



Aviation Services Division

SES Five Year Plan 2025-2029

The Aviation Services Division SES 5 Year Plan meets the requirements set out in EU CIR 2017/373 ATM/ANS.OR.D.005 to develop of a business plan covering a period of five years and, in that regard, is aligned with the RP4 timeline of 2025-29.

This Plan will be incorporated into Ireland's Performance Plan as required by COMMISSION IMPLEMENTING REGULATION (EU) 2019/317 of 11 February 2019 laying down a performance and charging scheme in the Single European Sky. It makes due consideration of the draft cost efficiency targets as published by the Performance Review Body of the SES. The Plan outlines cost projections and rationale for operational and capital activities necessary to develop and provide regulated meteorological services to aviation that are compliant with ICAO Standards and EU Regulations.

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on
23rd August 2024



AVIATION SERVICES DIVISION

MET ÉIREANN

BUSINESS PLAN

2024 – 2029



MISSION STATEMENT

The Aviation Services Division (ASD) of Met Éireann will provide safe, high-quality and cost-efficient meteorological services to aviation, in compliance with ICAO Standards and EU Regulations and in consultation with its customers. ASD will maintain its authoritative voice as Ireland’s Meteorological Authority through strong and effective relationships with Irelands Competent Authority, fellow air navigation service providers, the Department of Transport and the network of international aviation meteorological service providers.

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Acronyms and Abbreviations

AWOS	Aviation Weather Observations System
ATC	Air Traffic Control
ATM	Air Traffic Management
ATS	Air Traffic Services
BCFM	Business Continuity and Facilities Management Division, Met Éireann
CA	Competent Authority
CAR	Commission for Aviation Regulation
CAS	Competency Assessment System
DPER	Department of Public Expenditure and Reform
DoHLGH	Department of Housing, Local Government and Heritage
DoT	Department of Transport
EANP	European Air Navigation Plan
EANPG	European Air Navigation Planning Group (ICAO Regional Subgroup)
EC	European Commission
EU	European Union
FAB	Functional Airspace Block
FIR	Flight Information Region
ICAO	International Civil Aviation Organisation
SWIM	System Wide Information Management
KPI	Key Performance Indicator
KPT	Key Performance Target
ManCom	Management Committee of Met Éireann
METAR	Routine Meteorological Aviation Report
METSP	Aeronautical Meteorological Service Provider
MG-ASD	Management Group – Aviation Services Division
OPW	Office of Public Works
PMDS	Performance Management and Development System
QMS	Quality Management System
SARPs	Standards and Recommended Practices (ICAO)
SES	Single European Sky
SESAR	Single European Sky Air Traffic Management Research Programme
SLA	Service Level Agreement
SMS	Safety Management System



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TAF Terminal Area Forecast

UKMO United Kingdom Meteorological Office

WMO World Meteorological Organisation

Executive Summary

Aviation Services Division (ASD) is a business unit of Met Éireann, Ireland's National Meteorological Service maintained by the State under the UN Convention of the World Meteorological Organisation (WMO). The ASD is designated as Ireland's Meteorological Authority under the ICAO Convention on International Civil Aviation and further designated as MET Air Navigation Service Provider by the Minister for Transport under the EU Single European Skies legislation with responsibility for the provision of regulated meteorological services to aviation.

This plan outlines the Aviation Services Division (ASD) strategic objectives in the reference period 4 period (RP4) 2025-2029 and how they will be achieved. The Plan highlights environmental actors and developments that will impact on service provision and show how ASD intends to succeed in its role during RP4.

The operational activities that operate on a year round 24/7 basis produce and deliver weather services and products on which the aviation sector relies. These operations will continue to provide high-quality services to meet regulatory requirements and specific customer needs, supported by efficiently-deployed technical, administrative and managerial resources. ASD will continue to strengthen its relationships with its customers through user consultation processes and the application of its quality, safety and security managements systems.

In the period 2025-2029 the International Civil Aviation Organisation (ICAO) will continue with its Annex 3 (Meteorological Service for International Air Navigation) amendment cycles. All new or amended requirements will be implemented by ASD as will any modifications to the European Air Navigation Plan (EANP) that impacts on meteorological Service Provision (METSP). This will further ensure that the ASD remains compliant with CIR (EU) 2017/373 which transposes Annex 3 Standards and Recommended Practices (SARPs) into European law. The growing competence of the EU in terms of regulation of METSP will be a significant driver for process and technology change over the RP3 period.

Use of of new technologies emanating from the European Union Single European Sky Air Traffic Management Research Programme (SESAR) and by developing compliance with the Common Project 1 Regulation (CIR EU N° 2021/116) ASD will ensure future provision of enhanced, safe and cost efficient services to aviation. The adoption of new technologies will further position ASD to meet challenges arising from evolving customer requirements while recognising that meeting these requirements is dependent on making capital investments in new and upgraded infrastructure.

The development of staff is crucial to the efficient provision of service. Training programmes will be implemented as will the mandatory Competence Assessment System (CAS) for all Aeronautical Meteorological Personnel. The competence assessment process was extended during 2024 to include technical and systems support staff. Staffing levels will remain under continuous review through analytical workforce planning to ensure that the requirements of safety, continuity of service and efficiency are met.



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ASD will continue its involvement in international cooperative activities with other European MET Services to seek efficiencies in service provision. It will also work within the European ICAO MET Group in order to contribute to the international development of aviation meteorology. ASD and the UK Met Office will collaborate operationally to ensure the consistency of meteorological information being provided to airspace users operating at the FIR boundary.

As recognised in the Performance and Charging Regulation, meteorological service to aviation is not sensitive to traffic levels and service provision costs do not reduce, or indeed grow, in line with traffic volumes. However, cost containment and maximising efficiency is a priority for ASD. Furthermore, Met Éireann's accounts system provides accurate, reliable and transparent information about aviation costs and, through ongoing review of the determination of costs process, will continue to comply with the relevant ICAO and WMO charging principles and guidelines.



1. Introduction

Aviation Services Division (ASD) is a business unit of Met Éireann, Ireland’s National Meteorological Service maintained by the State under the UN Convention of the World Meteorological Organisation (WMO).

Ireland is a signatory to the 1944 Chicago Convention on International Civil Aviation which established an international framework for the safe and efficient management of global aviation. Under the convention Met Éireann is designated as Irelands Meteorological Authority and under that mandate ASD holds the responsibility to ‘provide or arrange for the provision’ of meteorological services to support aviation in the Shannon Flight Information Region (Ireland’s Airspace). Currently ASD is mandated to act as both Meteorological Authority and meteorological service provider (METSP) to the aviation sector.

ASD is committed to being a customer focused and quality driven organisation in the provision of aeronautical meteorological services to support safety, regularity and efficiency of international air navigation within Ireland and beyond, for both civil and military customers.

