Customer Supplier Agreement

For the provision of the UK Public Weather Service

2025-2030

Met Office Ref No: L7543

Date agreement comes into effect: 1 April 2025

SECTION 2: PWS PERFORMANCE MEASURES, DELIVERABLES, SERVICES AND REPORTING FOR 2025-30

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Foreword

Welcome to the latest Customer Supplier Agreement (CSA) covering the period from 2025-2030. We are now in a well-established process of refreshing the rolling 5-year agreement, with this being the third iteration. The rolling agreement ensures that the PWS has the ability to plan for upcoming developments, future capabilities and provide innovation to the market. This flexibility is especially important in the light of the formation of a new government and the uncertainty of upcoming spending review settlements during this period. Equally, it allows for the impact of AI/ML on not only the potential to improve forecasts but also the other aspects of Met Office business.

The refreshed CSA has been developed at a time that the Met Office have also been refreshing its own strategy, due for launch early FY25/26. As Chair of the Public Weather Service Customer Group (PWSCG) I have been consulted and was able to provide input the views and priorities of the PWSCG as part of the strategy development. With the PWSCG being the largest funded contract within the Met Office, I am particularly pleased to see a real customer focus within the strategy. Needless to say, it is vital that the Met Office and the PWSCG remain aligned.

Within the refreshed CSA you will continue to see that the previous key themes remain as the foundations within which the detailed plans, performance measures and deliverables within this CSA are set. These themes of Stay Safe, Thrive, Authoritative Voice, National Capabilities and International Commitments provide the golden thread from the Met Office strategy through to the CSA and vice versa.

During the last year the PWSCG has maintained to focus on its enduring priorities of ensuring PWS output is Discoverable, Consistent, Useful and Timely. Importantly, as our number one priority, the PWSCG continues to seek improvements from the Met Office in the accuracy of its forecasts across the three lenses of, Actual, Comparative and Perceptions of accuracy. This will continue to be a key focus for the Group as the new supercomputer becomes operational and aims to deliver on the improvements in forecasting as promised within its business case. However, year one of this CSA will reflect the delays in the Supercomputer and the inevitable delay in the anticipated performance. Exploiting the new Supercomputer and weather models is especially important in a period when disruptive changes in the weather market brought about by AI/ML is beginning to have significant impact. The Met Office is looking at how AI can be used and, in a rapidly changing scientific period, the CSA will need to be reactive over the 5 years and help to drive change and new investment and techniques where needed.

Looking forwards, in addition to the enduring priorities, we look forward to improvements in the direct reach of Met Office services via the launch of the new Met Office App in FY25/26. This builds on the foundations developed within the Citizen Engagement strategy, which to date has primarily focused on increasing attributed indirect reach and has shown some encouraging results. This year I will also be looking to evolve the membership of the PWSCG to provide more prominent views and challenge from members who can represent the 'Thrive' theme of the CSA. This will include members to represent areas of the outdoor economy such as farming and leisure.

Finally, as was the case the previous year, the weather this year has brought challenges and significant impacts to the UK. This has especially been the case during the 2024/25 winter with storms Darragh and Éowyn both warranting the Met Office issuing red National Severe Weather Warnings for their significant risk to life, with Éowyn bringing the most powerful windstorm to the UK in over a decade.

Duncan L Potts CB - Chair of the Public Weather Service Customer Group

1. Introduction

The UK Government through the Department for Science, Innovation and Technology (DSIT) funds the Met Office to provide a public weather service for all citizens of the United Kingdom. The Public Weather Service (PWS) exists to provide a trustworthy and reliable public forecast for UK citizens, including the provision of a National Severe Weather Warning Service.

PWS also supports the National Capability (data, research, development and expertise) needed to support impactful weather and climate products and services, national strategic needs and emergency response. PWS also enables the Met Office to be a trusted partner internationally and actively participate in global organisations on behalf of the UK. (See Annex C for more information.)

The Met Office's two statutory responsibilities are delivered through PWS:

1. The Met Office's role as a Category 2 Responder under the Civil Contingency Act since 2022
2. Maintenance of the National Meteorological Archive as a place of repository or records created under the authority of the Met Office and its predecessor organisations and subject to the Public Records Act 1958.

As a DSIT Partner Organisation, the Met Office is an Executive Agency of the Department with Trading Fund Status. The Met Office is the delivery body for the PWS with the owning Department, DSIT, setting the organisation's Public Task through the PWS.

To ensure the PWS is delivered in a way that meets the needs of all users of these services, an independently Chaired Public Weather Service Customer Group (PWSCG) provides a crucial role in representing the interests of the wider public sector and government, including the interest of the general public. Further details on the role of the PWSCG can be found here and in Annex E.

1.1. PWS Scope

The PWS must equip the UK public, responder organisations and users of the outputs of the Met Office National Capability with information that enables them to take appropriate decisions and actions to **stay safe** and **thrive.**

On behalf of UK citizens, the PWSCG requires the Met Office to provide discoverable, accurate, consistent, useful and timely forecasts.

This includes warnings of severe weather that are trustworthy and useful, delivered in a manner so that the public and responder community can take action.

Weather forecasts will cover the whole of the UK, including mountains, island and coastal areas, for all time periods from nowcasting through to the next 3-months. This must help them assess what weather conditions may impact themselves and others, including their personal or business activities.

PWS civil contingency products and services will only support PWS core risks and UK multi-agency response. Core risks are pure weather plus plume forecasts. For the UK, multi-agency means multiple UK departments and / or organisations may be involved in response. For International, multi-agency means multiple UK departments and / or organisations involved in response.

The products and services are defined by the Customer Supplier Agreement (CSA) and must be delivered to agreed performance standards.

1.2. PWS Priorities

During the course of this CSA the below areas will remain the enduring priorities for PWS:

- Ensuring PWS output is Discoverable, Consistent, Useful and Timely.
- Improving the accuracy of Met Office forecasts as assessed via the three lenses of Actual, Comparative and Perceptions of accuracy.

Alongside these enduring priorities there are a number of immediate priorities for PWS:

- Exploiting the new Supercomputer and forecast model improvements, this is especially important in a period of disruptive changes in the weather market brought about by AI/ML.
- Improvements in the direct reach of Met Office services as documented in the Met Office
- Citizen Engagement strategy, this includes the development and release of a new Met Office App.
- Evolving the membership of the PWSCG to provide more prominent views and challenge from members who can represent the 'Thrive' theme of the CSA.

1.3. PWS Principles

The following principles will guide development and delivery of PWS services:

- **Value for money** – all PWS services, products and the underlying capability should provide value for money to the taxpayer and deliver social and economic benefits to the UK;
- **User insight** – the development of services and products will be based on a sound understanding of user needs, informed by user engagement, user testing and research together with usage statistics and digital channel analytics;
- **Partnerships and collaboration** – requirements will be developed and delivered working with or collaborating with partners where relevant;
- **Consistency** – products and messages across all delivery channels will be as consistent as possible, critical for gaining trust in forecasts;
- **Integrity** – all products will be based on sound scientific principles and provide demonstrable value;
- **Resilience** – operational services will be delivered with a high level of resilience and with appropriate levels of support;
- **Verification** – where possible all forecasts will be verified against observations, surveys and impacts;
- **Compliance** – PWS services and products will comply with all relevant legislation.

1.4. What the PWS is not

The PWS provides products and services that are within the scope of PWS and follow the principles laid out above. It does not provide **specialist** products and services; specialist forecasts should be paid for under a commercial contract with the Met Office. The final decision for including a service within the PWS CSA rests with the PWSCG after consideration of the PWS scope and principles.

1.5. The Customer Supplier Agreement (CSA)

The CSA is the agreement that is in place between the Secretary of State at DSIT and the Met Office and sets out the detailed outcomes that the Met Office must deliver as part of the PWS. The CSA is signed by three parties: the Senior Civil Servant with policy responsibility for the PWS at DSIT on behalf of the Secretary of State, the Chief Executive Officer at the Met Office and the Chair of the Public Weather Service Customer Group.

Since 2023 the CSA has covered a rolling 5-year period, which is refreshed each year. The annual refresh allows for the agreement to be flexible to consider evolving circumstances and priorities, for example to new digital development such as AI, alignment to evolving Met Office strategies and to allow for adjustments depending on financial settlements.

The CSA describes the full range of expectations of capability and services that the PWSCG require from the Met Office. It outlines what products and services are required and is focussed on outputs and impacts, with a series of associated metrics (performance measures) by which the Met Office will be assessed. Deliverables are also defined detailing PWSCG requirements for projects designed to improve PWS services.

It is recognised that over the timescale of this 5-year rolling agreement, there is potential for some external factors to impact and influence the priorities within the CSA and may impact upon the Met Office's ability to deliver the full ambition described in this CSA. The PWSCG will monitor progress throughout and prioritise delivery as appropriate. These factors include;

- ***Phase 2 Spending Review outcomes covering FY26/27 – FY29/30***
- ***Development of disruptive technologies such as Artificial Intelligence***
- ***Implementation of the new supercomputer and adjacent supporting technologies***

The CSA is broken down into four overarching themes as shown in Figure 1. Requirements for each theme are based on consultations with customers, users and other research and are outlined in detail in section 4 of this document.

Figure 1: Summary of the CSA themes which define the requirements of the CSA.

1.6. How does this CSA link to the 2025/2030 Met Office strategy

The Met Office is developing a new corporate strategy to cover the period 2025 to 2030. This is due to be launched in Summer 2025.

The Met Office purpose of '*helping you make better decisions to stay safe and thrive'* will not change.

The 3 priorities that will drive the Met Office's strategic work are:

- **Customer Driven** - Transforming to serve citizens, communities and businesses with trusted services which deliver growth and value.
- **Purposeful Data and Intelligence** - Increasing value and driving growth by delivering the most accurate, consistent, and usable weather and climate data and intelligence.
- **Agility and Innovation** - Working with agility to balance innovation, risk and value for money.

Both this CSA and the new Met Office Strategy reflect the close cooperation that has and continues to exist between the PWSCG and the Met Office. Being the Met Office's largest customer, the demand signal generated in this CSA is a key driver for the Met Office. In short, for the PWS the PWSCG thru the CSA sets the demand signal – The What – and the Met Office meets the demand – The How. Key to success in this relationship is based on a close, mutually understanding and supporting relationship.

The Met Office vision is to be '*delivering the most trusted weather and climate intelligence in a radically changing world'.* The PWSCG CSA aims to give the Met Office a framework to deliver services that are focussed on what people, organisations and responders want and need, provide good value for money to the UK population, and deliver extraordinary impact and benefit.

1.7. How does the PWS tie in with broader Government missions?

The PWS provides direct and indirect benefits to the UK that go beyond the well-known forecast and warning services. Investing in a public weather service and all the underpinning UK infrastructure, science and expertise needed to produce and communicate weather forecasts nationally and internationally puts the UK at the forefront of weather and climate science. The services that are provided help to reduce the impact that severe weather has on our lives, but importantly for users and business it allows them to Thrive in making better decisions at times when the weather matters most to them.

The PWS supports the following Government Missions as set out in the Government's 'Plan for Change'

- **Growth**
    - The Met Office, supported largely by PWS products and services, deliver significant value to UK economy and society. A recent study shows a headline Benefits Cost Ratio of 19:1 (published estimate, from the Economic Value of the Met Office, by London Economics), by making businesses and individuals resilient to weather and climate-related hazards and minimising disruption. The economic analysis in the report evaluates the Met Office's activities over a period of 2024-2033.
    - Public Sector Information made available for reuse as part of the Met Office's Public Task helps to stimulate a competitive market for weather products and services. This aligns with wider Government objectives to ensure an innovative sector that supports job creation in the fields of artificial intelligence and geospatial data.

- **Clean Energy**
    - The underpinning national capability that the PWS pays for supports the Hadley Centre for Climate Change to carry out its world leading science and research which is key to supporting the UK commitment of reaching Net Zero by 2050.

- **Health**
    - PWS provide forecasts relevant to health and wellbeing, including for UV, pollen, and air quality.

- **Resilience**
    - Weather and climate advice is becoming increasingly important to national resilience, particularly given the increasing frequency and severity of extreme weather. The Met Office having Category 2 Responder status is an important acknowledgement of the UK's National Weather Service, working in partnership with government and the UK resilience community in the planning and response to emergencies and incidents across the country.
    - A dedicated team of Civil Contingency Advisors located across the UK work closely with Local Resilience Forums and emergency responders. The team helps support and plan for incidents arising from the impacts of severe storms, extreme heat and cold, fires and chemical incidents and other events where weather could have a significant impact. They also support the agencies responsible for forecasting and responding to flooding.

