive is being carried out in a gradual manner. It was therefore expected that the DCCAE/NCSC audit would take that into account and adopt a progressive auditing approach, starting with an assessment of asset registers followed by audits into specific areas two to three months later.

SRD is responsible for providing oversight of ANSPs’ Security Management System (SeMS). The IAA ANSP SeMS has been in place since 2016 and is evolving.

When a functional change is introduced within the ANSP, the potential safety and security impact are assessed. The security assessment is completed by a trained engineer, giving a baseline understanding of the level of cyber threats. If required, a cyber expert (from the ANSP) can be called upon to support the assessment.

5.8.3  Risk mitigation
To understand the current risks faced and mechanisms being implemented in the other stakeholders, the ANSP engages with the wider industry to exchange lessons learnt.

The ANSP has multiple measures in place to mitigate the risk of a cyber-attack and implemented mechanisms to limit the impact of a cyber-attack if it were to occur:

- Processes: procedures are in place for leavers and joiners to ensure the access rights granted to each individual are commensurate with their role – this requires a manager
Risk tracking is carried by the ICT department. Recovery plan is exercised every year;

- Infrastructure: Majority of systems are ‘air gapped’ and segregated (i.e. duplicated) to make it harder for an infection to bridge across to another system, and implementing their own bespoke firewalls;

- Training: Information sessions are held for staff to convey best practices regarding day to day cyber use. Engagement of staff in national crisis management exercises run by NSCS with European Union Agency for Network and Information Security (ENISA).
6 Conclusions

The IAA is a mature organisation in the way it applies and enforces technical and safety standards to aircraft and air navigation. In some areas, such as in the regulator’s development of organisation risk registers or the ANSP safety performance management, it is at the forefront of aviation safety. This is reflected in the consistently good scores obtained during EASA standardisation inspections and CANSO evaluations. The organisation has implemented a comprehensive safety system, with qualified staff who possess relevant industry experience. This is supported by the organisation’s commitment to continuous training. SRD’s oversight approach is proportional to the size and remit of regulated entities and stakeholders reported a healthy relationship with SRD inspectors.

In line with the IAA’s ethos of continual improvement, we observed notable changes since the previous Section 32 examination carried out in 2015. This includes the creation of key roles within the organisation (e.g. legal officer) and efforts to engage more actively with stakeholders in assisting them implementing new regulations.

The IAA has multiple means of consultation with regulated entities on safety issues. The majority of consulted stakeholders had a positive view of the IAA and recognised the expertise and availability of its staff. Efforts by the IAA to support them implement new regulatory requirements was particularly commended.

Most of the recommendations from the 2015 Section 32 examination have been completed. Despite this progress, the IAA is facing significant challenges. In concluding our examination, we make 16 recommendations. The key areas requiring attention are developed hereafter:

- The pace of the separation project has been slower than DTTAS and some IAA executive directors expected. Some of the transition timescales are driven by legislation and therefore are outside of the direct control of the IAA, however this should not be an obstacle to developing detailed transition arrangements. It is also noted that the project is complex, and the impact on safety regulation today and the potential impact in the future must be considered in all decisions being made. The IAA is on record as being committed to deliver the proposed separation. However, at the time of the examination, there were uncertainties within the IAA over the transition towards the new regulator. We recommend that the separation project is concluded quickly along agreed timelines and that meaningful transition arrangements are agreed and implemented by the IAA and CAR – including in respect of preparing for the transfer of statutory responsibilities - while ensuring that safety levels are maintained throughout that process. We also recommend that clarity is provided on the legislative timetable.

- The relationship between a pilots’ union consulted and the regulator is poor. Although such relationships are not uncommon throughout Europe, the communication channels between the IAA and the union need to be maintained. We recommend that a just culture body is implemented as soon as possible to bring Ireland in line with Regulation (EU) 376/2014. This will require the bringing into force of legislation. Giving the new structure a level of independence would support the building of additional trust with stakeholders.