The primary goals of the ASD are to:

- a) provide meteorological services that support safety, regularity and economy in aviation within Ireland and beyond for both civil and military customers
- b) fulfil customer requirements by complying with International Civil Aviation Authority (ICAO) standards and recommended practices and relevant EU Single European Skies legislation and Regulations and, also, as determined through assessments of the requirements of national aviation
- c) comply with applicable policies and regulations as laid down by Government

ASD has been involved in the safe, efficient and effective provision of meteorological services to aviation without break for over 80 years. As the aviation industry evolved so has the manner in which ASD provides weather services by responding to requirements of both customers and the governing standards and regulations.

ASD staff actively participate in the international bodies charged with the organisation, regulation and development of meteorological services to international civil aviation such as ICAO and the Services Commission for Aeronautical Meteorology of the World Meteorological Organisation (WMO SERCOM-AVI). At the European level the Single European Skies (SES) legislation has extended EU competence deeper into the service provision aspect of ASD business activities. Through compliance with these regulatory requirements ASD will ensure continually improving and more secure services which are both effective and cost efficient.

EU regulations governing METSP are expanding in scope. Implementation timelines associated with existing regulations such as Common Project 1 draw nearer and demand significant changes



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over the period of this plan. ASD, supported by the wider Met Éireann organisation, will develop appropriate projects and processes to ensure these requirements are met thereby contributing to Ireland's and Europe's commitment to the timely implementation of ICAO Global Air Navigation Plan.

The Plan describes the environment within which ASD operates and how it will respond to the challenges and opportunities which are expected during the 2020-24 period. It will do this in close consultation with its customers, the Aviation Regulator, ICAO and WMO. It will map the current organisational structure of ASD and its place within the broader management structure of Met Éireann and the Department; it will provide a brief description of the main business of ASD; it will identify the main strategies to be implemented to support the aviation service processes and finally it will summarise these developments in its financial projections for the period.



2. Aviation Services Division Organisational Structure

The ASD is a multi-site Division of Met Éireann with a geographical footprint as follows.



ASD is headquartered at Shannon Airport where the Central Aviation Office is located. From here, and other offices located in Met Éireann HQ, Glasnevin, the ICAO Meteorological Watch Office (MWO) and Aeronautical Meteorological Office (AMO) functions are also provided. There are additional Aeronautical Meteorological Stations (AMS) located at Dublin Airport, Cork Airport, Ireland West Airport Knock and at the Headquarters of the Irish Air Corps at Casement Aerodrome. This plan does not comprehend the costs of services to the Department of Defence which fall outside of the Regulated services under consideration.

3. Description of Business

Met Éireann's ASD is Ireland's primary meteorological air navigation service provider (MET ANSP) as defined under the SES Service Provision Regulation (CIR EU 550/2004). Regulatory supervision of ASD is maintained by Ireland's Competent Authority (CA) which resides within the Irish Aviation Authority (IAA). ASD is granted a service provision certificate by the aviation regulator and is further designated as the provider of ICAO specified meteorological services by the Department of Transport (DoT) in Ireland. These services are specified in CIR EU 2017/373 and, also, in Annexes 3, 11 and 14 to the Convention on International Civil Aviation and further detailed in GEN 3.5 Meteorological Services of the Aeronautical Information Publication (AIP) Ireland.

The core business of ASD is the operational production and dissemination of timely, accurate and actionable aviation-related weather information. These operational activities rely on technical, administrative and management support services provided by ASD's own internal resources and are further supported by the wider Met Éireann organisation. Aside from the production of

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operational output there is a large scientific and technical project requirement in order to ensure that the necessary operational enablers are in place. This requirement is growing in line with increased requirements emanating from Common Project 1 and the development of compliant solutions to enable effective implementation of ICAO Global Air Navigation Plan Aviation System Block Upgrades.

The regulated aeronautical weather services provided by ASD are specified by ICAO in ANNEX 3 to the Convention on International Civil Aviation. This Annex also defines the role and responsibilities for ASD as both Meteorological Authority and METSP. The EASA Regulation (CIR EU 2017/373) has effectively transposed ICAO Standards into EU law and, while some minor disparity exists between ICAO ANNEX 3 standards and the EU Regulations, work is ongoing by EASA to ensure the further synchronisation of the two sets of requirements.

The aeronautical meteorological business activities engaged with are:

- Maintenance of the Meteorological Watch Office for the Shannon Flight Information Region (FIR)
- Provision of aeronautical forecast and warnings services and maintenance of 5 Aeronautical Meteorological Stations
- Collaboration with other METSP to provide network wide services to support greater harmonisation of services to enhance safety and efficiency of European and transatlantic aviation
- Search and Rescue support services
- Training provision to service users
- Provision of weather observing training including to external organisations
- Support of the Aviation Regulator during audits of Regional Airports as subject matter expert

The regulated services are supplemented by non-Annex 3 services, such as verbal briefings, bespoke services to support airport infrastructure projects, graphical and tabular TMA support weather services. Provision of meteorological services to the Irish Air Corps (IAC) is also a key function of ASD but the costs incurred by providing this service fall outside the scope of this Plan.

ASD ensures the non-discriminatory availability of weather data for *bona fide* aviation users in Ireland, including the provision of access to the UK World Area Forecast Centre products.

4. External Environment

4.1 [Economic](#)

Cost recovery for provision of meteorological service to aviation by ASD is carefully aligned with ICAO and WMO charging principles and is also restricted by EU Regulations which impose constraints such as cost efficiency targets, as established by the EC Performance Review Board. ASD determines its aviation costs transparently through its accounting system which is based on the referred charging principles and guidelines and using an agreed cost allocation methodology under the supervision of the IAA.

ASD must achieve the ambitious objectives set out by in this plan at a time of general cost containment. Significant capital was expended in recent years in order to modernise the aviation observing and other core systems and make them best in class for high traffic volume airspace and airports and, also, to meet the requirements of EU Regulations. Further capital expenditure will be required during RP4 in order to maintain and support existing infrastructure and to implement other essential technical projects.

The provision of regulated MET services and the associated costs of service provision are not linked to aviation traffic volumes and are therefore exempt from the traffic risk sharing mechanism as specified in *CIR (EU) 2019/317 Art. 25 para 6 (b)*. As traffic increases or decreases the MET service provision requirement is constant.

4.2 [Regulatory requirements](#)

The decision by the Regulator to grant ASD a service provider certificate is based on the ability of ASD to provide robust evidence to demonstrate that ASD meets the common requirements as set out in *EU CIR (EU) 2017/373*. The Regulator supervision of ASD is supported via an audit process used to measure compliance with the European regulations and ICAO Standards. Attainment of the service provision certificate allows the Department of Transport to designate ASD as MET ANSP for Ireland.