2. Themes

The following themes within the CSA tie in with the Met Office Purpose of '*helping you make better decisions to stay safe and thrive'.*

Performance metrics and deliverables have been developed using evidence and information that has been gathered from surveys and research undertaken on behalf of the PWSCG by the Met Office and other independent research organisations. These surveys include the Public Perception Survey, Trust Tracker, Consumer Accuracy Index, Emergency Responder and ad-hoc warning surveys.

2.1. Theme 1: Weather forecasts and warnings when it matters – stay safe:

Accurate weather forecasts and warnings that help people make decisions and change their behaviour.

The Met Office should deliver authoritative, trusted, timely and useful forecasts and warnings when it matters. Warnings for high impact weather should be made available to all users – this includes the public, communities, responders, the media, and government through its responsibilities as a Category 2 responder - in a timely way through the National Severe Weather Warnings Service (NSWWS), Civil Contingency Services, and direct and indirect channels. These warnings and their supporting services should provide information and advice to help mitigate the impacts of the weather that may pose an immediate risk to life and property, such as that shown in Figure 3.

To meet this aim, there are a range of improvements that the Met Office should seek to make. These improvements are described in full in the following sections, but include improving the accuracy of warnings, simplifying complex warnings and including advice on impacts to help people make decisions and drive behaviour change. Work is also required to maintain and improve the advisor service and the technology used by responders (Hazard Manager).

Why is this a priority?

Warnings and advice from the Met Office, working with partners where appropriate, will enable the public, responders (for example Category 1 and Category 2 responders, community resilience, voluntary organisations etc) and government (for example the COBR Unit and Resilience Directorate) to take action to mitigate the impacts of weather events that may cause danger or disruption to people, property or infrastructure.

Figure 2: Storm Éowyn timeline – January 2025

The services and outputs from this theme:

The National Severe Weather Warning Service

The PWS provides the UK's warnings service which issues discoverable, accurate, consistent, useful and timely advice to the public, communities, responders, the media, and government about weather which may cause danger or disruption to people, property, or infrastructure. This service should be made up of the impact based National Severe Weather Warning Service (NSWWS), supporting communication information, engagement, education, and civil contingencies services.

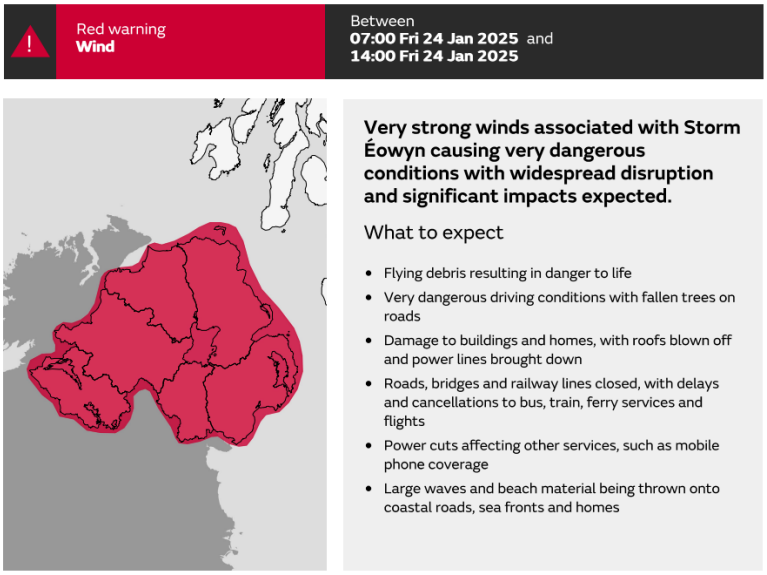

Figure 3: Example NSWWS output

The winter of 2024-25 saw several high-profile weather events. Storm Bert was a UK-wide 'multihazard' event, with disruptive snow across northern areas and some significant flooding across parts of Wales and the Midlands. The flooding highlighted the challenges of risk communication when impacts are uncertain. Storms Darragh and Éowyn both saw red wind warnings issued, and the first opportunities for use of the Cabinet Office's Emergency Alerting System for severe weather. In each case the warnings, the associated advice and the steps taken by the resilience community were highly effective. Surveys indicated that 99% of the public in Northern Ireland were aware of the red warning for Storm Éowyn, with an unprecedented 94% taking action as a result.

Civil Contingency Services

The PWS will provide the UK Civil Contingencies Community with relevant, accurate and trusted advice around impactful weather and weather-related natural hazards. A team of Met Office Civil Contingencies Advisors distributed across the UK will integrate with and advise Local Resilience Fora, Civil Contingencies Groups and Partnerships as well as the UK Government and Devolved Governments. By working closely with responders, the Advisors will interpret the risks of weather in the context of responder decisions, supported by appropriate online information and expert advice or support.

The Advisors will also provide trusted advice to UK Government around weather and natural hazard events affecting UK interests worldwide. The PWS will also provide forecasts and advice to UK government for weather and atmospheric pollution events that require a UK multi-agency response. The Met Office will work with partner organisations to coordinate and understand impacts of warnings, including the Environment Agency (EA), Scottish Environment Protection Agency (SEPA), Natural Resources Wales (NRW),

Northern Ireland Rivers Agency (NIRA), UK Health Security Agency (UKHSA) and their equivalents in the Devolved Governments and other members of the Natural Hazard Partnership (NHP). The Met Office will continue to own risks on the National Security Risk Assessment – cold and snow, heat and storms (the Met Office also own Extreme Space weather but as this is not a PWS service it is not covered in this CSA).

The Met Office Civil Contingencies Advisor team celebrated its 20th anniversary in Spring 2025. Now numbering over twenty staff, the team offers advice and support to all of the UK's governments and local resilience groups as well as input into UK resilience activities overseas.

The Met Office was recognised as a Category 2 Responder under the Civil Contingencies Act in 2022. The PWS Customer Group and the Customer Supplier Agreement play a role in demonstrating evidence that the Met Office meets its obligations to the resilience community. Some of the CSA Performance Measures and Deliverables are now identified as contributing to this evidence

Safety forecasts

The Met Office will provide weather forecasts and warnings in areas of heightened risk, to ensure the safety of users. This will include mountain, and beach forecasts. These forecasts will be readily available, and have been developed in partnership with other organisations, such as the Maritime and Coastguard Agency recognising that 'when it matters' may also include what may be thought of as benign weather (e.g. hot, calm weather on the beach) when people can become 'at risk' when in a situation that is unfamiliar to them or when they are unable to take appropriate action.

PWSCG outcomes required in this theme:

Increase in quality and authority of warnings to the public and responder community.

All citizens and the responder community are provided with trusted (discoverable, accurate, consistent, useful and timely) forecasts, ensuring everyone makes better decisions to stay safe and thrive.

Weather warnings should:

- Be discoverable, accurate, consistent, useful, timely and consistent with other forecast information both within channels and across different channels:
    - Clear start and end times;
    - As much notice as possible (dependent upon confidence);
    - Include context -compared to recent weather/memorable events/weather in the future;
    - Include clear messages around uncertainty, communicating the true risk level;
    - Include warnings of short notice weather events, pulling through nowcasting capabilities
- Give clear and relevant geographical detail:
    - Take a holistic view of warning services; not just warnings but the advice, communications and educational services which support them;
    - Ensure messages are clear and simple even when faced with a complex weather event;
    - Ensure warnings are issued where possible at times when they will get the most impact – e.g. at times when broadcasters can present the information.
- Include context and appropriately tailored advice to drive action and change behaviour:
    - This should be done in collaboration with partners and the media - Key messages with clear advice should be communicated consistently between the Met Office and partner organisations;
    - This advice should be clear about when people should act and what they should do;
    - The true risk level should be clearly communicated;

        - The way confidence and uncertainty of warnings is conveyed should be improved;
        - This should employ social science and marketing and communications expertise to optimise understanding and to drive action.
    - Be communicated clearly and appropriately:
        - Be tested with users to ensure clear communication;
        - Be accessible via a wide variety of platforms, direct and indirect, improving reach and access;
        - Facilitate sharing of authoritative Met Office warnings by and between partners and third-party platforms and systems following guidelines to ensure that they are used appropriately;
        - Ensure published advice can be integrated into other systems where possible;
        - Ensure there is a suitable platform for civil contingency practitioners which meets their needs, life cycling and updating the technology (e.g. Hazard Manager) as appropriate;
    - Align work within a wider UK vision and framework for risk and resilience:
        - Continue to set the standard for weather warning and civil contingency services;
        - Investigate ways to tailor information to specific users (whilst not creeping into what are rightly specialist services).

There will be a network of Civil Contingency Advisors, that will:

- Be UK-wide, covering all nations and regions;
- Be resilient, with a team structure that enables them to provide a service to responders when required, with additional support from the wider Met Office to provide cover out of hours;
- Give additional information and advice around warnings, weather related hazards and impacts
- Provide training to responders on weather, natural hazards and use of Met Office products and services;
- Provide support for risk assessment and resilience planning to responders and government;
- Provide information, support and advice to government as requested, for example to support COBR and the resilience aspect of high-profile events;
- Work with partners to ensure advice to government and responders is consistent and authoritative.

These outcomes will be measured by the Performance Measures, supported by deliverables which can be found in Section 4, Theme 1.

Assurance will be provided through reports to the PWS Assurance Group (PAG 1), further details can be found in Annex E.

2.2. Theme 2: Weather forecasts every day – thrive:

Accurate weather forecasts that people see and use every day.

The Met Office should enable members of the UK public to thrive every day. This means that the Met Office should provide weather information that helps people to make informed everyday decisions that improve their lives and wellbeing and helps businesses to make decisions that enable them to work more effectively and increase productivity.

Fundamental to this is the ability for the Met Office to provide consistently accurate forecasts, that compare well to other providers. Forecasts will cover the whole of the UK, including mountains, islands, and coastal areas.

Why is this a priority?

Accurate weather forecasts should enable the UK public and business to thrive. By providing accurate weather forecasts that the public trusts, the Met Office is enabling the public to make decisions with confidence when it really matters to them. This could be planning for a family camping trip or scheduling specific weather impacted activities in industries such as farming and the outdoor economy. These everyday thrive decisions drive effectiveness, improve productivity and efficiency, therefore improve economic impact and benefits to the UK.

The Met Office should continue to improve the accuracy of weather forecasts throughout the period of the CSA. There are three aspects of accuracy that are important – actual accuracy, comparative accuracy (Met Office performance relative to other providers) and perceptions of accuracy. Improvements in forecast accuracy is the number one priority for the PWSCG.

Every year the PWSCG ask the Met Office to work with an external agency to survey the public. This survey asks a representative sample of the public across the UK how they access weather and climate information, how important they think weather forecasts are, how satisfied they are with the key elements of weather forecasts and the survey also assess awareness and usage of forecasts. This is known as the Public Perception Survey (PPS) and the results of this survey are reported under this Theme of the CSA, this information is used to track trends and direct areas of improvement for the Met Office moving forwards.

The services and outputs from this theme:

- Be accurate, timely and consistent with other forecast information both within channels and across different channels:
- Accurate weather forecasts for all time periods from Nowcasts to three months;
- The provision of forecasts relevant to health and wellbeing, including for example UV, pollen, and air quality.

PWSCG outcomes required in this theme:

Improvements in forecast accuracy available to all UK citizens, to help them make better decisions to stay safe and thrive:

- The **actual accuracy** of precipitation forecasts should improve (this includes rain and snow):
  - Will it be wet or dry?
  - When will it start and stop?
  - How hard will it be?

- There should be a focus on improving the actual accuracy of predicted temperature, especially when it is extreme and newsworthy;
- The Met Office should score highly when independently verified against other weather providers active within the UK **(comparative accuracy)**
- Ensure that the improvements to local forecasts from Enhanced post processed data are pulled through to all PWS services;
- As the new supercomputer comes online, the PWSCG expects the improvements in underpinning modelling and science pull through to drive improvements in forecast accuracy;

Longer range forecasts should be improved:

- Improve the utility and understanding of the three-month forecast for government and responder communities;
- Implement 14-day forecasts on Met Office channels, including both video and data output - Video content was made available in January 2024, and forecast data driving the forecasts on the web and app should be available in 2026;

Improve accuracy of forecasts by pulling through Met Office research and innovation into PWS products and services, including visualisation of ensembles for the public.

These outcomes will be measured by the Performance Measures, supported by deliverables which can be found in Section 4, Theme 2.

Assurance will be provided through Assurance Reports to the PWS Assurance Group (PAG 2), further details can be found in Annex E.

2.3. Theme 3: Maintaining an authoritative voice – recognised as global leaders in weather and climate services

Trusted and authoritative weather--- forecasts, accessible when and where people need them.