- The growth of regulated entities and added complexity of new regulations puts pressure on resourcing. SRD is struggling to recruit which compounds the strain on resources. This has resulted in non-urgent tasks being de-prioritised in some cases.
Some productivity gains may be achieved through the IAA’s IT ‘digitalisation’ project, but its completion is several years away. The IAA could look to accelerate the deployment of the digitalisation to achieve productivity gains earlier. This would provide some mitigation for the difficulties encountered in recruiting staff. A human resources assessment carried out in 2018 by SRD shows some gaps in resources. We recommend that **SRD follows through on its plan to increase staff count**, independently of the progress achieved on the separation;

- Brexit puts significant strains on the IAA to cope with the increase in workload linked to large numbers of UK pilots and regulated entities applying for Irish licenses. Although the demand for licenses has reduced over the past months, the IAA expect an increase in the run up to Brexit. Depending on the nature of the future IE/UK (and EU/UK) relationship, there could be a significant impact on SRD, resulting in increased workload for its staff. **Establishing plans to cope with various Brexit scenarios and / or different levels of demand for Irish licences** should be explored. That said, we recognise the difficulties associated with such planning given the uncertainty over the exact Brexit outcomes.

- Two unrelated failures of the ATM system of the IAA ANSP in recent years and added cyber security threats highlight the need to **reinforce resilience processes** to provide better business continuity. While not a safety issue, the IAA was conscious of the importance of business continuity for customers. This is recognised by senior management and has been proactively acted upon.
## Recommendations

### A.1 General

<table>
<thead>
<tr>
<th>Priority</th>
<th>Recommendation</th>
<th>Division</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>2019S32_IAA_01</td>
<td>IAA</td>
<td>The IAA to continue to monitor the potential workload increase for staff due to Brexit and implement adequate mitigating measures. As the outcome of Brexit is currently unknown, this planning exercise could for example be based on a worst-case scenario (by end of June 2020).</td>
</tr>
<tr>
<td>High</td>
<td>2019S32_IAA_02</td>
<td>IAA</td>
<td>The IAA to review communication channels to communicate directly with relevant stakeholders on Brexit contingency and preparedness measures (by end of June 2020)</td>
</tr>
<tr>
<td>High</td>
<td>2019S32_IAA_03</td>
<td>IAA</td>
<td>The IAA to make preparations so that upon designation of just culture functions to it by DTTAS it will deploy a robust just culture process, including working arrangements (governance structure, procedures, etc) within one month of the relevant Statutory Instrument coming into force.</td>
</tr>
</tbody>
</table>