In the context of the proposed RP4 cost efficiency targets it should be noted that there are other regulations by which ASD is also bound. In particular, *CIR (EU) No 716/2014* on the establishment of the Pilot Common Project to support the implementation of the ICAO GANP and the European Air Traffic Management Master Plan. There are a growing number of additional, EU regulations with significant applicability to METSP and achieving compliance with these requires investment in systems, infrastructure, training and support - the detail of which is set out in later sections. The impact of these projects will be to provide enhanced meteorological services and support and lead to improved performance, safety and security within the aviation system across all 4 KPAs comprehended within the Performance Regulation.

4.3 Civil Service Developments

ASD also implements a business planning process under the aegis of its parent Department. The broader initiative called ‘Civil Service Renewal 2030’ is also an ambitious 10-year strategy of reform for the Civil Service that will be implemented through a series of 3-year action plans. These action plans detail the precise goals and initiatives which will progress the established public sector strategic priorities.

Management supports and control systems supervised by the Department of Public Expenditure and Reform (DPER) will continue to be implemented. This broader framework will provide support to ASD and ensure excellent governance of all activities and support strategic capital and operational investment decisions.

4.4 Scientific and Technological Advances

Weather is one of the main causes of air traffic delays. The ability to match actual airspace capacity, which is variable, to airspace demand is critical to efficient ATM. A key input to the determination of airspace capacity is the ability to accurately forecast weather - especially adverse weather which has the potential to disrupt aviation operations.

National and international research efforts continue to provide the means for improving computer-based forecasts and observations. During RP4 ASD will invest in technology to further enhance the meteorological infrastructure to support airports and enroute traffic through congested airspace. Projects being implemented over the course of RP4 include the expansion and improvement of the national weather RADAR network and further increasing High Performance Computing (HPC) resources in collaboration with Met Éireann’s international partners. Significant investment has already been made during RP3 to support business continuity management and to ensure the resilience of systems and services based on their criticality to the aviation system. The investments already made will need to be renewed over RP4 to ensure suitability and ongoing effectiveness.

Scientific research in areas critical to aviation meteorology will continue including machine learning research, nowcasting, boundary layer research and exploiting AI technologies. Combined, all of these activities will lead to more accurate and actionable weather information delivered to the aviation user in a way that helps to better inform planning and operational decision making.

4.5 Requirements for New Services and New Delivery Methods.

Aeronautical meteorological service developments are driven from multiple sources including ICAO requirements, user consultation processes and through the deployment of Single European Skies ATM Research (SESAR) projects. Continually enhancing the quality and nature of MET services is necessary as traditional regulated meteorological services, while effective in their own right, do not fully meet all of the planning and operational requirements of busy airspace and airport users.

ASD experiences ongoing requests for bespoke weather forecasts to supplement the regulated services provided. These include requests for bespoke services to support airside infrastructural works or to support of Air Traffic Control (ATC) activities. The delivery of more representative data to Air Traffic Services (ATS) units and airport users with greater temporal resolution is often a key user requirement. ATS plans to implement initiatives such as time based separation of aircraft arrivals will require new and different types of meteorological data to allow them to be successfully realised. In achieving the technical and scientific objectives detailed in this plan ASD will ensure that the capacity to deliver on these service requests exists and excellent MET support is delivered.

Aligned with the implementation of state of the art weather observing and forecast guidance systems there are requirements for improvements to communications and delivery systems to optimise the use of MET information. The METCOM project currently being implemented will upgrade aviation messaging systems to ensure regulatory compliance and enable compliance with CP1 in time for the end 2025 target date. After 2025 further additional project modules will be developed to include enhanced SWIM compliant observations, forecast and hazardous weather services within the ASD service offering. These enhanced services will be developed in line with the growing need to provide higher accuracy forecasts and warnings to support aviation in a world where climate change is creating more impactful weather such as increasing convective activity and more significant atmospheric turbulence.

4.6 Collaboration with other MET Service Providers and the International Organisations

Aviation meteorology is a global activity requiring collaboration at both the global and regional scale to ensure consistency and effectiveness of basic services. At the global level ICAO specifies services to international civil aviation and develops standards for meteorological service provision and these are implemented fully by ASD. The ASD participates in the MET Group of the European Air Navigation Planning Group (EANPG) of ICAO and its working subgroups. The World Meteorological Organisation (WMO), through the Services Commission on Aviation, works closely with ICAO to detail requirements, standards and guidance material. ASD staff attend and contribute to the work of these organisations in the development of aeronautical meteorological standards. Furthermore, ASD will continue its work with the Department of Transport and IAA to ensure that Ireland's Meteorological Authority and METSP are effective in their roles and are structured appropriately.

Met Éireann strives to ensure that its scientific, technical and expertise resources are optimised through its international collaborative activities. Membership of a number of international groups and projects provides the opportunity to leverage its own resources and benefit from partnering with other leaders in aviation meteorology. Examples of such collaborations include participation in United Weather Centres (UWC) which is implementing a state of the art High Performance Computing Infrastructure for 10 leading National Meteorological Services, European Centre for Medium Range Weather Forecasting (ECMWF), MET Alliance, ICAO METG and the European Meteorological Network. These collaborations ensure that maximum cost efficiency is achieved for essential projects and provides ASD with best in class tools and supports for its own service delivery.

Ireland's flight information region is bounded on all sides by airspace under the jurisdiction of the UK. The UK Met Office (UKMO) holds the designated MWO responsibility for these airspaces.



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ASD engages operationally with the United Kingdom Met Office (UKMO) to enhance co-operation and service harmonisation of meteorological information impacting operators at the FIR

boundaries. Such cross border collaboration is strongly promoted by ICAO, EC and EASA and is essential to ensure efficiency and consistency of messaging to the aviation user. The Ireland/UK SIGMET co-ordination activity ensures harmonisation of hazardous weather warnings at the FIR boundaries.

Met Éireann is a member of a network wide collaborative activity under the EUMETNET umbrella which provides a Cross Border Convective Forecast service to EUROCONTROL Network Manager. This service will become a SWIM compliant service during the RP4 period and contribute to ensuring that consistent, harmonised meteorological information is available to the ATM system.

5. Internal Environment

5.1 Operational Activities

ASD produces and disseminates a range of high quality meteorological services and products from 5 aerodrome sites. These activities are controlled by an accredited quality management system (ISO 9001:2015) with ASD process and service performance measured on an ongoing basis against a comprehensive set of key performance targets.

Opportunities to improve efficiency and enhance service quality are identified and pursued on a continuous basis. Services are developed based on a combination of regulatory compliance requirements, customer consultation processes and the implementation of activities to support continual improvement based on comprehensive evaluation and verification of service quality. ASD engages in development work and projects to deliver data services to aviation users who choose to implement additional third party planning and decision making software tools.

5.2 Relationship with other Met Éireann Divisions

ASD is one of 8 Divisions of Met Éireann many of which provide support and services required to fulfill the aviation mandate. This structure is required in the interest of organizational efficiency and to optimize capacity to achieve the ASD strategic objectives in a cost effective way. Service enablers provided by our sister divisions include, forecast services, technical and ICT infrastructure and support and some HRM functions. The levels of service received are managed under the auspices of the ASD QMS via a SLA process which assures the quality of data that enters the aviation system. Agreed service levels are based on risk based thinking and the criticality of the data and services provided to ATM and airport operations.