The other themes of this CSA require the Met Office to produce accurate weather forecasts especially through improvements in the science and technology. However, the Met Office could produce an accurate forecast, but if this is not getting into the hands of the people who need it in a way that is useful and helps them to make decisions then that investment and work is wasted.

Met Office products and services should be:

Discoverable, Accurate, Consistent, Useful and Timely

Recognising the importance of communication and engagement with end users, the Met Office developed the Citizens Engagement Strategy in 2022 with the support of the PWSCG. The purpose of the strategy is to set out and implement the Met Office's approach to reaching all members of the UK population with trusted weather and climate services to help them to make better decisions to stay safe and thrive. This includes harder to reach and vulnerable groups. The Met Office will be positioned as 'the engine', driving the UK weather market and an essential component of all weather services. The "engine" means that the Met Office will aim to make high quality data[1], compelling content and trusted services available either directly or indirectly to all UK citizens.

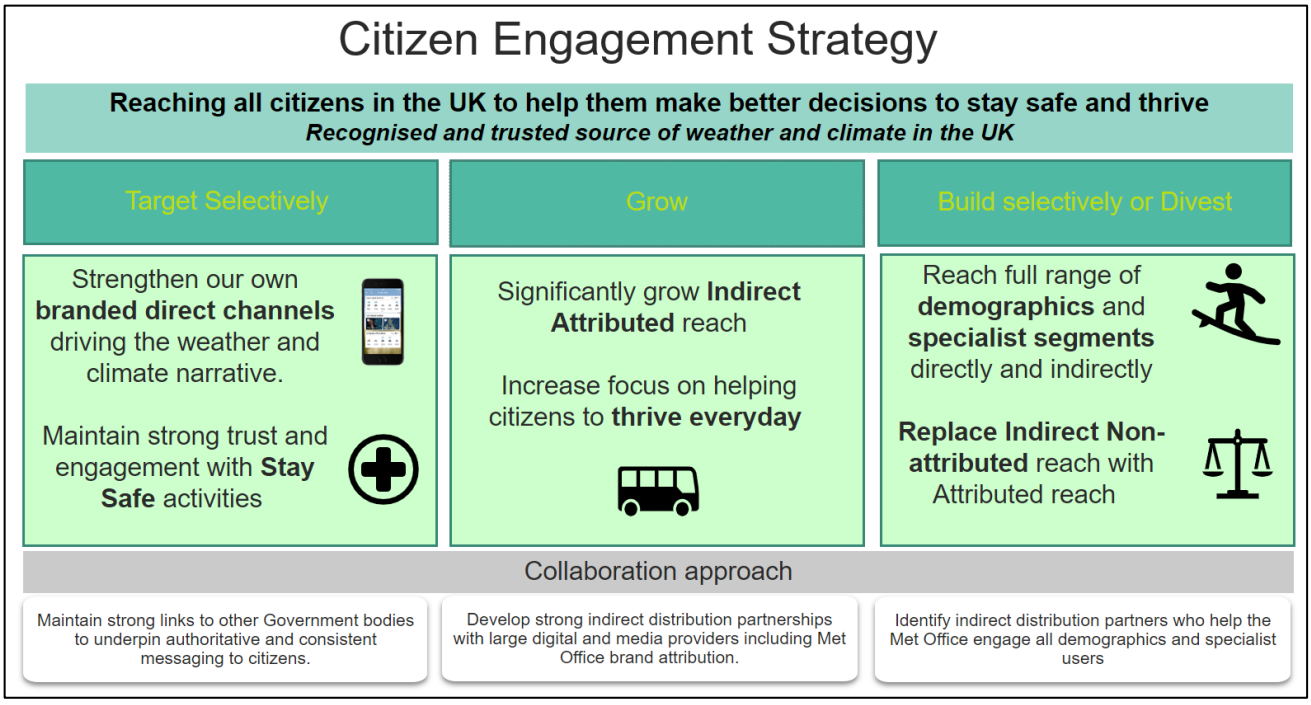

Figure 4: Overview of Citizen Engagement Strategy

[1] Data includes Numerical Weather Prediction model data, observational data and post-processed data. An attribution policy will enable attribution of all types of data where specific criteria are met.

2023 marked the first year of implementation, with significant progress made since then, including a new web and app strategy. This strategy aims to enhance pace, data-driven decision making, and user experiences. By improving People, Process, Technology, and Data, the strategy seeks to elevate the Met Office as an industry leader for Website and App products. Foundational changes have already been made, enabling accelerated evolution in both products.

The success of Theme 3 is dependent upon the success of Themes 1, 2 and 4 – without the improvements in the science, technology, accuracy and warnings, the Met Office will not be able to maintain its authoritative voice. Significant Supercomputer enhancements are expected by 2026. Meanwhile, other providers are leveraging AI to strengthen their market position. To mitigate this risk the Met Office will launch a brand positioning campaign to enhance its perception and positioning among target audiences. This campaign aims to drive customer preference for Met Office services, increase awareness of its economic benefits, and highlight the Met Office as an innovative, tech-led organisation.

Why is this a priority?

Ensuring the Met Office has an authoritative voice and communicates accurate and useful forecasts daily will help people understand the weather and climate, its impact, and take actions to stay safe and thrive. A key part of the Citizens Engagement Strategy is for the Met Office to provide Direct Channels that are aimed at people who want a reference product that can be trusted when the weather matters most **to them**. This may be for safety, but it will also include thrive, whether for personal events when weather is key, but also for small and medium sized businesses where the weather is a key factor in their decision making, especially when their business relies on accurate forecasts. This will drive Met Office direct channels to move beyond 'at a glance' to offer more detailed and longer-range forecasts that people need. The provision of a high-quality authoritative and consistent service will establish trust and brand loyalty between customers and the Met Office, resulting in greater engagement with Met Office forecasts and improving the likelihood that appropriate behaviour change will occur every day and during extreme weather.

Building and maintaining an authoritative brand through Met Office direct channels, such as the Met Office App, will encourage third party media channels and organisations to work with it, which increases the reach, use and display of data, forecasts, and warnings.

The most important aspects of a weather forecast as evidenced by the 2024 Public Perception Survey (as described in Theme 2) are:

- has local detail
- is accurate
- is easy to understand
- is easy to use
- is clearly presented
- is useful
- is provided by a trusted supplier
- has useful information about how the forecast will change through the day

It is these factors that drive engagement between the Met Office and the end user. The Met Office defines Engagement as: *Working to positively **engage audiences** so that they are **aware, understand** and **act**.*

This ensures that the information provided is trusted, listened to and acted upon.

The services and outputs from this theme:

- Discoverable, Accurate, Consistent, Useful and Timely weather forecasts and weather information that reach the UK population and help them to make decisions about whether to change their behaviour (direct channels);
- High quality presentation of weather forecasts, content and data that are shared with, and where possible developed in conjunction with, partner organisations (indirect channels);
- Maintenance of the Met Office Library and archive, which is a legal obligation under the Public Records Acts 1958 https://www.metoffice.gov.uk/research/library-and-archive/about-us/our-policies.

PWSCG outcomes required in this theme:

Increase in thought leadership and innovation applied to high quality, compelling and trusted direct channels.

- The Met Office should continue to strengthen direct channels which are world class and maintain their **authoritative voice** – demonstrating **thought leadership** and **innovation**. Requirements for these direct channels include:
    - Improve the way weather is communicated, thus improving the perception of accuracy of Met Office forecasts:
        - Improve the communication of how the weather will *feel*;
        - Review how symbols or other ways of representing weather in forecasting are seen and understood and make improvements, for example by including ways to represent how heavy rain will be and to fully tell the weather story.
    - Provide forecasts and warnings that enable the general public to understand the weather within the context of a changing climate and within appropriate historical context;
    - Include comparison to historical events where appropriate;
    - Include more information on how seasons will change, trends of severe weather changes, frequency of severe weather events, comparison of predicted future weather to current extreme weather;
    - Raising awareness of climate change and how it will change the weather in the future amongst the public both directly and indirectly.
    - Give more information to help people make decisions;
    - Use clear language to explain probability and uncertainty in all forecasts and warnings;
    - Explain how the forecast is going to change;
    - Improving direct engagement with 'harder to reach' audiences and those who are most vulnerable to the impacts of the weather and climate.

Increased levels of citizen engagement with attributed Met Office information through direct and indirect channels.

- The Met Office should also extend the reach of Met Office information and forecasts by:
    - Widening partnership working via indirect channels to ensure authoritative advice provided by the Met Office has extensive reach to drive action and change behaviours;
    - Data should be **easily accessible**, useable, and be **attributed** to the Met Office where possible;
    - Content should be relevant/bespoke for indirect channels - content partnerships and syndication;
    - The use of partner organisations should be capitalised on;

- Work with partners to increase the authority of our service by providing content relevant to their area of expertise;
- Work strategically with weather partners who have competitive capability (whether this be technology or data) to enter different markets;
- Target harder to reach audiences and drive action;
- Build social media partnerships (for example via ambassadors or influencers);
- Encouraging wider use of Met Office data, making it quick and easy to download and use by individuals and government, especially when it comes to warnings.

Increase public trust in the Met Office for weather and climate.

- The Met Office should continue to raise awareness of the weather and climate change in schools.
- The Met Office should also seek to maintain its authoritative voice via the delivery of a Met Office National Meteorological Library and Archive
- The Met Office should ensure that the weather story is the same whatever communication channel is used to view it, and that the information within a channel is also consistent:
  - Ensure that communication of forecasts is consistent within all channels - for example, the forecast should match the radar picture, the weather script should match the spot forecast information etc;
  - Show consistent weather forecasts and key messages across channels (website, app etc.).

These outcomes will be measured by the Performance Measures, supported by deliverables which can be found in Section 4, Theme 3.

Assurance will be provided through Assurance Reports to the PWS Assurance Group (PAG 3), further details can be found in Annex E.

2.4. Theme 4: National capability and international commitments - recognised as global leaders in weather and climate science.

Science, observations, technology and international commitments that underpin weather forecasts and warnings.

National Capability

The National Capability of the Met Office **delivers the data, research, development and expertise to support impactful weather and climate products and services, national strategic needs and emergency response.**

It comprises data supply, post-processing and analysis, prediction and projection and observation.

- Data supply is the ability to store, manage, and supply observation, prediction and projection, and post-processed data to internal consumers
- Post-processing and analysis is the ability to transform observation and prediction and projection data to modify scientific characteristics for a general purpose use-case
- Prediction and projection is the ability to simulate or emulate the physical, chemical and/or biological environment within a given domain and specific context
- Observation is the ability to capture measurements of the physical, chemical and/or biological environment, measured at a specific time in the past.

International Commitments

The Met Office as the UK's national met service is well respected and highly regarded internationally and plays an important role in deploying a degree of 'soft power' to the overall benefit of the UK. The Met Office should maintain and, where possible, increase influence within key organisations and collaborations to ensure that UK interests are served. When representing the UK on the international stage the Met Office should seek to maximise the impact of any financial contributions made by the UK Government. If circumstances allow, the Met Office should ensure that interventions and decisions support and further widen UK Government aims and objectives that may be closely linked or aligned to those in weather and climate.

On behalf of the UK, the Met Office is an active member within international organisations and has also established itself as a trusted partner with a number of overseas governments.

The key organisations and institutions that Met Office should maintain an active role in and maintain engagement with to the benefit of the PWS are:

- EUMETSAT
    - The European Organisation for the Exploitation of Meteorological Satellites is an intergovernmental organisation based in Darmstadt, Germany. Currently with 30 Member States, it develops and operates 24/7 primary weather satellites for Europe. It also provides its members access to meteorological satellite data from other agencies.
- ECMWF
    - The European Centre for Medium-range Weather Forecasts. An intergovernmental organisation of 23 member states responsible for delivering numerical weather predictions on the medium and extended range timescales for its members.
- WMO

    - The World Meteorological Organisation is the United Nations specialised Agency responsible for international cooperation in weather, climate, and water. Through its programmes it coordinates the exchange of real time meteorological information between its 193 members and facilitates the capacity development of National Meteorological Services (NMSs) in developing countries through its Voluntary Cooperation Programme (VCP).
- EUMETNET
    - European Meteorological Services Network. An economic interest grouping of European Meteorological Services which organises cooperative programmes relating to surface observations and weather forecasting, to ensure cost-efficient, optimised, Europe-wide composite observing system. Based in Brussels, Belgium.
- ECOMET
    - Economic interest grouping of the National Meteorological Services of the European Economic Area. Operates and maintains an administrative framework to increase access to data and products throughout Europe (for ECOMET Members and 3rd parties). Based in Brussels, Belgium.

The PWS Assurance Group PAG 4 will scrutinise this theme and the Met Office should produce a report as outlined below.