### A.2 SRD

<table>
<thead>
<tr>
<th>Priority</th>
<th>Recommendation</th>
<th>Division</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>2019S32_SRD_01</td>
<td>SRD</td>
<td>SRD to monitor the progress of the adherence of the aviation community to the voluntary occurrence reporting system (by end of June 2020).</td>
</tr>
<tr>
<td>-</td>
<td>2019S32_SRD_02</td>
<td>SRD</td>
<td>SRD to create risk registers for all domains (by end of June 2020).</td>
</tr>
<tr>
<td>-</td>
<td>2019S32_SRD_03</td>
<td>SRD</td>
<td>SRD to ensure that a copy of all previous authorisations granted to operators before the implementation date of regulation 965/2012 (28 October 2014) are available for continuous validity check (by end of June 2020).</td>
</tr>
<tr>
<td>-</td>
<td>2019S32_SRD_04</td>
<td>SRD</td>
<td>SRD to review procedure SRD.008 to assess whether the actors responsible for addressing recommendations from auditing activities should be explicitly documented (by end of June 2020).</td>
</tr>
<tr>
<td>-</td>
<td>2019S32_SRD_05</td>
<td>SRD</td>
<td>SRD to review the need to update review criteria/processes adopted by inspectors and to align inspector expectations/requirements in each SRD division to provide consistent oversight feedback to stakeholders (by end of June 2020).</td>
</tr>
<tr>
<td>High</td>
<td>2019S32_AD_01</td>
<td>AD</td>
<td>SRD to hire additional AD inspectors to achieve the required 4.7 FTE to perform all tasks assigned to AD in timely manner (by end of June 2020).</td>
</tr>
<tr>
<td>-</td>
<td>2019S32_AD_02</td>
<td>AD</td>
<td>AD to develop and publish procedures for certification of heliports on certified aerodromes and licensing of heliports, including guidelines for ground-based heliport site owners/occupiers and for heliport site-keepers (by end of June 2020).</td>
</tr>
<tr>
<td></td>
<td>2019S32_AD_03</td>
<td>AD</td>
<td>By analysing the conclusions / recommendations of ICAO Wildlife Strike Reduction Symposium, AD to make a proposal for implementation in Ireland (by end of April 2020) and communicate it through the next National Bird Hazard Committee and Annual Safety Forum.</td>
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<tr>
<td></td>
<td>2019S32_AD_04</td>
<td>AD</td>
<td>AD to review the need to organise safety meetings dedicated to smaller aerodrome operations, with attendance from front line aerodrome personnel to promote the exchange of practical experience (by end of June 2020).</td>
</tr>
<tr>
<td>High</td>
<td>2019S32_FOD_01</td>
<td>FOD</td>
<td>FOD to evaluate the overall resource needed to meet the oversight demand generated by EU regulations (by end of June 2020).</td>
</tr>
<tr>
<td></td>
<td>2019S32_FOD_02</td>
<td>FOD</td>
<td>FOD to consult with stakeholders to investigate the value of establishing a FDM platform where operators can share best practices and lessons learnt (by end of June 2020).</td>
</tr>
<tr>
<td>High</td>
<td>2019S32_FOD_03</td>
<td>FOD</td>
<td>FOD to review the need to recruit/train an additional Cabin Crew Coordinator (by end of June 2020).</td>
</tr>
<tr>
<td></td>
<td>2019S32_RPPLD_01</td>
<td>RPPLD</td>
<td>RPPLD to continue to develop the EMPIC tool to address the new surveillance requirements introduced by EU regulations (by end of June 2020).</td>
</tr>
</tbody>
</table>
## Summary of 2015 Section 32 recommendations

This appendix provides an overview of how the IAA addressed the recommendations from the previous Section 32 examination, and highlights where in the report these recommendations are discussed.

This section will be updated following the IAA’s review and once all requested information is provided by the IAA.

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Division</th>
<th>Description</th>
<th>Status</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>REC_SRD_1</td>
<td>General</td>
<td>Whereas EASA has not questioned the effectiveness of the functional, as distinct from legal, separation of the IAA regulator and the IAA ANSP at the highest level in the organisation, such responsibility and accountability for certain independent decisions should be kept under review to ensure that appropriate safeguards in relation to safety oversight are in place. The objective should be to ensure that there is demonstrable transparency regarding the independence of safety regulation and that potential “conflict of interest” issues are managed in line with the principles underpinning the emerging regulations within the framework of SES II+ and with best practice globally.</td>
<td>Met</td>
<td>Section 3.2 provides a more detailed analysis on the high-level IAA separation review. The following are the key points: The decision to split the regulator and ANSP was made in 2017. The objective is to ensure a higher degree of separation that currently exists through organisational separation. A steering group has been established to deliver the separation and the change management process. The group have put forward a structural design. The parliamentary process to deliver the separation has commenced.</td>
</tr>
<tr>
<td>REC_SRD_2</td>
<td>The IAA should ensure:</td>
<td>a) Communication mechanisms are reviewed to ensure effective support to stakeholders during times of significant regulatory changes. This should include identification of the means and resource to improve the effectiveness of the communication process, and appropriate action plans to ensure the industry is fully supported in its implementation and interpretation of the regulations.</td>
<td>Met</td>
<td>Section 4.1.4 details the changes introduced in SRD that address the recommendation from 2015. Two procedures have been implemented by SRD that detail the communication mechanisms used to ensure effective support is provided to stakeholders during times of significant regulatory changes. These include: The Communication Policy (SRD.009) which defines the main principles that governs how SRD communicates both internally and externally. Procedure SRD.111 which outlines the method used to process new or proposed amendments to a regulatory requirement. Section 4.5.5 details the changes introduced in the Flight Operations division that address</td>
</tr>
</tbody>
</table>

### Section 4.1.4

The changes introduced in Section 4.1.4 are detailed in the Communication Policy (SRD.009) which defines the main principles that governs how SRD communicates both internally and externally. Procedure SRD.111 outlines the method used to process new or proposed amendments to a regulatory requirement.