5.3 Funding and Accounting Arrangements

ASD is funded from Met Éireann's administrative budget which itself is part of the administrative budget of the Department of Housing, Local Government and Heritage. Costs recouped for provision of meteorological services to aviation are returned to central funds.

Met Éireann's accounts system calculates charges to aviation in a fair and transparent way. The cost allocation methodology used was developed as an agreed report by Met Éireann, IAA and DoT ANSD (Chair of the WG) and is aligned with WMO and ICAO charging guidelines. Prior to the calculation of enroute and terminal costs, the system excludes the costs of service to general aviation, the military and other non-applicable costs. Following a recommendation by the Commission for Aviation Regulation (CAR) in 2002 these charges are split 80:20 to enroute and terminal. Met Éireann's parent Department conducts audits of financial activities via its Internal Audit Unit and the recommendations it makes are implemented as appropriate. The cost allocation methodology was reviewed and approved by IAA in advance of the development of this Plan.

5.4 Human Resources

5.4.1 ASD staff are highly qualified and trained specialist personnel with skills maintained through a process of induction training followed by continuous professional development implemented under the PMDS. This process ensures that skills of the technical, operational and scientific teams are standardized and maintained at the competent level to support ASD business requirements. Competence of all aeronautical meteorological personnel is assured via the application of a Competence Assessment Scheme (CAS), which was established and implemented under ICAO and WMO rules. The CAS is continually reviewed and developed in line with process and regulatory changes.

The Met Éireann workforce planning activities aim to ensure that current and future ASD staffing needs are met. A Staff Mobility Policy is in place to develop interoperability and to spread expertise amongst staff to maintain organizational capacity and resilience in specialized ASD processes.

The ASD staffing profile is very lean in terms of efficiency and output per FTE in comparison to peer organisations.

5.4.2 *Aeronautical Forecast Process Staffing:* Alongside the ASD staff complement is a cohort of 8 FTE aeronautical meteorological forecasters (AMF) that are assigned to Met Éireann's Forecast Division. These staff work from 2 fully enabled MWO and AMO – one based at Shannon Airport, the other at Met Éireann HQ, Glasnevin. The AMF team maintain a continuous 24 hour aeronautical weather watch and are responsible for provision of all regulated and value added forecast and warnings services. Generally, the AMF work in a single person operations environment. All regulated forecast services detailed in section 8.1 are provided by this cohort.

5.4.3 *Observations Process Staffing:* The aeronautical observation team (AMO) are positioned at the 3 State airports and Ireland West Airport Knock. ASD also supports the operations of the Irish Air Corps, Garda Air Support Unit and Government air transport at Casement Aerodrome, Baldonnel. Each Airport has a determined complement of 6 FTE per operational position and this staffing factor represents the minimum requirement to facilitate full 24/7 operations. IWAK has a reduced complement of 4 FTE due to its reduced operational hours. A small number of additional staff above the minimum number required are also assigned in order to provide cover for the various types of leave available under law.

5.4.4 *Contingency Staffing:* In view of the efficient staffing factors currently assigned to aviation service provision additional contingency staff are available from other teams within Met Éireann. Some interoperability is maintained across the Forecast Division forecasting team to ensure capacity exists to provide cover for aviation forecast team staff shortages. These contingency AMF are competence assessed and certified to perform aviation forecast functions if required. This cohort also has its currency maintained through scheduled engagement with the aviation forecasting function.

The observations process is also supported by a team of aviation contingency observers who are generally assigned to other non-aviation tasks within the wider organisation but who can be called on to provide operational support if required. The same competence, certification and currency arrangements apply to this cohort as to the aviation forecaster cohort.



6 Key Strategic Objectives

The regulation sets out the 4 KPAs of Safety, Capacity, Environment and Cost Efficiency against which targets are set and performance of regulated entities is evaluated. However, despite the contribution of MET services to all KPA as an input to other ANSP activities only the cost efficiency KPA is applicable in terms of target setting. In order to conduct its business economically, effectively and efficiently Met Éireann’s ASD must consider other KPA beyond those established in the regulation.

Key Performance Area A: Regulatory Compliance	
Description of KPA To ensure ASD processes and the aeronautical meteorological services and products provided by it are compliant with ICAO SaRPs and EU regulations.	
Key Performance Indicators <ul style="list-style-type: none"> - Current certificate for service provision pursuant to Implementing Regulation (EU) 2017/373 is retained. - Designation of ASD as Met Service Provider by Minister for Transport. - Accreditation to ISO 9001:2015 QMS standard 	Key Performance Targets <ul style="list-style-type: none"> - Success in external audits by CA (IAA) and EASA against CIR (EU) 2017/373 - Success in audits conducted by NSAI against ISO 9001:2015 - Completion of essential technical projects - Current letter of designation issued by DoT
Key strategies to achieve targets during RP4 <ul style="list-style-type: none"> - Continuous monitoring of the relevant regulations including GAP analysis and development of action items as appropriate - Continued participation in international expert groups concerning the interpretation of aeronautical meteorological regulations - Participate in ICAO METG workgroups to ensure regional developments of standards, recommended practices and guidance material reflect Irelands particular circumstances in relation to METSP - Ongoing consultation with the CA to ensure compliance with SES regulations - Conduct an assessment of ICAO State Letters transmitted to Met Éireann under the State Letter Procedure of the IAA with consequent actions as required. - Ensure projects and processes are developed in a timely way to close gaps in line with regulatory timelines and CA guidance/advice - Ensure compliance with the EU Performance Regulation via timely production and ongoing assessment of the 5-Year Business and Annual Plans of ASD and the timely production of the SES Annual Performance Report. 	

Key Performance Area B: Operations and Customer Service	
Description of KPA To provide high-quality aeronautical warnings, forecasts, observations and information to support aviation and related bodies in compliance with ICAO SaRPs, EU Regulations and further refined based on customer requirements	
Key Performance Indicators <ul style="list-style-type: none"> - Timeliness of observations and forecasts - Verification of the accuracy and compliance of services and processes - Effective service users consultation processes 	Key Performance Targets <ul style="list-style-type: none"> - Targets for timeliness as specified in ASD’s QMS reached or exceeded - Exceed the targets for accuracy and product conformity as specified in ICAO Annex 3 Att. B - Application of consultation procedures specified



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	<p>in ASD’s QMS</p> <ul style="list-style-type: none"> - Implementation of value added services and service criteria based on user feedback
<p>Key strategies to achieve targets during RP4</p> <ul style="list-style-type: none"> - Implement and further develop monitoring and measuring systems to ensure that deficiencies are minimised and address any non-conformities that arise under the aegis of the QMS. - Lead on change to ensure continual improvement of forecast and observations process capability - Maintain regular and effective consultation with service users, the CA and the DoT under the auspices of the ASD Customer Liaison Group and the application of the QMS Communications Policy - Manage operational relationships with AirNav Ireland and other external organisations through application of relevant Service Level Agreements 	