Why is this a priority?

The National Capability underpins the PWS and weather services provided to a wide range of government departments as described above, providing accurate and timely observations and forecasts, and the means through which information is disseminated to users.

Without the national capability and international co-operation and commitments there would be no weather forecasts, the UK would not be able to provide the public or responders with information that will help them stay safe and thrive and the Met Office would not be able to fulfil their public task[2].

The services and outputs from this theme:

- Outputs essential to deliver PWS Services listed within the Annex to this CSA;
- Outputs that provide advice to multiple UK government departments to assist in the mitigation of weather-related risks within the National Risk Register;
- Outputs to Civil Aviation which are regulated by the Civil Aviation Authority (CAA) and which are required to perform to quality standards in accordance with the UK's international obligations, and additional national requirements as applicable;
- Capability essential to underpin outputs to UK government which enable multiple Departments to discharge their responsibilities in line with the UK's National Security Strategy;
- Capabilities that improve the quality of PWS services to meet performance levels required by the PWSCG in this CSA;
- Capability that exists as part of the Met Office's recognised role by the World Meteorological Organisation (WMO) as the UKs National Meteorological Service;
- Pull through of new capabilities running on the new supercomputer – in conjunction with partners;

A full list of services can be found in Annex A at the end of this document.

[2] The PWS Services and outputs of the National Capability which are listed within the Service Catalogue of this CSA form the Met Office Public Task.

PWSCG requirements for this theme:

The Met Office should focus on:

- Ensuring national capability is constantly developed and its outputs are pulled through from the science to the wide range of users, focussing improvements on accuracy for forecasts that matter most to the user, with a particular focus on precipitation and extreme temperatures, whilst recognising that improvements in the accuracy of all warnings is required to stay safe.
- Ensuring that forecast capabilities on the supercomputer are developed to deliver the performance gains which are reflected within this Customer Supplier Agreement. A new supercomputer with significantly greater capacity has been implemented in 2025 and will be followed by a second capacity upgrade, that will require implementation of a next generation modelling capability, pulling through improvements from the new supercomputer into improved accuracy, products, and services.
- Ensuring that the substantial increase in data volumes from the next supercomputer can be managed efficiently. Service continuity should also be maintained whilst transitioning to the new supercomputer.
- Evolve and life-cycle the UK observational network for the next generation of models, including observations from satellite, radar, surface (land and marine), upper air and from emerging novel sources (including exploiting the internet of things). This should be continuous to deliver the outcomes required through services and to ensure that the next generation models have access to the appropriate quantity and types of observations.
- Engaging with WMO, EUMETSAT, ECMWF, EUMETNET and the wider international community in line with UK Government policy and its priorities, in order to operate as a member of the global weather and climate community.
- Ensuring that absolute and relative verification capabilities are kept up to date and relevant to ensure that the Met Office can measure and report on the accuracy of forecasts as required.

Assurance will be provided through Assurance Reports to the PWS Assurance Group (PAG 4), further details can be found in Annex E.

3 Summary tables

Performance measures and deliverables in blue will be reported to and assured by the PWSCG Secretariat rather than the full customer group.

Performance measures and deliverables marked with an asterisk* will be used as indicators that the Met Office is delivering its responsibilities as a Category 2 responder

Theme 1 performance measures and deliverables

Performance measure	Metric	Rating Frequency
PM1.1 Deliver timely and accurate warnings to the public and responder community	**PM1.1a** Accuracy of warnings should be baseline 80%, verified by the Met Office and PWSCG (rolling 3-year average). 'Very Poor' guidance should constitute less than 20% warnings. * *N.B. Measure now includes additional timeliness threshold (developed under PMD1.1a)*	Monthly subjective verification meeting and RAG rating.
	PM1.1b Accuracy of warnings should be 82% from April 26. **PMD1.1b** Report performance of all yellow warnings issued for: • Storms named by the Met Office • Storms named by a different National Met Service that the Met Office would have named • All other high-impact yellows. Establish new baseline. **(March 26)** *Report to Secretariat*	
PM1.2 Ensure warnings reach as much of the UK population as possible	**PM1.2a** Awareness of amber and red warnings should be at least 80%, based on ad hoc surveys. **PM1.2c** Snow warnings should be at least 85%.	RAG ratings as surveys are available

PM1.3 Increase the usefulness of warnings in order to increase action and drive behaviour change	Through ad hoc public surveys, Amber / Red Warnings verified at the following levels: **PM1.3a** 'Useful' at least 85% **PM1.3c** 'Action taken' is at least 80%	
PM1.4 Maintain and develop the Met Office Civil Contingency Services	**PM1.4a** In biennial responder surveys, achieve 85% satisfaction with Civil Contingency Advisor (CCA) team. *	Biennial RAG rating, next survey to be undertaken February 2026

5 Year Outcome	**Objectives (in bold)**
Increase in quality and authority of warnings to the public and responder community All citizens and the responder community are provided with trusted, accurate and useful (timely, consistent, discoverable, innovative) forecasts, ensuring everyone makes better decisions to stay safe and thrive	**Ensure responders and the public continue to have high-levels of awareness of warnings and take appropriate action to stay safe:** **Yr 1&2** **D1.3f** Review terms and conditions associated with 3rd party use of warnings to ensure authoritative and attributed use. Implement any recommended changes. (**March 26)** *Report to Secretariat* **D1.3g** Create a 5-year vision and service design for warnings, considering external changes, optimal delivery channels, D1.3 recommendations, and responder user experience. **(March 27)** **Yr 3-5** **D1.3h** Implement the vision and service design across all components of the warnings service, including service delivery and communications. **(April 27 - March 30)**
Increase in quality and authority of warnings to	**Based on working in partnership across governments and their agencies, develop a refined and common warnings approach that aligns with user feedback (public and emergency responder) and developing Met Office capabilities.**

the public and responder community All citizens and the responder community are provided with trusted, accurate and useful (timely, consistent, discoverable, innovative) forecasts, ensuring everyone makes better decisions to stay safe and thrive	**Yr 1&2** **D1.7a** Identify opportunities with partners to align language, hazard matrices and communications **(October 25) *** **D1.7b** Display or communication of warnings for the Republic of Ireland alongside those for Northern Ireland on Met Office direct channels **(March 27)** *Report to Secretariat*
Increase in quality and authority of Met Office channels to the civil contingencies community Strengthen channels for the civil contingencies community, demonstrating thought leadership and innovation through high quality, compelling and trusted services	**Continuous development of civil contingency services to ensure our service offering is fit for the future:** **Yr 1 & 2** **D1.8e** Undertake essential Hazard Manager resilience improvements, removing a dependence on legacy technology **(March 27)** *Report to Secretariat* **D1.8f** Create a future vision and service design for Met Office civil contingency digital products and services for the UK, focusing on user needs, service coherence, and interoperability. **(March 27)** **Yr 3-5** **D1.8g** Implement service design for Met Office civil contingency digital products and services for the UK. **(March 29)**

Theme 2 performance measures, deliverables and reports

Performance measure	Metric	Rating Frequency
PM2.0 Improve the accuracy of forecasts, particularly improving the accuracy of extremes and precipitation	**PM2.0** Improve the actual accuracy and skill of forecasts that are available through web and app so that 31 out of 47 parameters are RAG rated green by **March 2026**: • Min and max temperature • 3-hourly temperature • 3-hourly wind speed • 3 hourly wind direction • Weather symbol for rain (1 drop and 2 drop) • Relative extremes (max and min temp, wind speed) • 3-hourly temperature via WOW • Civil aviation measures NB Each green RAG rating is based on an agreed threshold that represents a quantifiable improvement (thresholds are detailed in Annex B). There will be the option to review the thresholds once targets have been baselined. (See **PMD2.0b**.) **PMD2.0a** Implement new verification metrics for forecasts that are available through web and app for underlying gridded from radar measurements **(September 26)** **PMD2.0b** Baseline target for actual accuracy of forecasts for each of the forecast components of PM2.0 for implementation from April 26. **(March 26)** **PMD2.0c** Extend verification capability out to 14-days once forecasts are available to the public. **(September 26)**	6-monthly reporting at PAG2

Performance measure	Metric	Rating Frequency
	PMD2.0d Implement new verification metrics for forecasts that are available through web and app as follows: 1. Temporal consistency of data e.g. forecast flipflop (temperature, wind speed) (**March 26)** 2. Spatial consistency of forecast e.g. are stations close to each other reporting similar things, taking into account mountain impacts **(September 26)** *Once metrics are in place they will be baselined and included in the target for PM2.0 from April 27.*	
PM2.2 The Met Office should be accurate when compared to other weather providers.	**PM2.2** The Met Office ranks in the Top 3 reported weather providers for accuracy. (ForecastWatch)	Quarterly report
PM2.7 The public should perceive Met Office direct channels as accurate compared to other weather providers	**PM2.7b** The Met Office ranks in the Top 3 reported weather providers for perceptions of accuracy. (Consumer Accuracy Index)	Reported quarterly, as an average at end of year.
PM2.8 The public should perceive the Met Office as accurate	**PM2.8a** 'Fairly good", "very good" or "excellent"' by at least 92% of the UK public, based on Met Office specific score. (Prompted Question, Public Perception Survey)	Reported annually following survey.
R2.2 Improved accuracy and consistency	Deliver improvements to actual accuracy of forecasts based on the Met Office Roadmap.	Annual report at PAG2 each March.
R2.3 Improved accuracy and consistency	Deliver improvements to consistency of forecasts based on the Met Office Roadmap.	Annual report at PAG2 each March.

Performance measure	Metric	Rating Frequency
R2.4 Improved accuracy and consistency	Improve accuracy by integrating ML model data into weather forecasts where appropriate.	Annual report at PAG2 each March.

5 Year Outcome	Objectives (in bold)
Improvements in forecast accuracy available to all UK citizens, to help them make better decisions to stay safe and thrive. All UK citizens are provided with improved accuracy and consistency to help them make better decisions, when the weather really matters to them.	**Improve accuracy of forecasts provided through Met Office Direct and Indirect Channels aimed at a Thriving UK** **Yr 1&2** **D2.3b** Deliver 14-day forecast data to web & app, demonstrating new ways of visualising the data and explore user requirements for exposing the same data via appropriate data platform for reuse. **(March 26)**

Theme 3 performance measures, deliverables and reports

Performance measure	Metric	Rating Frequency
PM3.9 Increase trust and engagement with the Met Office through direct and indirect channels	**PM3.9** Improve trust and engagement with the Met Office so that 4 out of 6 components of the engagement dashboard are RAG-rated green. *There will be the option to review the framework if needed during this first year of implementation to ensure it is providing useful insight.*	Monthly RAG rating

5 Year Outcome	Objectives
Increase in thought leadership and innovation applied to high quality, compelling and trusted direct channels Strengthen Met Office direct channels, through pulling-through new science capabilities and demonstrating new ways to communicate the weather story to the UK.	**Continuous development of Direct Channels including new features to enable greater use of content and the ability to target segments of users whilst maintaining high usability standards required by public digital services.** **Yr 1&2** **D3.4** "Telling the weather story." Develop direct channels to improve our story telling ability and the consistency of the weather story across channels. **(March 26)** *Report to Secretariat*
	Implementation of the web and app strategy to ensure we remain innovative and thought leaders in this area, with the idea of consolidating the metoffice.gov.uk offering to become the front door for Met Office services: **Yr 1&2** **D3.5a** Deliver a new app and remove old app from app stores **(March 2026)** **D3.5b** Implement app and web strategy and roadmaps, providing quarterly updates to the Secretariat (and wider customer group as required) on delivery schedule. **(March 27)** **Yr 3-5** **D3.5c** Continuous development of direct channels in line with the web and app strategy. **(March 28)**

5 Year Outcome	Objectives
	Continuous delivery of a high-quality social media presence that builds public engagement, as well as improves our ability to tell the weather story and build weather literacy **Yr1&2** **D3.5d** Deliver a 'social media plan on a page' that outlines each social channel's purpose and use, the continuous evolution of the Met Office's social media strategy and embeds best practice. **(March 26)**
Increased levels of citizen engagement with attributed Met Office information through indirect channels Ensuring Met Office data and information is used by the wider weather market.	**Continuous Development of the Public Weather Media Service (PWMS) to ensure our offering is fit for new customers and the future.** **Yr 1 & 2** **D3.6f** Agree product lifecycle plan including self-briefing tool, data, guidance products and visualisation enhancements to ensure PWMS remains attractive to media customers. Launch initial scope private beta of consolidated briefing service as an interim measure **(September 25)** **Yr 3-5** **D3.6h** Continue to enhance PWMS package particularly as customers and users migrate to digital, and internally we transition to new tools, systems & operating models. **(September 28)**

5 Year Outcome	Objectives
Expand the range of content available to citizens through direct and increasingly indirect channels. Ensuring timely, trusted and useful content is available through all the channels people use to access weather information.	**Boost public engagement with Met Office content through improved production, distribution, storytelling, and public literacy on weather extremes.** **Yr 1 & 2** **D3.7c** Implement phase 2 of the content roadmap (D3.7a). **(March 26)** *Report to Secretariat*
Increase public trust in the Met Office for weather and climate. Met Office is the recognised engine and trusted source of weather and climate in the UK.	**Maintain the Met Office's reputation as the UK's most trusted weather brand by promoting its capabilities, expertise, value and impact to build customer preference.** **Yr 1&2** **D3.9a** Strengthen approach to reputation management, to address increasing amounts of external critique of the Met Office. **(March 26)** **D3.9b** Embed a robust approach to tackle increasing amounts of weather and climate misinformation**. (March 26)** **D3.9c** Deliver a brand positioning campaign that increases public and stakeholder understanding of the value and impact of the Met Office and enhances its brand positioning (specifically in relation to technological innovation). **6 monthly updates with campaign completed by (March 26)** **D3.9d** Raise targeted public awareness of the unique role that the Met Office plans in the UK weather industry, and the range of places that they can access weather information. **(October 25)**

Annex A: Products and Services Catalogue

List of all the products and services that constitute the Met Office Public Task. Some of these products and services are not directly mentioned in the CSA but are included here for completeness.