### Section 4.5.5

The changes introduced in Section 4.5.5 are detailed in the Flight Operations division.
the recommendation from 2015.
In the flight operations domain, anticipated regulatory changes are addressed in FOG meetings held twice a year with operation managers. **Section 4.1.9** details a communication issues raised by the Aerodrome operator consulted at the time Regulation 139/2014 was implemented, and for consultation on changes to physical infrastructure. The stakeholder expressed that additional information would have been beneficial regarding procedures to be followed and interpretation of some of the new requirements and obligations. Considering the historical nature of the implementation (2017) and the fact that other stakeholders (in different domains) reported a good engagement from SRD, we believe SRD has implemented adequate processes.

<table>
<thead>
<tr>
<th>b)</th>
<th>A focal point for each sub-division is implemented and known to all organisations to make sure urgent situations requiring an inspector are processed in a timely manner.</th>
<th>Met</th>
</tr>
</thead>
<tbody>
<tr>
<td>c)</td>
<td>Personnel with appropriate expertise are involved in any rulemaking activity and regulation interpretation</td>
<td>Met</td>
</tr>
</tbody>
</table>

**Section 4.1.4** details the changes introduced in SRD that address the recommendation from 2015.

Each regulated entity is assigned a nominated inspector which act as a focal point. The IAA’s website can also be used by regulated entities to ask questions.

**Section 4.1.4** details the changes introduced in SRD that address the recommendation from 2015.

The Legal Officer was appointed in October 2018 and is responsible for:

- tracking and coordinating the regulatory change management aspects
- checking the flexibility of provisions under the EASA BR

It was noted that the Legal Officer does not provide interpretation of regulations, the expert in the area is responsible for...
interpretations, however where there are conflicts the Legal Officer linguistic interpretations.

Since the previous audit of AD two aerodrome inspectors with strong airport operations and management backgrounds have been hired.

Section 4.1.4 details the changes introduced in SRD that address the recommendation from 2015. The latest AD procedures were developed by inspectors and reviewed by the head of the department. As defined in SRD’s internal management processes, a compliance review of procedures is done during internal audits.

Section 4.1.6 details the changes introduced in SRD that address the recommendation from 2015. The SPA is developed in consultation with stakeholders and is updated every year, in response to the publication of EASA’s EPAS. The SPA describe Safety Objectives with associated safety performance indicators (process-based (i.e. leading) and outcome-based (i.e. lagging)) and safety targets.

REC_SRD_3
The SRD should continue to work with EASA and stakeholders to ensure that relevant indicators for effectiveness of safety management at both State and organisational level continue to be developed across all domains.

a) an EU coordinated set of high level and low level, leading and lagging safety indicators are developed in conformance with the EU requirements and agreed with stakeholders, which will enable safety targets for regulated entities to target their individual resources to address key safety concerns and improve communications between other organisations and with SRD

b) a common scoring scheme for performance targets is developed, along with a common communications methodology for sharing information both within and between authorities and organisations

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c) relevant indicators for effectiveness of safety management at both State and organisational level continue to be developed across all domains.

Section 4.1.6 details the changes introduced in SRD that address the recommendation from 2015.

The effectiveness of safety management is assessed using EU Performance Scheme Effectiveness of Safety Management (EoSM) tool in the ANS domain and the EASA MS Effectiveness Tool applicable to all other domains.

The latest edition of the SPAS (2019-2022) was being finalised at the time of writing. Tools are expected to be implemented by SRD to monitor each indicator (at organisation-level, and State-level).

Section 4.1.5 details the changes introduced in SRD that address the recommendation from 2015.