<p>Key Performance Area C: Efficient use of new Technologies, Scientific Advances and New Services</p>	
<p>Description of KPA Monitor developments in technology and meteorological science to assess suitability for deployment to Met Éireann’s aviation system to improve efficiency, safety and overall effectiveness of services. Use of available technological supports to build both resilient business processes and operational contingency.</p>	
<p>Key Performance Indicators</p> <ul style="list-style-type: none"> - Ongoing participation and collaboration with international meteorological organisations in areas of science, services and regulation - Operational systems remain fit-for-purpose and compliant with regulatory requirements with projects in place to support the development and deployment of new technologies - Sufficient BCM, DR and Cyber contingency plans and resources in place to mitigate external shocks to the operational system 	<p>Key Performance Targets</p> <ul style="list-style-type: none"> - Experts nominated to all relevant international bodies and collaborations - Completion of technical projects required to ensure availability of state of the art ICT and communications systems to ensure SWIM compliance and CPI enablers are in place by end 2025 - Approval of new systems and systems upgrades by the CA throughout the system lifecycle in line with EASA Regulatory requirements - State of the art nowcasting systems - Machine learning and AI tools to enhance capacity to predict operationally critical meteorological parameters including those which are increasingly impactful due to the effects of climate change - Automated observational processes in place to build operational contingency and improve airport and TMA operations
<p>Key strategies to achieve targets during RP4</p> <ul style="list-style-type: none"> - Management Group of the Aviation Services Division (MG-ASD) continue assessments of current systems and their suitability. Replace systems in order of criticality to the aviation system prior to obsolescence. - Progress experimental work on the development of an AUTOTAF and AUTOOBS system and procedures to support the forecast and observations production processes with support of Met Alliance projects - Expand use of research fellowships and the planned professorship to undertake focussed research aimed at enhancing aviation service provision focussing on growing convective, icing and turbulence as hazards to aviation - Expand international collaborative activities to leverage ASD and Met Éireann expertise and resources in terms of service and process enhancement - Met Éireann to implement a new RADAR network - Maintain a leadership role in the UWC project to implement enhanced High Performance Computing capacity to allow greater resolution modelling and increase the capacity for improvements to aeronautical weather forecasting. 	



Key Performance Area D: Human and Financial Resources and Cost Containment	
<p>Description of KPA Ensure that MET Éireann’s recruitment processes and work force planning activities provide sufficient staff to maintain continuity of service in aviation operations and technical support areas; that the ASD continues to maximise efficiency in the context of the cost efficiency KPA of the Performance Regulation.</p>	
<p>Key Performance Indicators</p> <ul style="list-style-type: none"> - Quality and relevance of recruitment and training programmes - Competence Assessment Scheme - Uninterrupted operational services - Strategic plans in place to deal with staffing and revenue constraints - Cost efficiency requirement set as target metric (as established within the Performance and Charging Schemes) 	<p>Key Performance Targets</p> <ul style="list-style-type: none"> - Induction training programmes for aeronautical meteorological personnel (AMP) meet WMO BIP-MT and BIP-M requirements - All AMP and ATSEP hold current certificates of competence appropriate to role - Continuity of service maintained - Agree determined costs for RP4
<p>Key strategies to achieve targets during RP4</p> <ul style="list-style-type: none"> - ASD will assess all training programmes for AMP and ATSEP for relevance, quality and compliance with the WMO and CIR (EU) 2017/373 requirements - Ensure that staffing resources are sufficient to maintain continuity of service but that operational arrangements are in place to Notice to Airmen (NOTAM) out services in the exceptional circumstances where breaks might occur. - Maintain contingency plans and procedures to deal with reduced staffing and other resources - Ensure that no costs, nor portions of costs, related to activities that do not contribute to supporting the aviation system (such as military, SYNOP, climatology and suchlike) will be allocated to aviation. The allocation system will be reviewed and revised periodically, in consultation with IAA, to meet this strategic objective. - 	



7. Capital investment Programme

A number of capital investment projects are planned to further the success of ASD as a METSP in the context of the SES and ICAO regulatory frameworks and also in terms of improving the quality of services to meet user requirements. Compliance with the SES regulations necessitates investment and the Performance regulation itself, supported by the EC PRB reports, recognise the interdependencies of the 4 KPA’s of cost efficiency, safety, capacity and the environment.

Some capital projects are focussed specifically on supporting the aeronautical meteorological function while others are cross cutting in nature and form part of the core capital spend. These planned investments are intended to also support other Met Éireann activities along with the aviation function and the allocation of capital costs to aviation on foot of these projects is via the application of the agreed cost allocation methodology. Projects that are necessary to fulfil regulatory, for example CP1, requirements are not yet fully defined either by ICAO or EASA. These investment costs are difficult to determine but, as the timeline for these projects implementation are aligned with the end of RP4 some of these investments can be recovered during RP5 using the depreciation method. The foreseen investment projects are detailed in the following tables with some being new to RP4 and others are carried over from RP3.

7.1 CP1 Compliance Project

Project name	CP1
Date of implementation	Phase 1 required to be implemented by November 2025 Phase 2 required to be implemented by end 2030
Expected completion date	Phase 1 November 2024 Phase 2 end 2030
Description and drivers for investment and expected benefits	The driver is to develop compliance with EU CIR (EU) 2021/116 of 1 February 2021 on the establishment of the Common Project One supporting the implementation of the European Air Traffic Management Master Plan provided for in Regulation (EC) No 550/2004 of the European Parliament and of the Council, amending Commission Implementing Regulation (EU) No 409/2013 and repealing Commission Implementing Regulation (EU) No 716/2014. CP1 is aligned with the ICAO Global Air Navigation Plan and sets out, in sometimes broad terms, requirements for MET data formats and message exchange and new enhanced aerodrome, enroute and hazard warning services
Total cost estimate (over 10 years)	Phase 1 will be complete during RP3 (by end 2024) and Phase 2 costs cannot be realistically established as the MET ANSP community await clear service specifications to be developed by the international bodies. At the time of writing it seems likely that the phase 2 projects will be made operational towards the end of RP4 with cost recovery during RP5
Asset life assumption and basis	Phase 1 – 10 years (contract duration) Phase 2 – TBD
Approvals	Phase 1- Met Éireann management Board; Dept Housing ICT Governance Phase 2 - TBD
Note	-



7.2 Building High Performance Computing (HPC) capacity

Project name	High Performance Computing
Project commencement date	Procurement commenced September 2020
Expected completion date	Phase 1 operational May 2024 with further project deliverables for period spanning throughout RP4
Description and drivers for investment and expected benefits	The science of meteorology is on a continuous upward trajectory in terms of its appetite for high performance computing (HPC) and ICT resources. The implementation of resilient HPC by Met Éireann is required in order to develop capacity to enable developments in forecast services such as nowcasting and the use of high resolution ensemble forecasts for the TMA. The improved forecasting capability will also support improvements to forecast services relating to high impact and extreme weather and support safety and efficiency in airport management and ATM. Met Éireann will develop this HPC capacity in collaboration with other modern European Meteorological Services to ensure value for money and to optimise the investment potential.
Total cost estimate	€6,686,000 (phase 1 with expected inflation rate of 30% over course of RP4) An agreed fixed budget was developed based on market research and experience of project collaborators for HPC lifetime costs. The procurement is designed within this fixed cost constraint.
Asset life assumption and basis	5 years Based on estimated useful life of HPC assets and foreseen future requirement for further capacity
Governance/approvals	Departmental Management Board approved. Supported by Memo for Government.