All products and services are delivered against at least one of the Theme aims and are included only once in the below summary under the Theme they are most aligned to. However, please note that some products and services do contribute to the success of more than one Theme.

Theme Products and Services

An asterisk (*) denotes products and services associated with Met Office Cat 2 responsibilities.

Theme 1 – Weather forecasts and warnings when it matters – Stay Safe	
UK	
Services	Civil Contingency Advisors* Hazard Manager* NSWWS [National Severe Weather Warning Service] (service) – includes supporting communications, engagement, and education provision.* Avalanche support services Gov e-mail Delivery Expert Weather Hub guidance services (UK Operational forecast expertise)
Products	NSWWS (product) Daily Hazard Assessment Short notice warnings CHEMET (Area and Plume forecast for hazardous chemical releases) Three-month Outlook
International	
Services	RSMC (Regional Specialist Met Centre) – allocated by WMO for Atmospheric Transportation Modelling Services CTBTO [Comprehensive Nuclear Test Ban Treaty Organisation] (dispersion modelling) Meteoalarm (European warnings information service) Atmospheric pollution service Advice to Government Hurricane Season Forecasts Crisis Area Modelling International support services (briefing to UK government) Global Guidance Unit Services (GGU) (Global Operational forecast expertise)
Products	Global Long-Range Outlook (Produced by Science) Global daily weather impact assessment Global incident forecasts International atmospheric pollution services Severe weather assessments

Theme 2 – Weather forecasts and warnings everyday - thrive	
Services	Met Office Website Met Office Mobile Apps Met Office Mobile Widget Alexa skill and Flash briefing
Products	7-day site specific and mapped forecasts across the UK

	Operational Forecasts • National and Regional video forecasts • Text forecasts • Weather forecast charts Weather related website and App content (text chart and video) Pollen forecasts (5-day pollen forecast service March-October) Mountain forecasts Beach forecasts UK event forecasts UK climate information UV forecasts Current Observations, including radar, satellite and surface based Historical Observations

Theme 3 – Maintaining an authoritative voice – recognised as world leaders in weather and climate services.	
Services	New and Emerging channels Social Media Channels Management Weather Desk (Met Office 24hr helpdesk) National Meteorological Library and Archive (digital and analogue archives) Public Weather Media Service (PWMS) Presenter Visual Cortex licence and support (with 3rd party funding) Design Services Press Office Communications and weather campaigns Syndication services Marketing and market intelligence Schools Programme of services
Products	Bespoke Graphics Production Media Briefings from specialists (media services team and others) Briefings and scripts Downloadable weather-related curriculum for 7-14 year olds
Data Services	Weather DataHub (Link here) Datapoint (deprecated to be decommissioned) (Link here) Data Provisioning (PSI re-use data catalogue) (Link here) Weather observations Website (WOW) (Link here)

Theme 4: National capability and international commitments - recognised as global leaders in weather and climate science

Reports from Technical Services (Observations), Science, Operational Technology, International Commitments and Finance are provided to the PAG for assurance purposes, giving detail on the performance of service delivery and progress made in development activities which contribute to the lifecycle plans of products and services detailed above under themes 1 to 3.

Observations, Science and Technology capabilities listed within tables below undergo regular life-cycling which includes transformation to cloud based technologies. Tables will be refreshed annually and may not precisely reflect the latest configuration of underpinning capabilities.

Technical Services (Observations)	Global satellite reception UK radar network UK land observations UK upper air observations Marine observations (Buoys, Voluntary observing ships, Argo Floats) Lightning observations UK AMDAR (Aircraft Meteorological Data Relay) WOW observations (Weather Observations Website) (Also included above in Theme 3) European and Global observations – exchange and collaborations Spectrum and Safeguarding Observations data quality control Climate Observations Historical Data
Science	**Forecast Models** *Atmospheric NWP* Global Model Deterministic UK Model Deterministic Local Area Model London Global Ensemble UK Ensemble *Atmospheric – Extended range* Met Office Global Seasonal Forecasting System – Monthly (with 3rd party funding) Met Office Global Seasonal Forecasting System – Seasonal (with 3rd party funding) Met Office Global Seasonal Forecasting System – Hindcast (with 3rd party funding) (Data available for re-use through Copernicus – link here) *Dispersion Models* NAME (Numerical Atmospheric Dispersion Modelling Environment) (Supports Theme 1 CHEMET, RSMC and CTBTO services) UK Air Quality Unified Model (UK AQUM) *Marine Models* Global Wave Model UK Wave Model Atlantic Wave Model Ensemble OSTIA Foundation Sea Surface Temperature and Sea Ice Analysis Global Forecasting Ocean Assimilation Model (Global FOAM) North West Shelf Seas Forecasting Ocean Assimilation Model European Shelf Seas (AMM15) (with 3rd party funding) UK surge model UK surge ensemble model Global Ocean (with 3rd party funding) *Science Capability* Atmospheric model evaluation & development Atmospheric physics & parameterisations Data Assimilation Satellite applications Verification (capabilities and outputs) Dynamics research

	Post processing (Gridded, Site specific, climatological record) Impact modelling Observation based research Observations systems research Weather Science IT Informatics Atmospheric dispersion Science partnerships Ocean forecasting Climate science IT Climate monitoring & attribution *Other Centres - ECMWF* European Centre for Medium Range Weather Forecasting (ECMWF) - Global Deterministic Model, - Global Ensemble Model, - Monthly - Seasonal
Technology	**Technology** Supercomputing (HPC Exeter, HPC ECMWF) Other Compute (Physical, Virtual, Container, Function) Hosting (On Premise, Public Cloud) Storage (Object, Block, File System) Connectivity (LAN, WAN, Internet, Partner) *Technology Applications* Platform Engineering (Databases, IDAM, Machine Learning etc) Software Development (Design, Build, Test, Integrate, Deploy) Application Lifecycle Management (On-Board, Configuration, Customisation, Retirement) IT Service Management (Design, Transition, Operation, Improvement, Retirement) *Data* Data Transport (Data Transfer, Data Traffic Management) Data Management (Common Reference, Common Metadata, Data Catalogue, Common Functions) Data Platform (Data Services, Data Pipelines, Data Lake, Interactive Data Environments) Data Supply (Observation, Simulation, Standardise, Post-Processing, Productise, Supply) *Data Science (Data Science Research)*

International Commitments	World Meteorological Organisation (WMO) European Centre for Medium-Range weather forecasts (ECMWF) European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) EUMETNET (network of 31 European National Met Services) WMO Voluntary Co-operation Programme (VCP) European Economic Interest Group (ECOMET)

Annex B: PM2.0 Accuracy Thresholds

The numbers highlighted in green through this document show the target scores for March 2026 for PM2.0.

PM2.0 Improve the actual accuracy and skill of forecasts that are available through web and app so that 31 out of 47 parameters are RAG rated green by **March 2026**:

- Min and max temperature
- 3-hourly temperature
- 3-hourly wind speed
- 3 hourly wind direction
- Weather symbol for rain (1 drop and 2 drop)
- Relative extremes (max and min temp, wind speed)
- 3-hourly temperature via WOW
- Civil aviation measures.

1) Verification percentages based on last 36-month performance

These represent how often each meteorological element is 'correct'. For example, an 80% score means the forecast is right 80% of the time.

Green – March 2026 36-month score shows long term improvement in the accuracy of this parameter (exceeds March 2023 score).
Amber – March 2026 36-month score lies within tolerance band (doesn't exceed but no more than 1% below March 2023 performance level).
Red – March 2026 36-month measure shows long-term deterioration in the accuracy of this parameter (score more than 1% below March 2023 score).

	Day 1	Day 3	Day 5	Day 7
Min Temp (% correct within 2C)	88.3	78.3	66.6	57.9
Max Temp (% correct within 2C)	96.2	89.7	80.8	71.0
3-hourly Temp (% correct within 2C)	95.4	88.5	78.6	67.8
3-hourly Wind speed	94.6	89.4	82.9	77.2
3-hourly Wind direction	87.9	77.4	60.2	43.0

2) Rainfall symbol

Green – March 2026 12-month score shows improvement in the accuracy of this parameter (exceeds March 2025 score).
Amber – March 2026 12-month score lies within tolerance band (doesn't exceed but no less than 3% compared to March 2025 score).
Red – March 2026 12-month measure shows long-term deterioration in the accuracy of this parameter (score more than 3% below March 2025 score).

	Day 1	Day 3	Day 5
% times when 1-drop rain forecast, and rain observed (HIT)	69.6	65.0	54.5

% times when 1-drop rain forecast, and no rain observed (FALSE ALARM – lower better)	7.1	10.5	13.3
% times when 2-drop rain forecast, and heavy rain observed (HIT HEAVY)	64.7	57.4	42.5
% times when 2-drop rain forecast, and no rain observed (FALSE ALARM, heavy rain forecast, and it was dry – lower better)	2.5	2.8	3.0

3) Relative Extremes

Green – March 2026 12-month score shows improvement in the accuracy of this parameter. (exceeds March 2025 score).
Amber – March 2026 12-month score lies within tolerance band (doesn't exceed but no less than 10% compared to March 2025 score).
Red – March 2026 12-month measure shows long-term deterioration in the accuracy of this parameter (score more than 10% below March 2025 score).

	Day 1	Day 3	Day 5
Max temperature – % skill against climatology	35.3	20.9	9.9
Min temperature– % skill against climatology	6.8	2.6	N/A
Wind speed– % skill against climatology	16.2	9.1	5.2

4) Temperature at citizen observation stations (WOW scores)

Green – March 2026 12-month score shows skill in this parameter compared to the score from previous post processing system (difference between scores exceeds 0).
Amber – March 2026 12-month score lies within tolerance band (difference between scores doesn't exceed but no less than -0.5).
Red – March 2026 12-month measure shows deterioration in the accuracy of this parameter compared to the score from the previous post-processing system (score difference is <-0.5).

	Day 1	Day 3	Day 5
Temperature (3 hourly)	>0	>0	>0

5) CAA measures

Green – March 2026 36-month score shows skill (>0)
Red – March 2026 36-month score has no skill (<0)

	March 25	**March 26**
Visibility at 1000m – 24 hr skill against reference score	0.0548	Target > 0
Visibility at 500m – 24 hr skill against reference score	0.0024	Target > 0
Cloud base height at 100m – 24 hr skill against reference score	0.0828	Target > 0
Cloud base height at 50m – 24 hr skill against reference score	-0.5328	Target > 0

Annex C: Use of the National Capability by sector

The National Capability provided by the Met Office is not just used for PWS products and services. As can be seen in the table below, it is used in a wide range of other areas. Any change or cut to National Capability therefore will have impacts on other products and services provided by the Met Office. This table will be kept under review and will be updated annually.