Cross domain sharing of safety information is provided through the Cross Domain Safety Workshop, which is attended by the IAA SRD inspectors and the safety managers from AOC Holders, Airports and ANSP’s in Ireland. This supports the sharing of information between stakeholders (including those who may not have been directly affected by the safety issue).

a) follow-up reports and lessons learned from occurrences reported by one organisation are shared with other affected stakeholders (e.g. airports, ANSP, operators), using appropriate communication levels and methods, taking due account of data protection issues.

b) initial reporters are aware of conclusions if they are not directly affected (despite being the initial reporter), taking due account of data protection issues.

The SRD should further ensure that:

- The latest edition of the SPAS (2019-2022) was being finalised at the time of writing.
- Tools are expected to be implemented by SRD to monitor each indicator (at organisation-level, and State-level).
- Cross domain sharing of safety information is provided through the Cross Domain Safety Workshop, which is attended by the IAA SRD inspectors and the safety managers from AOC Holders, Airports and ANSP’s in Ireland. This supports the sharing of information between stakeholders (including those who may not have been directly affected by the safety issue).
- Follow-up reports and lessons learned from occurrences reported by one organisation are shared with other affected stakeholders (e.g. airports, ANSP, operators), using appropriate communication levels and methods, taking due account of data protection issues.
- Initial reporters are aware of conclusions if they are not directly affected (despite being the initial reporter), taking due account of data protection issues.
Central Repository. Feedback to voluntary reporters may be provided but was not guaranteed.

AD inspectors regularly inspect all safety reports in the ECCAIRS, check whether the reports are complete, provide feedback to the report and monitor the status of implementation.

Section 4.1.5 details the changes introduced in SRD that address the recommendation from 2015.

Confidentiality and appropriate use of the data from mandatory and voluntary reports are protected according to the provisions defined in Regulation (EU) 376/2014. Some stakeholders confirmed that the IAA implemented this recommendation adequately. However, and despite these efforts by the IAA, a pilots' union some concerns (see section 3.3). We were not able to validate this view.

c) Industry professionals and the public are further re-assured that information received under voluntary or confidential reporting mechanisms, including via the website or direct to IAA, is treated with the same importance as reports received under mandatory reporting schemes

Met

d) its commitment to industry professionals is re-affirmed that it will maintain a balanced position on reports received by individuals against their own organisation

Met

e) process and procedure is in place for dealing with complaints

Met

f) stakeholders are aware of the associated process/procedures

Met

g) individual voluntary reporting to oversee effective implementation of

Partially met

Some of the stakeholders consulted noted
Just culture within the regulated organisations is further investigated (e.g. through survey on those organisations) to determine whether there remains to be issues positive results since the implementation of just culture policies within their organisation, with increased level of reporting. However, it is noted that currently there is no just culture body in place (at the time of writing) as required by Regulation (EU) 376/2014. DTTAS is in the process of developing the legal instrument to designate the role of that body. The instrument is due to be completed in Q3 2019. DTTAS is expected to assign this role to SRD. Section 3.3 provides more information on this topic.

<table>
<thead>
<tr>
<th>REC_SRQ_5</th>
<th>FOD RPPLD</th>
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</thead>
<tbody>
<tr>
<td>The SRD organisation, policies and procedures should be amended to complete the implementation of the Part ARO and Part ARA compliance monitoring function</td>
<td></td>
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<table>
<thead>
<tr>
<th>REC_SRQ_6</th>
<th>RPPLD</th>
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<tbody>
<tr>
<td>The conversion reports, to be submitted for gliders and balloons pilots and towing ratings, must be prepared for future conversion of Irish national licenses/qualifications/ experiences to European licenses. Because licensing of these pilots is mainly based first on a recognition of their experience and to ease the report process, it is recommended to first issue Irish licenses in accordance with national rules then requested conversion to Part FCL licenses</td>
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<thead>
<tr>
<th>REC_SRQ_7</th>
<th>AD</th>
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<tr>
<td>a) Aerodrome training to include establishment of criteria to identify the contents of the continuous/recurrent training, based on the regulatory updates – in particular the EASA ones – and on the topics</td>
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Section 4.1.7 details the changes introduced in the Quality assurance functions that address the recommendation from 2015. The IAA has established a compliance monitoring function with initial procedures based on the information and the expectations of EASA post IAA's SYS audit in the last quarter of 2019 - EASA expect every procedure in a given entity to be checked and sampling was no longer appropriate. The QA manager performs internal QA audits to monitor compliance with EU quality requirements in a three year programme.