7.3 RADAR network upgrade

Project name	RADAR network upgrade
Date of commencement	January 2021
Expected completion date	Staggered commissioning of new radar as follows: Shannon RADAR upgrade: Q3 2023 (Complete) Dublin RADAR upgrade: Q4 2024 Remaining 5 sites: RP4
Description and drivers for investment and expected benefits	Met Éireann’s current RADAR network is nearing the end of its useful life and is under specified for a modern meteorological service. The data produced by the network is high quality but is not sufficient to fully support ATM, or to support the development of effective nowcasting algorithms or the automated aviation observations. The Met Éireann RADAR network will be upgraded from its current 2 sites to

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	6 sites which will significantly increase the domain covered within the Shannon FIR and provide ATS with the capability, through implementation of aviation specific software modules, to overlay RADAR data onto ATM workstations hence improving both situational awareness and decision making by ATCO. The first phase of the RADAR network upgrade was completed in Q4 2023 with the replacement of the Shannon RADAR. The Dublin RADAR will be replaced by end 2024. Additional 4 new RADAR are planned to come online at the rate of 1 per year from 2027.
Total cost estimate	€23,728,144
Asset life assumption and basis	25 years Based on experience with current RADAR network and consultation process.
Approvals	Department Management Board approved (October 2018)

7.4 Research and Development

Project name	Research and Development
Date of implementation	Met Éireann engages with continuous research and development
Expected completion date	Met Éireann engages with continuous research and development
Description and drivers for investment and expected benefits	<p>Met Éireann is Ireland's National Meteorological Service and, as such, engages with research and development as part of its remit to provide the highest quality weather services to the State and key users such as Aviation.</p> <p>Normal R&D activities require a capital spend. The total expected capital spend on R&D activities over the course of the RP4 period will amount to 1.9 million euro. 10% of this cost will be assigned to aviation based on regulatory guidance materials (WMO Doc 904).</p> <p>Specific investments in research that are planned and/or underway for the RP4 period that will directly contribute to aviation support include:</p> <ul style="list-style-type: none"> • Numerical Weather Prediction model upgrades with focus on aeronautical relevant MET parameters • Funding of a Professorship within an academic institution to lead a team of researchers focussed on the exploitation of AI to derive significantly enhanced forecast products and services • Enhancements to Ireland ensemble prediction system implemented (leading to better probabilistic forecast guidance for aviation forecast team)
Total cost estimate	<p>€190,000 p.a. normal research costs over RP4</p> <p>Based on WMO Doc 904 recommendation for R&D costs assignment to aviation</p> <p>Professorship costs of €5,000,000 over 5 years (managed under other operating costs)</p>
Asset life	Continually evolving capability in the provision of METSP to aviation

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assumption and basis	
Approvals	Projects approved through internal Met Éireann management processes and Divisional Business planning activities

7.5 AUTO-METAR

Project name	Infrastructure Investments to support AUTO-METAR
Date of initiation	2026
Expected completion date	RP4
Description and drivers for investment and expected benefits	Investment in additional visibility observing sites in the vicinity of the major airports will provide the aviation observers and forecast teams of early warning of degenerating visibility and cloud ceiling conditions through the deployment of visual aide sensors. These will be further supported through the deployment of camera technology to support remote weather observations. The benefit of these deployments will be to <ol style="list-style-type: none"> 1. Provide real time observational data from remote but operationally significant areas in the vicinity of Dublin Airport 2. Support the TAF/TREND production and amendment process 3. Improve downstream product improvements such as RVR
Total cost estimate	€500,000 Basis: Estimated costs based on consultation with international peers
Asset life assumption and basis	TBC
Approvals	TBC

7.6 Business Continuity and Disaster Recovery

Project name	Business Continuity and Disaster Recovery (ICT Migration and Managed Services Project (IMaMS))
Date of initiation	Procurement process began 2020.
Expected completion	IMaMS Commissioned December 2022 with current supporting contracts expiring at end 2026 requiring an equivalent project (IMaMS 2) to be concluded by end 2026.
Description and drivers for investment and expected benefits	Met Éireann's ICT infrastructure existed mainly in a single site location in Glasnevin HQ. While there is considerable redundancy built into the server infrastructure in Met Éireann HQ, with key operational servers configured for diversification, there was no geographical resilience or redundancy available. Therefore the loss of the Glasnevin HQ building would have had serious

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	impacts on Met Éireann’s and ASDs ability to develop and deliver its services. In order to strengthen Business Continuity in Met Éireann, there was a requirement for ICT Geo-resilience in conjunction with a Business Continuity Management (BCM) operational office. This required an ICT solution to enable diversification and replication across two ICT sites in order to facilitate DR and meet Recovery Time Objectives and Recovery Point Objectives for products and services.
Asset life assumption and basis	Contract based timeline
Total cost estimate	IMaMS €5,442,000 Based results of tender process (concluded June 2021) IMaMS 2 €8,000,000 (est.)
Approvals	Department Management Board approved January 2021 IMaMS 2 approvals will be secured at the appropriate time

7.7 Forecast visualisation and production system replacement

Project name	Meteorological Data Visualisation System
Date of implementation	Q3 2024
Expected completion date	Q1 2025
Description and drivers for investment and expected benefits	<p>The purpose of this project is to procure and enter into a new contract for a Meteorological Data Visualisation and Production System. Such a system is a core requirement of the Forecasting Division, and it would not be possible to produce quality forecasts, including aviation forecasts, without such a system. The new system will provide the same services and functionality as currently provided by IBL’s Visual Weather but additional features will also be requested. Support on a 24/7 basis will also be required. The project is necessary now as the current contract is expiring in 2024.</p> <p>The benefits of having such a system are:</p> <ul style="list-style-type: none"> • Visualization of meteorological data • Analysis of all relevant meteorological parameters (forecast and observational) • Provide a production suite for aviation forecasts and warnings in compliance with ICAO and EU requirements • Provide capacity to develop additional observational and forecast services necessary for future compliance with Commission Implementing Regulation (EU) 2021/116 (CP1) and the ICAO Global Air Navigation Plan System Block Upgrades • Ensure the infrastructure is in place to handle the inevitable increase in both the volume of data to be ingested and the number of output

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	products required over the coming years.
Total cost estimate (over asset lifespan including maintenance and support)	€800,000 over 5 years.
Asset life assumption and basis	Specified contract duration and meeting public procurement requirements
Approvals	Met Éireann Management Committee. Department of Housing's ICT Governance committee.