Attribute	UK Defence	International Defence	Hydrology	Civil Aviation (Regulated)	Marine (Regulated)	Civil Contingencies	UK Media	UK Direct Reach	International Development
Model Types									
Atmospheric (incl. post processing)	Extensive	Extensive	Extensive	Extensive	Extensive	Extensive	Extensive	Extensive	Extensive
Marine	Extensive[4]	Extensive	Extensive	Extensive	Extensive	Occasional	Occasional	Limited	Limited
Dispersion	Occasional	Occasional	Occasional	Occasional	Occasional	Occasional	-	-	-
Air Quality	-	-	Limited	-	-	Occasional	Occasional	Limited	-
Forecast Range[1]									
Nowcasting	Extensive	Extensive	Extensive	Extensive	Extensive	Extensive	Extensive	Extensive	-
Short-range	Extensive	Extensive	Extensive	Extensive	Extensive	Extensive	Extensive	Extensive	Limited
Medium-range	Extensive	Extensive	Limited	Occasional	Limited	Extensive	Extensive	Extensive	Limited
Long-range	Limited[5]	-	Occasional	Limited	-	Occasional	Occasional	Limited	Limited
Seasonal	Limited	-	Occasional	Limited	-	Occasional	-	Limited	Limited
Deterministic/Ensemble									
Deterministic	Extensive	Extensive	Extensive	Extensive	Extensive	Extensive	Extensive	Extensive	Extensive
Ensemble	Limited	Limited	Extensive	Extensive	-	Limited	Limited	Limited	Limited
Domain (Model types)									
Global	-	Extensive	-	Extensive	Extensive[3]	Occasional	Extensive	Limited	Extensive
UK	Extensive	Limited	Extensive	Extensive	Extensive	Extensive	Extensive	Extensive	Limited
Regional	Extensive - Custom	Limited	-	Limited	-	-	-	-	Extensive
Guidance									
UK	Extensive	-	Extensive	Extensive	Extensive	Extensive	Extensive	-	Limited
Global	Extensive	-	-	Occasional	-	Occasional	Occasional	-	Extensive
Observations (Direct use)[2]									
UK land surface	Extensive	Extensive	Extensive	Extensive	Limited	Extensive	Extensive	Extensive	Occasional
UK radar	Extensive	Extensive	Extensive	Extensive	Limited	Extensive	Extensive	Extensive	Occasional
UK marine	Extensive	Extensive	Extensive	Limited	Extensive	Occasional	Occasional	Limited	-
UK upper air	Extensive	Extensive	-	Extensive	Limited	Occasional	Occasional	-	-
Global	Extensive	Extensive	-	Extensive	Limited	Occasional	Occasional	Limited	Extensive

Required performance level is documented for key outputs?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dependent custom capabilities used by sector	Yes CAMs Tropical Africa 4km TDAs Visual Weather	Yes CAMs (Limited) TDAs Tropical Africa 4km CDA components Visual Weather	Yes Surge Models	Yes Custom diagnostics	Yes Custom diagnostics	Yes Impact	Yes Visual Cortex	No	Yes Tropical Africa 4km Tropical Cyclone tracking

National Capability Glossary

Extensive – Capability is used semi-continuously (in time) and comprehensively (in scope)

Limited – Capability is used regularly, though limited in scope.

Occasional – Capability is used irregularly, perhaps responding to specific events (e.g. volcanic eruption), though may be used comprehensively (in scope).

Custom [Capability] – Capability has a clear dependency upon the outputs or capabilities of the National Capability but use by other sectors is either restricted or isn't required due to bespoke characteristics

'-' – Indicates no current usage of capability

[1] Nowcasting: 0 to 6 hrs, short-range: 6hrs to 7 days, medium-range: 7 days to 15 days, long-range: 15 days to 30 days, seasonal: 1 to 6 months

[2]Direct use includes visualisation, within products & services, interpretation & use by meteorologists, use within climate records and verification of outputs. It excludes in-direct use within models via data assimilation

[3]Regulated marine products issued under the SOLAS Convention, cover a domain out to 35 deg. W

[4]Includes use of FOAM, global & regional ocean models and Shelf-Seas Model

[5]Includes use of ECMWF to T+368

Annex D: Glossary and Terms of Expression

Accuracy	There are three types of accuracy typically referred to by the Met Office. **Actual accuracy** represents how well the weather forecast at a particular location represents the true weather conditions observed at that location. **Perceptions of accuracy** represents how accurate Met Office users/customers believe the forecast(s) to be, based on feedback from market research. **Comparative accuracy** refers to how accurate the Met Office is compared to other weather providers, and this can be judged via actual accuracy measures or and perceived accuracy measures. However, the definitive comparison is based on actual accuracy.
Ad hoc surveys following severe weather	The Met Office commission surveys a number of times each year in consultation with the PWSCG Secretariat after the issuing of an amber or red warning. The surveys aim to monitor the awareness and usefulness of the warnings and establish any actions taken by the public as a result. Up to 6 surveys are carried out per year.
Artificial Intelligence	Artificial intelligence (AI) describes computer systems which can perform tasks usually requiring human intelligence. In the context of the CSA this could be related to improvements to weather forecasting capability brought about by AI.
Authoritative voice	The term **'authoritative voice'** is being used here as a general term to describe the Met Office as a trusted, expert service provider that partners choose to use. It should be noted that across the international meteorological community it is used for a more specific purpose, to describe the NMHS responsibilities for delivering non-discretionary services that provide safety of life services – such as NSWWS for example. It's a concept designed to guard against contradictory warnings in serious weather situations. Work is currently underway in the Met Office to better define the different uses of the term authoritative voice and this will be shared with the PWS Customer Group when it becomes available.
CAA	**Civil Aviation Authority** is a DfT agency and the UK's specialist aviation regulator
CAI	**Consumer Accuracy Index** is an output measure from the Perceptions of Accuracy Omnibus survey which helps the Met Office to understand and monitor the drivers of consumer accuracy ratings amongst weather service users.
Channels	**Direct channel:** Met Office provides content or services directly to the public and where the public are interacting directly with the Met Office. *E.g. Met Office website, Met Office app, Met Office weather desk, Met Office social media ** *Met Office social media really is a 'rented channel', e.g. through Facebook or Twitter, as the Met Office do not own the platform. However, it is included in direct as the public feel that they are interacting personally with the Met Office. **Indirect channel:** Met Office provides weather services to an intermediary, who then pass this on to the public. It may go through more than one intermediary and the initial content from the Met Office may change as it passes through an intermediary. *E.g. Public Weather Media Service and broadcast media, data services, content syndication, Met Office for Schools programme.*
CSA	**Customer Supplier Agreement –** the document which sets out what products and services the Public Weather Service will provide, which form the basis of the Met Office's Public Task. The CSA defines the key performance measures that will ensure PWS is being delivered to the required standard and deliverables that will need to be reached in order to ensure the ongoing development of the PWS.
DHA	**Daily Hazards Assessment** is a provided by the Natural Hazards Partnership, and is an 'at a glance' overview of potential natural hazards and health implications that could affect the UK over the next 5 days. It provides a hazards summary to help increase UK's ability to respond to and be prepared for multi-hazard events.

D	**Deliverables** are pieces of work designed to make improvements to PWS services. Deliverables are defined within the CSA and assessed for delivery. Note - Each deliverable has a unique identifier so that they can be tracked through the course of the CSA – therefore may not be seen in the CSA in sequence, however are tracked by the Secretariat.
EA	**Environment Agency** a Department for Environment, Food & Rural Affairs body which works to create better places for people and wildlife, and support sustainable development, and is responsible for flood warnings in England
ECMWF	**European Centre for Medium-range Weather Forecasts** a non-EU intergovernmental treaty organisation hosted in the UK. It is both a research institute and a 24/7 operational service producing & disseminating medium range numerical weather predictions to its Member States.
ECOMET	An economic interest grouping of European Meteorological Services which operates and maintains an administrative framework to increase access to data and products throughout Europe (for ECOMET Members and 3rd parties). Based in Brussels, Belgium.
Emergency responder survey	The Emergency responder survey is carried out by the Met Office every 2 years to get feedback from the responder community on Met Office services.
Emergency Responder workshops	The Met Office and PWSCG run workshops with the responder community, when appropriate, to test the effectiveness of the current service offer and to inform where changes and improvements to the service could be made in the future.
Engine	The Met Office should be the ***Recognised Engine*** or understood by the public to be the strong influence on the UK weather forecast.
EUMETNET	A non-EU grouping of 31 European National Meteorological Services that provides a framework to organise co-operative programmes between its Members in the various fields of basic meteorological activities
EUMETSAT	The **European Organisation for the Exploitation of Meteorological Satellites** (EUMETSAT) a non-EU intergovernmental treaty organisation responsible for the launch and operation of European weather satellites and delivering satellite data to National Met Services.
Hadley Centre for Climate Science and Services	The Met Office Hadley Centre — named in honour of George Hadley — is one of the United Kingdom's leading centres for the study of scientific issues associated with climate change. It is part of, and based at the headquarters of the Met Office in Exeter. See also (MO)HCCP.
Heatwave	A **heatwave** is an extended period of hot weather relative to the expected conditions of the area at that time of year, which may be accompanied by high humidity. A UK heatwave threshold is met when a location records a period of at least three consecutive days with daily maximum temperatures meeting or exceeding the heatwave temperature threshold. The threshold varies by UK county and can be found on the Met Office website here.
Extreme Heat Warning	**The Extreme Heat Warning** is an impact-based warning designed to highlight the potential impacts of extreme heat to protect lives and property, helping people make better decisions to stay safe and thrive. These are UK wide impact-based warnings, with medium or high likelihood of medium or high-level impacts to transport, energy supply and other areas as well as health (i.e. amber or red warnings), will be distinct from the heatwave definition and heat health alerts described above, and cover impacts to the general population (not just the vulnerable) and to infrastructure.
HPC	**High Performance Computer** or supercomputer
MARG	**Media & Reach Group** - a sub-group of PWSCG with the mandate to provide assurance to the Chair of the PWSCG in the following areas. The outputs of the Public Weather Service provide adequate 'reach' to help demonstrate value for money for PWS. There is consistency in the delivered message of those outputs across the various media channels. The Public Weather Media Service (PWMS) is operating in a way that meets the needs of the broadcasters using it.
MCA	**Maritime & Coastguard Agency –** an Executive Agency of the Department for Transport, which works to prevent the loss of life on the coast and at sea.

MOB	**Met Office Board -** The main role of the Met Office Board ("the Board") is to support, constructively challenge and provide leadership to the Executive Board, including the Accounting Officer. It should also ensure that the Met Office is working within a framework of prudent and effective governance arrangements and controls which enable risk to be appropriately assessed and managed.
(MO)HCCP	**(Met Office) Hadley Centre Climate Programme -** a programme of work which develops core UK climate science infrastructure and serves the needs of the UK Government by providing policy-relevant scientific evidence and advice in the post-Paris context.
MOSAC	The **Met Office Scientific Advisory Committee** (MOSAC) a committee of external independent experts which reviews the Met Office's science programmes annually and raises any scientific concerns in relation to the ability of the Met Office's research plans to meet its customer's requirements and its own strategic aims.
NHP	**Natural Hazard Partnership** is a collaboration between UK public bodies to provide authoritative, consistent, and useful, hazard, impact and risk assessment information to responder communities and governments.
National Capability	**National Capability** comprises the essential observations, *common* forecast capabilities and infrastructure that underpin all Met Office weather services for PWS and wider UK Government.
NMS	**National Met Service** an organisation whose mission is to observe, understand and predict the weather and climate of its country and to provide meteorological and related services in support of its national needs and international obligations. It thus involves an essentially five-fold mission of monitoring, research, modelling, service provision and international co-operation.
NRR	The **National Risk Register** describes the risks of major emergencies that could affect the UK in the next five years and provides resilience advice and guidance. This is the public facing version of the NSRA
NRW	**Natural Resources Wales** is a Welsh Government sponsored body, which aims to pursue sustainable management of natural resources in Wales and is responsible for flood warnings in Wales.
NSAG	**National Security Advisory Group**
NSRA	**National Security Risk Assessment** is designed to compare, assess and prioritise all major disruptive risks to the UKs national security.
NSWWS	**National Severe Weather Warning Service** is a service provided by the Met Office in the United Kingdom. The purpose of this service is to warn the public and emergency responders of severe or hazardous weather which has the potential to cause danger to life or widespread disruption.
NSWWS survey	An **NSWWS survey** is an online survey following severe weather events with Emergency Responders. They are commissioned when required.
PAG	**Public Weather Service Assurance Group** - a sub-group of Public Weather Service Customer Group which provides additional scrutiny of each theme of the CSA and provide assurance of the financial management of PWS funds by the Met Office.
PM	**Performance Measures** are metrics used to assess PWS performance during the year, as defined by the CSA. Note - Each performance measure has a unique identifier so that they can be tracked through the course of the CSA – therefore may not be seen in the CSA in sequence, however are tracked by the Secretariat.
PMD	**Performance Measure Deliverables** require the Met Office to complete a body of work to support the Performance Measure. Note - Each performance measure deliverable has a unique identifier so that they can be tracked through the course of the CSA – therefore may not be seen in the CSA in sequence, however are tracked by the Secretariat.
Perceptions of Accuracy Omnibus	The **Perceptions of Accuracy Omnibus** survey is performed to understand and monitor the drivers of accuracy amongst the Met Office and other weather service providers. Output is a Customer Accuracy Indicator.