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<table>
<thead>
<tr>
<th>Section 4.5.5 details the current situation regarding personnel licenses that relate to the recommendation from 2015</th>
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<tr>
<td>There is no balloon license currently in Ireland. No conversion process is needed. Gliders licenses are currently issued by the Gliders association under delegation of the IAA. The gliders associations are expected to submit a conversion report to the EASA this summer for implementation before 8th April 2020.</td>
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<table>
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<tr>
<th>Section 4.4.5 details the changes introduced in AD that address the recommendation from</th>
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<tbody>
<tr>
<td>The conversion reports, to be submitted for gliders and balloons pilots and towing ratings, must be prepared for future conversion of Irish national licenses/qualifications/ experiences to European licenses. Because licensing of these pilots is mainly based first on a recognition of their experience and to ease the report process, it is recommended to first issue Irish licenses in accordance with national rules then requested conversion to Part FCL licenses</td>
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are recommended to be undertaken by the AD and/or IAA:

b) The respective training log of the AD inspectors recorded in the SharePoint site should indicate the type of training (basic, refreshing, OJT) and a description of the contents (for instance, the outlines of the training as an attached document).

c) Liaising arrangements with the Aviation Security Section (AvSec) to inspect items impacting both safety and security should be formalised in the procedures of the AD. Two-way communication between AD and AvSec on the inspections should be established, including the notification to the other party of the outcomes or whether follow-up required.

d) AD observations – or so-called level 3 deficiencies – indicated in the SharePoint site should be reviewed and updated or removed if they are no longer relevant. For those cases not requiring level 1 or level 2 findings, AD should use a standardised designation in the SharePoint site for the observations.

e) The AD manager position should be filled as soon as possible in order to ensure continuous and undisturbed fulfilment of the tasks to perform. The AD manager should be competent to conduct AD inspections.

f) Discuss with each public-use licensed aerodrome the establishment of an intermediate level of contact between the ones with the AD inspectors and the annual one with the IAA Chief Executive. On the Authority’s side, this intermediate level could be arranged either with the Assistant Director (ASD) or with the head of SRD depending on

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2015.

The content of the initial and recurrent of recurrent training is defined in the internal AD procedure ADR.109.

Section 4.4.5 details the changes introduced in AD that address the recommendation from 2015.

AD department issued internal AD procedure ADR.109 which defines selection criteria and training requirements. ADR.109 complies with AMC1 ADR.AR.B.005. Both current inspectors passed the prescribed training. The training was defined in the training plan and the records of the passed trainings were showed during the audit as an evidence.

Section 4.4.5 details the changes introduced in AD that address the recommendation from 2015.

AD and AvSec are under the same department and under the Assistant Director Aerodromes, ATC and Security.

Section 4.1.5 details the changes introduced in AD that address the recommendation from 2015.

The procedure for management of findings was developed in compliance with EASA AMC and adopted. All findings related to certified aerodromes are treated properly.

The AD manager position was recruited externally, from the aviation industry.

Section 4.1.3 details the changes introduced in AD that address the recommendation from 2015.

Primary and secondary points of contact are assigned for each aerodrome operator.
The purpose of these exchanges

a) continue to focus on opportunities derived from partnerships, particularly through COOPANS partners, EPN training and Borealis industrial partnerships and shared airspace arrangements through the UK-Ireland FAB

b) proactively ensure mechanisms and staff are in place to ensure that Project Managers continue to be supported (e.g. through partners and cross-ANSP training programmes) to perform their multiple roles on larger, more complex projects

The creation of an EATMN representation should be explored as it would help identify the potential impact of new changes in terms of interoperability

FRMS should be formalised through appropriate policy and procedures, to ensure fatigue risk management is understood by staff and is considered for change and ongoing monitoring, providing an appropriate reference point

Annually there is a high-level meeting between IAA managers and AD managers.