8. Financial plan

8.1 Allocation of MET costs methodology

MET costs to aviation are charged based on the determined operational and capital costs forecast over the RP4 period. The costs are established through the application of a cost allocation methodology agreed with IAA and through the application of the Public Spending Code (PSC). The methodology was revised in spring 2024 in order to bring it up to date for the purposes of RP4 planning. The methodology is aligned with the principles for allocation of MET costs to aviation as detailed in the following documents:

- ICAO Policies on Charges for Airports and Air Navigation Services (Doc 9082)
- ICAO Doc 9161: Manual on Air Navigation Services Economics
- WMO No. 904 (ed. 2023): Guide to Aeronautical Meteorological Services Cost Recovery

Management of costs is controlled via the application of the Performance and Charging Regulation (and its amendments) the oversight of which is within the mandate of the IAA. The following reference regulations supported by EC PRB reports also help guide the allocation of MET charges:

- Regulation EU No 550/2004 on the provision of air navigation services in the single European Sky
- Regulation EU No 391/2013 laying down a common charging scheme for air navigation services
- Regulation EU No 390/2013 laying down a performance scheme for air navigation services and network functions
- Regulation EU No 2019/317 of 11 February 2019 laying down a performance and charging scheme in the single European *sky*

The total costs assigned to aviation comprise 2 main categories:

1. **Direct Costs:** These are costs incurred by aviation specific activities and services which are not cross cutting across other Met Éireann activities. The Direct Costs are determined and attributed in full to the plan.

The direct cost component of the total costs relates to staff, production, operating and support costs associated with the following aviation specific services:



Table 1: Regulated aeronautical meteorological services

Service	Service description
METAR reports	METAR reports (excluding TREND) as specified in ICAO Annex 3
Reports for ATS	Instrument display systems for ATS; also plain-language reports for ATS (excluding TREND)
Automated Flight Briefing material	Online Met Self Briefing system
Verbal briefing	Briefing and consultation (excluding General Aviation and Military)
TAFs (FT and FC)	Terminal Area Forecasts as specified in ICAO Annex 3
SIGMET	SIGMET as specified in ICAO Annex 3
TREND	TREND forecasts in METARs and plain-language reports as specified in ICAO Annex 3
Aerodrome warnings.	Aerodrome warnings; wind-shear warnings as specified in ICAO Annex 3
Airport/ATC enquiries	Enquiries from airport agencies (airport authorities, IAA, etc.) and local Air Traffic Control
Graphical Charts	Low level significant weather charts; upper level tabular wind charts as specified in ICAO Annex 3
Additional forecast data	5 day tabular forecast for DAA to support ATC and DAA planning and operations and to elaborate detail
Consultation with adjacent MWO	Regarding SIGMET issuance and network weather in line with ICAO Annex 3 recommendations
Cross Border Convective Forecast Service	Collaborative cross border forecast service of operationally significant convection aggregated across the EUROCONTROL network domain.

The services listed represent the requirement specified under ICAO ANNEX 3 Standards and transposed into EU law via CIR (EU) 2017/373 Part MET. The ASD is certified under CIR (EU) 2017/373 by the aviation regulator for the provision of these services and is designated to do so by the Minister for Transport.

The staffing model assigned to aviation service provision and associated activities is very lean. For example, all of the above forecast services are provided by a team of 8 aeronautical forecasters – the international base level of staffing for 1 full 24/7 shift. This cohort provide the entire suite of MWO and AMO services and also engage in additional aviation service provision activities while on shift. Further, to better support the aviation users, this same cohort provides MET information interpretation training to users (such as IAA ANSP, Airport Authorities and SAR services) as operational rostering requirements allow.

2. **Core Costs:** These are the costs associated with the basic meteorological infrastructure upon which services to aviation depend. For example, in producing a Terminal Area Forecast, which is a direct service to aviation, the forecaster makes use of several Core products, such as surface observations, satellite images, NWP output, etc. Because of this dependence it is appropriate to allocate a proportion of Core costs to aviation. The



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proportion allocated to aviation depends of the relative use made of Core products for aviation purposes as compared with their use for other purposes.

Method used to apportion Core Costs to the RP4 determined costs:

There are 9 identified categories of Core Costs associated with Met Éireann activities used to support, amongst other functions, the aviation service. These are surface synoptic observations; upper air observations, RADAR data, Satellite data, NWP, Climatological data, ICT, Internal Forecasting Guidance and Library/Laboratory and Environment activities. All of the foregoing make a contribution to aviation services. However, the contribution of some Core activities is very small and so can be discounted while others are too complex to apportion fairly – and so these are also not included. Therefore, aviation is not charged any portion of costs associated with Internal Forecasting Guidance, Library/Laboratory and Environment activities. The coefficients used to apportion each core cost category is set out in the cost allocation methodology as agreed with IAA. Core costs are determined in compliance with the criteria set out in the Public Spending Code.

Adjustments in Core Cost allocation coefficients during RP4:

The proportion of Core Costs (operating and capital) assigned to aviation is adjusted for the RP4 period resulting in a cost benefit to the aviation sector. The adjustment is primarily the result of the growing remit of Met Éireann in its service areas due to the implementation of both the Flood Forecasting Centre (FFC) (which will become operational during 2024) and the establishment of a Climate Services Division. Because these new service activity areas also have a demand on the organisations core infrastructure it is considered reasonable that the coefficients apportioning Core to aviation be reduced proportionately.

The impact will be to reduce the proportion of Core costs allocated to aviation to 17.4% for the main cost categories with reductions also in the costs allocated for climatology.

8.2 Determined MET costs for RP4

The costs presented in this plan are based on projections under the normal cost category subheads of staff salaries, staff pension costs, other operating costs, depreciation and exceptional items with additional details provided regarding the operating and capital cost elements. ASD will review and report of these determined costs throughout the RP4 period as required by IAA in order to determine variance from actual costs as they arise.