PPS	The **Public Perception Survey** is commissioned annually by the Met Office (usually in the autumn) with the aim of assessing the satisfaction levels of the general public in respect of the weather forecasts generally and the services provided by PWS.
Public Sector Information	**Public Sector Information** means information produced, held or disseminated by the Met Office within its Public Task and in scope of the Re-Use of Public Sector Information Regulations 2015.
Public Task	**Public Task** means the delivery of the PWS Outputs, which the Met Office is empowered to deliver pursuant to the Meteorological Office Trading Fund Order 1996 No. 774 (as amended).
PWS	The **Public Weather Service** for the UK as set out in Section 2.
PWS Outputs	The deliverables for the PWS as set out in the Products and Services Catalogue at Annex A of Section 2.
PWMS	The **Public Weather Media Service** is a package of free (under licence) UK weather services, for eligible UK Broadcasters who sign up to the service, which is delivered by media-specialist Met Office forecasters. It provides Broadcasters with Met Office public weather service information for the UK (forecasts, weather warnings, observations, guidance, scripts and services), tailored for Broadcast media.
PWSCG	**Public Weather Service Customer Group –** acts as customer on behalf of the public and public sector users of the Public weather Service. Chair is a Ministerial appointment, membership includes an independent member (receives an honorarium from DSIT) to represent the views of the public, representatives from the emergency response community, the Devolved Administrations and Departmental and Arms Length Body users of the PWS.
Reach	**Met Office Reach** The number of people who see Met Office information or accesses its products or services via direct or indirect channels. Strongly branded Met Office reach through Met Office owned channels direct to the public. **Indirect reach:** Branded reach of Met Office forecasts of information achieved via a partner or 3rd party. Information provided through a partner has a limited degree of intervention between the information leaving the Met Office and it arriving with the general public due to an agreement with the partner, and includes branded content. Information provided through a third party could be Met Office attributed and the Met Office has less control of the final message. **Indirect non-attributed reach**: Reach of Met Office data and presented via a third party, not attributed to or branded Met Office. Data often blended with other types of data.
Share of Claimed Usage	The Met Office's claimed share of usage is a statistic derived from Public Perception Survey responses about where and how often people access weather forecasts, which provides an indication of the most used sources of everyday weather information in the UK.
SEPA	**Scottish Environment Protection Agency** is Scotland's principal environmental regulator, protecting and improving Scotland's environment and is responsible for flood warnings in Scotland.
Thought Leadership	The Met Office should show that based on its experience and industry perspective, offers unique guidance, inspires innovation and influences other others.
Trust	Trust is a general brand perception measure. **Brand trust is defined as the willingness of the average consumer to rely on the ability of the brand to perform its stated function** (Journal of Global Strategic Management) The Met Office measures its trust score via its quarterly trust tracker survey via the following question: The Met Office is the UK's national meteorological service. It provides a range of weather and climate services for the public, governments and businesses. To what extent do you trust the Met Office in general?
UKHSA	**UK Health Security Agency** which exists to protect and improve the nation's health and wellbeing, and reduce health inequalities**.**
Useful	Useful is a basket term to include **discoverable, accurate, consistent** and **timely.**

Weather-Health Alert System	A Weather-Health alert system[3] is run by UKHSA in partnership with the Met Office. The heat-health alert (HHA) operates from 1 June to 30 September and the cold-health alert (CHA) operates from 1 November to 30 March. Both systems are based on the Met Office forecasts and data. Depending on the level of alert, a response will be triggered to communicate the risk to the NHS England, government, and public health system. Advice and information for the public and health and social care professionals, particularly those working with at-risk groups. This includes both general preparation for hot or cold weather and more specific advice when a severe heatwave or cold weather has been forecast
WDH	**Weather DataHub** service offers access to detailed and customisable weather data. This API data channel will ultimately become the single point of access for all Met Office Public Task weather data, replacing both Met Office DataPoint and Wholesale Data Services.
WMO	**World Meteorological Organisation** – the specialised agency of the United Nations for meteorology (weather and climate), operational hydrology and related geophysical sciences. It is an intergovernmental organization with a membership of 193 Member States and Territories.

Annex E: PWS Reporting and Assurance

A high level of assurance is required by the PWSCG to ensure that services are provided to agreed standards. Performance Measures (PMs) and Deliverables (Ds) are used to define performance in the CSA. Governance mechanisms as outlined below will be used to review progress in delivering the PWS PMs and Deliverables and ensure that they undergo the appropriate scrutiny. Monthly performance review meetings will be used to monitor performance during the year, with summaries presented to the appropriate PWS Assurance Group (PAG). The end of year sign-off process is completed based on criteria described below.

Monthly Performance Review Meetings

This meeting is conducted on a monthly basis and is attended by the DSIT PWSCG Secretariat and Met Office. The purpose of the meeting is for the Met Office to update the PWSCG Secretariat on current performance relating to the PMs and Deliverables. A performance report will be provided by the Met Office ahead of the meeting which includes a RAG (Red-Amber-Green) status for each activity. Stretch targets will not be scored as part of the RAG rating assessment. Other items which may have an implication for the Public Weather Service will also be raised by either party at the meeting. The meetings are timetabled by the Met Office and they will produce a short record of the meeting.

If a PM or Deliverable is rated as red for two consecutive months and the Met Office cannot provide sufficient assurance that the PM/Deliverable is likely to return to green or amber in month three, the PWSCG Secretariat may request that the Met Office write an Improvement Plan for that PM/Deliverable. The Chair of PWSCG will be notified and the Improvement Plan will be shared with the Chair and at relevant PAG meetings as appropriate.

NSWWS Assessment Meetings

This meeting is conducted on a monthly basis if there have been any notable weather events within the preceding month for which a NSWWS has been issued, or for which evidence suggests that an event may have been missed. The meeting will be attended by the PWSCG Secretariat, a Met Office Civil Contingencies Advisor and a Met Office Senior Civil Contingencies Advisor. This purpose of the meeting is to subjectively

[3] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1153477/User-Guide-impact-based-weather-and-health-alerting-system.pdf

assess the performance of each Amber and Red (and by exception, Yellow) NSWWS warning by reviewing a broad evidence base of impact information collated by the PWSCG Secretariat and the Met Office.

This performance measure acts as a target of the accuracy of PWS severe weather warnings (PM1.1a) and helps to ensure that the quality of NSWWS guidance is being continually improved.

All warnings provide:

1. An assessment of the impact level expected
2. An assessment of the area at risk from these impacts
3. A validity time during which we expect to see these impacts become apparent.
4. An assessment of the timeliness (notice period) of the warnings

All four of these parameters will be assessed and measured for "accuracy", with particular emphasis given to assessment of impact level. The three questions to be answered become:

1. Were the impact levels as predicted?
2. Did the warning's area at risk accurately convey where these impacts occurred?
3. Did the warning's validity time accurately convey when these impacts occurred?
4. Was adequate notice provided ahead of the warning validity time?

In addition, the assessment should consider feedback from responders and the public, including ad-hoc surveys, storm naming, if any.

As a result of this assessment the warning will be placed in one of four categories:

- **Excellent Guidance**: The impacts, area, and validity time of the warning were closely in line with what was observed, and the warning was issued in good time before the onset of the event.
- **Good Guidance**: The warning was of use to responders and the public, but could have provided more accuracy or usefulness in terms of impact levels, area covered, validity time and/or timeliness of issue.
- **Poor Guidance**: A warning was issued, but it was either issued too late after the onset of the event, or the impact levels, area and/or validity time were significantly different to those observed so that the warning was of limited use to responders and the public.
- **Very Poor Guidance**: A missed warning or false alarm, i.e. either at least medium impacts were observed without any warning being in place, or a warning was in place but no impacts were observed.

Evidence will be logged to support the assessment using the range of information available. This evidence will be presented to the PWSCG Secretariat at the monthly NSWWS Assessment Meetings where agreement is reached about the quality of the warnings. Should there by disagreement, either party may request for the decision to be reviewed by either the Cabinet Office, Scottish Government, Welsh Assembly or Northern Ireland Assembly representative on the PWSCG, as appropriate. The result of this review shall be final. The outcomes from the assessment meeting will form the PM1.1a (Warnings Accuracy) performance measure.

PWS Assurance Groups (PAGs)

PAG 1 – Stay safe

PAG 1 will assure the metrics and deliverables for theme 1. Including assessment of the National Severe Weather Warning Service (NSWWS) and Civil Contingency Services. This will include going through any Ad-Hoc and responder survey results. The group will also assess and make recommendations regarding updates to deliverables and metrics for the yearly CSA update.

As this theme is such a fundamental part of the performance of the Met Office, all members of the PWSCG will be involved in this assurance. For this reason, assurance of the deliverables and metrics in theme 1, along with a review of the weather and warnings, will be a standing agenda item in each PWSCG meeting.

The Group will normally meet twice a year – in October and April. These meetings will be in person, with the option to join by Microsoft Teams if necessary.

Performance will be reviewed by PAG 1 through submission of Assurance Reports and presentations from the Met Office to the group. Information within the reports will explain the factors influencing trends in performance and any dips or peaks which occur. Factors which are outside of the influence of the Met Office will be stated. Subject matter experts within the Met Office will present the report to PAG 1 and be available for questions and discussion, to support the PAG in providing their assurance.

PAG 2 – Thrive

PAG 2 will assure the metrics and deliverables for theme 2.

PAG 2 will meet once per year to assure all the deliverables and metrics in theme 2, including a full assessment of the accuracy measures. It will also assess and make recommendations regarding updates to deliverables and metrics for the yearly CSA update.

This meeting will take place ahead of the PWSCG meeting in March in person, with the option to join by Microsoft Teams if necessary. The PAG will prepare a report for the PWSCG.

Performance will be reviewed by PAG 2 through submission of Assurance Reports and presentations from the Met Office to the group. Information within the reports will explain the factors influencing trends in performance and any dips or peaks which occur. Factors which are outside of the influence of the Met Office will be stated. Subject matter experts within the Met Office will present the report to PAG 2 and be available for questions and discussion, to support the PAG in providing their assurance.

PAG 2 Membership

Chair PWSCG	Independent member
Civil Aviation Authority	Ministry of Defence
Environment Agency	Maritime and Coastguard Agency
Others on request	

PAG 3 – Authoritative voice

The PWSCG sub-group PAG 3 provides additional scrutiny of the Met Office in its delivery of Theme 3 maintaining an authoritative voice and will be used to inform the development of reports for the PWSCG. The Group will normally meet twice a year – in late March ahead of the PWSCG meeting, and in September. These meetings will be in person, with the option to join by Microsoft Teams if necessary.

Performance will be reviewed by PAG 3 through submission of Assurance Reports and presentations from the Met Office to the group. Information within the reports will explain the factors influencing trends in performance and any dips or peaks which occur. Factors which are outside of the influence of the Met Office will be stated.

Subject matter experts within the Met Office will present the report to PAG 3 and be available for questions and discussion, to support the PAG in providing their assurance.

PAG 3 Membership

Chair PWSCG	Independent member
Scottish Government	Welsh Government
Northern Ireland Government	Environment Agency
Maritime and Coastguard Agency	UK Health Security Agency

PAG 4 – National capability and international commitments

PAG 4 will provide the assurance and scrutiny for the national capability and the international commitments. The PAG is expected to use the existing assurance mechanisms within the Met Office to inform its work (e.g. the Met Office Audit Committee and Met Office Scientific Advisory Committee) and not duplicate the work of any existing assurance mechanism. The Group will normally meet once a year – in late March ahead of the PWSCG meeting, these meetings will be in person, with the option to join by Microsoft Teams if necessary. Interim reports will be provided in October each year.

Performance will be reviewed by PAG 4 through submission of Assurance Reports and presentations from the Met Office to the group.

	Reporting frequency	**Overview of Assurance Reporting**
1) Technical Services (Observations) **2) Science** **3) Technology**	Annual + Interim	**October (Interim)** – Provide update on Delivery Metrics and BaU activities primarily, interim review on development activities. **March (End of Year)** – Full assurance report including final position on BaU metrics. Annual review of development activities.
4) International Commitments	Annual + Ad-hoc following meetings	**Annual Review** – (March) Review of previous year's activities – as well as forward look and plans for following year. **Ad-hoc** information and papers presented following international conferences and meetings of note.
5) Finance	Annual + Interim	**October (Interim)** – Review of 6-month position of PWS finances **March (End of Year)** – Review of Annual PWS Finances and budget planning for future years

The format of the Assurance Reports has been agreed with the PWSCG Secretariat but will be regularly reviewed to ensure that it is providing the level of detail needed by the PWSCG to provide assurance against these areas.