Section 5.6 details the changes introduced in the ANSP that address the recommendation from 2015.

The ANSP has remained involved in a number of technological and training partnerships.

Section 5.6 details the changes introduced in the ANSP that address the recommendation from 2015.

Project managers are supported in terms of performing their multiple roles on larger more complex projects, the existing ATM PG group is used, which agrees project prioritisation and staffing requirements with HR.

Section 5.5 details the changes introduced in the ANSP that address the recommendation from 2015.

The IAA tracks IOP requirements through its technology strategy, its engineering procedures and membership of the COOPANS group. Most IOP changes relate to the IAA’s ATM system and the COOPANS European affairs group tracks these issues on behalf of all the members.

The IAA do not see the benefits of creating an EATMN representation. This is appropriate considering that most IOP changes come from updates to the ATM system which are managed within the COOPANS group.

Section 5.4 details the changes introduced in the ANSP that address the recommendation from 2015.

The ANSP published its Fatigue Risk Management System (FRMS) policy in 2018. At operational level, staff were in place at each unit to work on and act as focal points.
The ANSP should further engage with the SRD to develop its existing centralised database(s) to ensure:

- Continued efficient recording and tracking of all internal and external audit results and actions
- Links between safety targets (trends) set at SRD-level and at ANSP-level (with particular focus on investigations and operational demonstration of risk)
- A more integrated organisation-wide demonstration of risk

Policy and process should more clearly define specialist Human Performance (HP) assessment for incident investigations, major change and complex projects to continue to progress the development of HP procedures and training.

**Section 5.3** details the changes introduced in the ANSP that address the recommendation from 2015.

The ANSP deployed EUROCONTROL's TOKAI (ToolKit for ATM Investigations) investigation tool in Q2 2018. Occurrences are managed through the TARGET tool. Information about occurrences becomes visible in TOKAI only once entered into TOKAI by inspectors. Safety dashboards are built and distributed to operational units on a monthly basis. That data may also be used to support the hazard identification phase of certain safety cases.

**Section 5.3** details the changes introduced in the ANSP that address the recommendation from 2015.

TARGET interfaces with the ANSP’s internal audit tracking process which is conducted through Document Audit And Management System (DAAMS). This internal ANSP tool supports the centralisation of all audit findings (e.g. through the creation of dashboards). At the time of writing the ANSP was in the process of migrating audits conducted by external parties into the DAAMS tool facilitate their monitoring.

**Section 5.3** details the changes introduced in the ANSP that address the recommendation from 2015.

The processes and their integration were recognised by CANSO as best practices in the industry.

**Section 5.4** details the changes introduced in the ANSP that address the recommendation from 2015.

HF causal (explanatory) factors, analysis and trending are incorporated into the
a) IAA has already identified its practicalities with IAA staff and observation of its use in other organisations

b) it is an understandable process in a workshop environment to demonstrate of risk

c) for a typical change, it ensures the visualisation of hazards at the operational level and its associated procedural, functional, human causes and operational outcomes

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**REC_ANS_6**

The ANSP should continue to establish in its safety management procedures and training the bow-tie format as an initial assessment methodology to support hazard analysis and risk assessment associated with all changes on the basis that:

**Met**

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**REC_ANS_7**

The ANSP should ensure clearer demonstration of how the hazard analysis and risk assessment processes and procedures inter-relate so that staff are clear as to a common starting point and the steps for

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**Section 5.2** details the changes introduced in the ANSP that address the recommendation from 2015.

Staff have been trained at unit level to conduct assessments using this process. Refresher training courses have been provided in addition to the three initial practitioner training courses (externally provided).

The use of bow-tie methodology is to the discretion of the staff responsible for conducting each safety assessment. This is determined based on the type and complexity of the change. For example, operational changes tend to be assessed using bow-tie methodology.

**Section 5.2** details the changes introduced in the ANSP that address the recommendation from 2015.

The bow-tie risk assessment process is now an established, regulatory approved procedure for application to assessing risks associated with planned changes to the Functional System. It can be utilised in workshops for assessing hazards identified by occurrence investigations and surveys.