The financial projections provided below are based on the following assumptions:

- a) Forecast staffing levels assigned to operational and direct support areas
- b) Full application of Direct Costs to aviation
- c) Allocation of Core Costs on basis of revised methodology as agreed with the IAA
- d) Depreciation schedules in line with capital project timelines
- e) Direct Salary costs are forecast actual salaries including incremental adjustments and pay rises
- f) Other operating costs assume 2% inflation p.a. as per IMF forecast
- g) Investment and exceptional item costs are in nominal terms

Table 2: Summary Determined Costs for RP4

<i>Cost Activity</i>	2023 (Actual)	2024(forecast Actual)	2025	2026	2027	2028	2029
Staff Salaries (inc. pensions)	4,543	5,039	5,973	6,215	6,472	6,678	6,888
Staff pensions costs	409	755	926	960	996	1,025	1,052
Other operating costs	1,584	2,887	3,245	3,287	3,385	3,428	3,457
Depreciation	1,213	785	620	682	757	552	881
Cost of Capital			-	-	-	-	-
Exceptional items (EUMETSAT)	1,029	1228	1,269	1,336	1,257	1,235	1,241
TOTAL	8,369	9,939	11,107	11,520	11,871	11,893	12,467

Costs in k€'s

*Cost lower than if staffing was at full complement in which case €5,431k

- The costs projections represent the total costs to international civil aviation (ENR plus Terminal)

Staff costs by activity (including pension costs)

Core staff costs for RP4 are determined using the DPER Public Spending Code Central Technical References and Economic Appraisal Parameters. The recently agreed public sector pay deal is also comprehended within the calculations. This agreement ends in June 2026 and, for the period thereafter, an annual pay scale increase of +2.0% is assumed. The staff profile as detailed in table 3 is constant over the period and assumes no significant staff shortages or additional recruitment to the aviation activity.

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Table 3: RP4 Staff profile and costs by activity area (inc pension costs)

Activity	2025	2026	2027	2028	2029
Corporate support (Management & Admin)	7	7	7	7	7
Salary Cost (incl pension)	955,505.14	984,455.88	1,021,571.91	1,043,750.24	1,066,768.47
Pension Cost	138,714.75	143,535.25	148,600.15	151,689.54	154,969.30
Operational MET service provisions (Ops team & supervisor)	40	40	40	40	40
Salary Cost (incl pension)	4,187,674.36	4,369,759.17	4,560,277.73	4,721,604.89	4,887,219.14
Pension Cost	662,972.52	688,208.54	715,153.87	737,919.03	759,143.21
Technical/ICT/Development	8	8	8	8	8
Salary Cost (incl pension)	829,725.85	860,694.44	890,695.28	913,051.81	933,665.51
Pension Cost	124,265.80	128,010.08	131,955.10	135,031.85	137,890.58
Total	55	55	55	55	55
Total Salary (incl pension)	5,972,905.35	6,214,909.49	6,472,544.91	6,678,406.95	6,887,653.12
Total pension costs	925,953.07	959,753.87	995,709.11	1,024,640.42	1,052,003.09

The RP3 staff profile ran under the predicted staff profile for RP3 with staffing deficits noted in the operational and operations supervisors categories. The ASD ensured no impact on operations was incurred via the use of overtime to cover duties, deployment of contingency staff between sites to effect operational cover, temporary transfers of staff from other Met Éireann Divisions. At the time of writing there are a number of recruitment initiatives in train to fill existing vacancies and bolster staff numbers. During RP4 there are expected to be opportunities to reduce staff assigned to the aviation weather observations service and research is underway to establish the potential in that regard with these cost benefits possible towards the end of RP4.

Table 4: Staff profile by year over RP3

Year	2019	2020	2021	2022	2023	2024 est, year end
Total ASD Staff numbers	50	48	48	49	47	52

Inflation

CIR (EU) 2019/317 states that inflation forecasts ought to be based on the latest available inflation forecast of average Consumer Price Index percentage change published by the International Monetary Fund. The relevant forecast inflation rate table is applied to the RP4 determined costs.

Table 5: Inflation profile

RP4 year	2025	2026	2027	2028	2029
IMF derived forecast inflation rate	2.0%	2.0%	2.0%	2.0%	2.0%

source data: <https://www.imf.org/external/datamapper/PCPIPCH@WEO/OEMDC/ADVEC/WEOWORLD/IRL>

Other operating costs

Other operating costs are either allocated entirely (direct costs) or as a proportion (core costs) to aviation and comprise the following: Regulated Service Production; Surface Synoptic Observations; Upper Air Observations; RADAR data; Satellite data; NWP data and systems

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support; ICT and its support; Communications (telephones etc); Accommodation and related items (contract services/heat/light/utility services); Training; Travel; Subsistence; HR services; Technical instruments and their consumables; Transport (e.g. airport vehicles). Justification for the noted step changes in other operating costs are made separately to the IAA.

Depreciation costs

Capital investment costs are depreciated according to the individual project asset lifetime using a straight line depreciation approach. The asset lifetime associated with each project is determined based on contract duration, experience and WMO guidelines.

The Met Data Visualisation project will be used to support only Met Éireann forecast delivery activities – therefore a unique depreciation factor (0.33) is applied to this project based on the ratio of forecast division resources required to provide aviation and total forecast services.

Table 6: RP4 Depreciation of capital projects allocated to aviation

Project	Term (yrs)	2025 Dep. Cost	2026 Dep. Cost	2027 Dep. Cost	2028 Dep. Cost	2029 Dep. Cost
Met Data Visualisation and Production System	5	53,333	53,333	53,333	53,333	53,333
RADAR Upgrade	25	14,255	14,255	52,917	79,887	106,857
CP1 (phase 2)					Planning and early implementation	
METCOM	10	47,607	47,607	47,607	47,607	47,607
AUTOMETAR	8		62,500	62,500	62,500	62,500
IMaMS	5	242,082	242,082			
IMaMS 2				278,400	278,400	278,400
HPC	5	232,672	232,672	232,672	-	302,474
Met Self Briefing	5	30,000	30,000	30,000	30,000	30,000
Total annual depreciation cost		619,949	682,449	757,429	551,727	881,171

8.3 Draft Cost efficiency Target and Comparison with RP4 Determined MET Costs

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During the RP4 consultation period conducted by EC PRB during 2023 the cost efficiency target ranges are set out in the following table:

Union-wide cost-efficiency target ranges					
2024 baseline	55.61€ ₂₀₂₂ / 7,198M€ ₂₀₂₂				
y-o-y change of Union-wide determined unit costs	2025	2026	2027	2028	2029
Targets upper bound	-0.7%	-0.7%	-0.7%	-0.7%	-0.7%
Targets lower bound	-3.1%	-3.1%	-3.1%	-3.1%	-3.1%

Table 33 - Union-wide cost-efficiency target ranges.

Both the upper and lower bounds seek a cost reduction over the course of each year of RP3. ASD continues to seek efficiencies and business process improvements to reduce costs where possible. However, the economic environment in recent years is one in which high inflation and escalating staffing costs are a real feature. While inflationary pressures are decreasing it is considered unlikely that the costs of doing business will reduce. Furthermore, all investments planned for RP4 are necessary to ensure that the quality of service is improved and compliance with both ICAO standards and EU regulatory requirements is maintained.

Costs borne by METSP are fixed regardless of traffic volumes and variation in these does not act to either increase or decrease resources or costs that must be applied in order to effect a high quality service in compliance with ICAO and EU requirements.