**Section 5.2** details the changes introduced in the ANSP that address the recommendation from 2015.
hazard assessment associated with any type of change

The ANSP’s Safety Management Manual (400 series) processes have been updated to highlight the interdependencies between the requirements for risk assessment, requirements for notification of changes, and guidance on the conduct and timing of hazard assessments/brainstorming sessions.
C  

Approach to the examination

This section details the approach adopted for the examination of the IAA’s performance of its statutory functions in respect to technical and safety standards. The task flow is shown in Figure 1 in section 1.3 (page 13). Each task is described in more detail below.

C.1 Task 1: Kick-off meeting and agree ToRs of the examination framework

A preliminary kick-off teleconference with DTTAS was held on 29th January 2019.

The ToRs of the examination framework were agreed prior to the on-site meetings and detailed the planned approach, inputs, outputs, timescales and key contacts needed to execute the audit within DTTAS, the IAA and other pertinent stakeholders that were likely to be involved in consultations.

A face to face meeting with DTTAS was held on the first day, 10th June, of the on-site meetings with the aim to introduce the week, the objective of the study and to understand specific requirements and areas of concern that need to be focussed on in the study.

C.2 Task 2: Review progress on the implementation of recommendations and actions of the previous Section 32 examination

Task 2 was primarily a gap analysis of the progress achieved since the previous Section 32 examination. The IAA provided a short report explaining how the organisation dealt with the recommendations and actions set in 2015. This document detailed arguments demonstrating how each recommendation was addressed, who was in charge of its realisation, what steps were undertaken, how the IAA processes were adapted, how these changes were communicated internally and externally, and how the effectiveness of these measures was assessed. During the on-site meetings the IAA explained how they addressed each recommendation in more detail, at this point in the audit the team asked clarification questions. Where recommendations remained outstanding, the IAA detailed their plan for completing them, including timescales associated with each milestone.

C.3 Task 3: Review of regulatory changes

As part of Task 3, prior to the on-site meetings, the audit team identified the regulations relevant to the IAA functions. The functional domains investigated included: aerodromes, airworthiness, air navigation services, flight operations, personnel licensing and safety analysis.

The regulations and associated recommendations/guidelines covered EASA regulatory instruments, European Commission regulations (including Implementing Rules), EUROCONTROL specifications, guidelines and best practices, ICAO SARPs and guidelines, and other best practices. These served as the basis of the regulatory change questions asked during the audit.

Furthermore, the scope of the last EASA standardisation visits (both ‘comprehensive’ and ‘focussed’) were studied to understand how the IAA has gone beyond the remit of the previous Section 32 examination. The audit team were presented with the latest EASA standardisation reports for analysis and corresponding Corrective Action Plans (CAP).

Where regulatory and EASA findings were identified, an audit on the measures implemented by the IAA, both from the perspective of the ANSP and regulator was conducted with IAA staff.
It is also noted that a Review of the Oversight of Search and Rescue Aviation Operations in Ireland (2018) indicated regulatory change through a number of recommendations addressed to the IAA.

The outcomes of this task have been blended in this document.

C.4 Task 4: Stakeholder consultations

Meetings with stakeholders were conducted to consolidate the outputs of Task 2 and 3. The objective was to obtain industry feedback on the effectiveness of the recommendations from the previous Section 32 examination and views on new issues that might have emerged since the previous examination. It also enabled us to survey stakeholders regarding the IAA’s reaction to recent regulatory, organisational and political changes such as Brexit and the split of the IAA.

C.5 Task 5: Final report

This report is a part of Task 5, it details the gap analysis, the results of the on-site visit and outcomes of the consultation. The report covers both ANSP and regulatory functions and identifies non-conformities and mitigating actions.

The draft report will be shared with the IAA, to allow them to clarify any non-compliances, and key issues presented to DTTAS. The draft report will be produced taking into account any additional information provided by the IAA including comments on the findings. The draft report will then be shared with DTTAS. Once comments from both parties are received, the report will be updated and a follow up meeting with DTTAS will be held to discuss the final recommendations. The finalised report will then be published.