PAG 4 Membership

Chair PWSCG	Independent member

Civil Aviation Authority	Ministry of Defence
Environment Agency	Others on request
Maritime and Coastguard Agency	

PWS Assurance Groups (PAG) Terms of reference

Purpose

The PAG's are subgroups of the Public Weather Service Customer Group, set up to provide assurance of each of the themes in the Customer Supplier Agreement (CSA). These groups will provide independent assessment of the progress of the Met Office against the targets set out in the CSA.

Responsibilities

The responsibilities of the PAG's are as follows:

a. Monitoring the performance and delivery of the PWS outputs against the agreed performance measures and deliverables of the relevant CSA theme, and considering in-period modifications as appropriate
b. Attending meetings or reviewing papers as required
c. Agreeing to a summary of each meeting or review to be delivered to the PWSCG meetings
d. Making recommendations regarding requirements, targets and metrics for yearly CSA updates

PWS Customer Group (PWSCG) Meetings

PWSCG Formal Meetings

PWSCG meetings will be the forum for strategic discussion, looking forward, discussing the bigger, more strategic issues and will set the direction of PWS. These meetings will include summaries of the PAG meetings.

Formal PWSCG meetings will normally be held twice a year in April & October. All members and Met Office delegates are expected to attend and if unable to do so are asked to provide a deputy. On an annual basis at the April PWSCG meeting, the members will form a recommendation to the Department for Science, Innovation and Technology (DSIT) as to delivery of the performance measures and deliverables, as defined within the CSA. These will have been run through in depth at the theme PAG's as described above. Official sign off or any challenges to sign off will be recorded at this meeting. Also, at this meeting the CSA for the subsequent period will be agreed including the Public Performance Measures and Deliverables. The meetings are timetabled and coordinated by the PWSCG Secretariat.

A formal meeting of the PWSCG will be considered quorate provided no more than one half of members and one of the independent members are absent. An inquorate meeting may proceed in an advisory capacity to the Chairperson.

Voting will be on a two thirds majority basis and the Chairperson will have the casting vote.

The PWSCG may establish sub-groups or hold special interest meetings as it considers appropriate to deliver its terms of reference.

Additional meetings within the Devolved Governments will take place most years and will be chaired by the PWSCG Member within the Devolved region. Representation will normally include:

- The Chair and Independent Member of the PWSCG

- Head PWSCG Secretariat
- Met Office Head of PWS or PWS Business Manager
- Met Office regional Civil Contingency Advisor/Senior Civil Contingency Advisor
- Representation from across government departments within the Devolved region.

Media and Reach Sub-Group (MARG)

The Media and Reach sub-Group (MARG) is a subgroup of the PWSCG with the mandate to provide assurance to the Chair of the PWSCG in three principal areas. Firstly, that the outputs of the Public Weather Service provide adequate 'reach' to help demonstrate value for money for PWS. Secondly that that there is consistency in the delivered message of those outputs across the various media channels. Thirdly, that the Public Weather Media Service (PWMS) is operating in a way that meets the needs of the broadcasters using it. The MARG provides challenge and steer to the Met Office to ensure adequate reach through UK broadcasters and where possible provide advice and direction in order to increase the reach of PWS outputs. The group provides challenge on behalf of the PWSCG on the form and function of the PWMS to ensure that the customers receive a fit for purpose service. The group will report back to the PWSCG on progress and set out any recommendations for actions. The Media and Reach sub-Group (MARG) is chaired by the Independent Member of the PWSCG. Membership of the MARG will comprise representatives from the PWSCG and its Secretariat, Met Office staff responsible for reach via the PWMS, and a cross section of users of the PWMS. The Chair of the PWSCG may attend at his discretion. The MARG will report to PAG(3) and PWSCG.

End of Year Sign off for performance measures

Within this CSA there are 12 Performance Measures, 5 Performance Measure Developments and 3 Assurance Reports

- Monthly monitoring will be performed on all PMs and PMDs as described above
- Ad hoc updated on Assurance Reports will be provided for any notable updates
- The PWSCG expects the Met Office to meet all agreed performance measures, Performance Measure Developments and Assurance Reports. However, some measures may not be met due to circumstances beyond the Met Office's control.
- To receive end of year signoff that the CSA has been delivered the Met Office are required to achieve:
    - All 12 PMs
    - All 5 PMDs
    - All 3 Assurance Reports

If a measure does not meet the end-of-year target, the PWSCG will accept a written explanation and discuss its approval for signoff in the CSA during relevant meetings. They will consider circumstances beyond the Met Office's control, issues highlighted by monthly monitoring, or other reasons for the missed PM.

End of year Sign off for Deliverables

Within this CSA there are 22 Deliverables. To assure PWSCG members that each Deliverable has been met, the Met Office will submit a paper describing the outcome of the Deliverable to the PWSCG Secretariat on or before the due date of that deliverable.

- The paper will be discussed in detail at the relevant PAG meeting, and the PAG will make a recommendation to the PWSCG end of year meeting
- The PWSCG group will be asked to agree or disagree that the Deliverable should be signed off.

Approval by PWSCG Secretariat

Within this CSA there are 7 measures will be assured and signed off by the PWSCG Secretariat rather than the full PWSCG. These measures are noted in blue within the summary tables within section 3. The PWSCG Secretariat can decide to escalate these measures to be signed off by the full PWSCG if deemed appropriate.

Business as usual items required to achieve signoff.

In addition to the deliverables and performance measures described above, the Met Office will be expected to deliver the following items throughout the year:

1. An annual PWS performance report for the April PWSCG meeting
2. The Public Perception Survey and annual briefing for the PWSCG Chair, Public Member and Secretariat

Annual CSA signoff

- For the CSA to be signed off at the end of each year the Met Office must achieve all PM's, Assurance Reports and Deliverables being signed off, unless the PWSCG agrees there are strong mitigating reasons why they have been missed or they have already been signed of under the authority of the PWSCG Secretariat.
- This process will be reviewed annually.

Public Weather Service Customer Group Terms of Reference

Purpose

The Public Weather Service Customer Group (PWSCG) is an independent body which acts as the customer on behalf of the public and public sector users of the Public Weather Service (PWS) and provides independent advice to Government ministers to enable the formal agreement of the PWS Customer-Supplier Agreement (CSA) between Government and the Met Office.

Responsibilities

The responsibilities of the PWSCG are as follows:

a. Setting the current and future outputs required from the PWS and specifying its performance indicators and targets;
b. Monitoring the performance and delivery of the PWS outputs against the agreed performance indicators and targets, and considering in-period modifications to the PWS as appropriate;
c. Reviewing whether Met Office plans for the underpinning capability and international commitments are appropriately prioritised and have a demonstrable, value for money link to support the delivery of PWS outputs and other direct services to Government, the public sector and civil aviation;
d. Reviewing the socio-economic benefits delivered by the PWS, commissioning additional research as necessary;
e. Supporting cross-Government cooperation to increase the use of PWS outputs and raise issues relevant to wider Government, including through the Chair's representation on Met Office Governance groups;
f. Providing independent advice to Government ministers on the PWS as required;
g. Consulting widely with the public and the public sector users of the PWS, as appropriate, in order to effectively undertake its responsibilities above.

PWSCG Chairperson

The Chairperson of the PWSCG will be a public appointment by a Government Minister and is the single point within the PWSCG accountable to the Minister. The Chairperson's responsibilities are as follows:

- Chairing meetings of the PWSCG;
- Ensuring the proper execution of the PWSCG Terms of Reference;
- Keeping the PWSCG Terms of Reference under regular review and proposing any changes to the appropriate Government minister;
- Formally approving the PWS Customer-Supplier Agreement, and formally notifying the Met Office on behalf of the PWSCG as to the extent to which the Met Office has delivered the Agreement;
- Representing the interests of the PWSCG during Government Spending Reviews and in any other relevant cross-Government initiatives;
- Negotiating the PWS price with the funding Government Department and the Met Office, if necessary, to ensure appropriate financial provision for the PWS;
- Ensuring that PWS funds are spent with due regard to economy, value for money and the Government's drive for efficiency;
- Raising the profile of the PWS across the Government and Devolved Administrations, including increasing the integration of the PWS in wider Government initiatives and increasing the impact of the PWS across the UK;
- Reporting on the activities of the PWSCG and the delivery of the PWS to the Departmental Owners and Met Office Board;
- Providing a focal point for all PWSCG correspondence;
- Maintaining relationships with other PWSCG members and Met Office Executive between formal meetings of the PWSCG.

PWSCG Membership

The membership of the PWSCG shall be drawn from the main public sector users of PWS outputs, other funders of the PWS and interested Government departments, and shall include a public appointment by the Chairperson to represent the public users of the PWS (referred to as the Independent Member of the PWSCG).

The Independent Member is appointed to represent the views of the general public and deputises for the Chair when required. This individual is independent of both the sponsoring department (DSIT) and the Met Office and is expected to have a good understanding of the mechanisms that can be used to gain insight into the public mood. This includes an awareness and knowledge of the various communications channels used by the PWS including social, digital and traditional media.

Membership shall include representatives from:

- Cabinet Office
- National Police Chiefs Council
- National Fire Chiefs Council
- Local Government Association
- Scottish Government
- Welsh Government
- Northern Ireland Government
- Environment Agency
- National Highways

- Maritime and Coastguard Agency
- Civil Aviation Authority
- Department for Science, Innovation and Technology (DSIT)
- Ministry of Defence (MoD)
- Department for Levelling Up, Housing and Communities
- UK Health Security Agency (UKHSA)
- Government Digital Service (via Integrated Core Services) – ***new member FY24/25***
- DEFRA – ***new member FY24/25***

The Chairperson may invite other organisations to be represented on the PWSCG that fulfil the conditions laid out above.

The Chairperson and Independent Member will be contracted for a fixed term and remunerated by Government through the PWSCG Secretariat.

PWSCG Secretariat

The PWSCG will be supported by a Secretariat staffed by officials provided by the Government department responsible for the PWS. The Secretariat will be a dedicated resource to support the Chairperson and PWSCG in delivering their responsibilities outlined in these terms of reference. The Secretariat should provide policy and technical advice to the Chairperson and PWSCG on all matters pertaining to the PWS and shall attend PWSCG meetings as advisors.

The Secretariat will ensure that documentation is published on the Met Office public website. This will include:

Minutes of the PWSCG meetings
PWSCG annual report
PWSCG TORs
PWSCG membership

Duration

The PWSCG is established on an on-going basis until no longer required, when it will be dissolved on instruction from a Government Minister.

Annex F: Change Control Process

The purpose of this procedure is to distinguish between those changes to the PWS that are sufficiently fundamental to require sign off at a high level, and those that are essentially business as usual and can be signed off at a comparatively lower level. The following table summarises the approach:

CSA change required	Review and sign off team	Method of recording change
CSA heads of terms Financials beyond delegations of Met Office Markets Director or DSIT Deputy Director	• Chair of the PWSCG • The responsible Director within DSIT • Chief Executive of the Met Office	Exchange of letters
Strategy Customer outcomes Material changes in performance levels, the scope of deliverables and dates associated with metrics Assurance	• Chair of the PWSCG • Wider PWSCG • The responsible Deputy Director within DSIT • Met Office Markets Director	Minutes of PWSCG meetings or exchange of letters
Catalogues Minor (non-material) changes in the scope and dates of metrics Editorial changes to the CSA	• Met Office Head Citizens and Media Business (Public Weather Service) • Head of the PWSCG Secretariat	CSA updated by PWSCG Secretariat and changes recorded in the table below.

N.B. the PWSCG Secretariat will provide background and supporting evidence for all review meetings
The change control procedure laid down in this annex will apply for any change relating to the Agreement.
For the purpose of this Change Control Procedure a material change may include but is not limited to:

(a) change to the infrastructure of either Party's systems;
(b) withdrawal of a Service;
(c) change to the Services;
(d) introduction of a new Service;
(f) change in any law, regulation or Government policy or Spending Review which affects the provision of the Services;
(g) procurement of additional equipment or premises;
(h) reduction or withdrawal of Funding.

This change control procedure does not preclude informal discussions between the Parties concerning any change but sets out the formal structure for incorporating and recording any changes agreed whilst this Agreement is in force. For pragmatic reasons the Parties may aggregate minor changes which are administrative or considered to have a low business impact into one Request for Change. References to 'in writing' can include electronic documents, provided the persons exchanging the electronic documents have appropriate delegated authority to act on behalf of his/her respective Party. Either Party may propose a

request for change in writing to the other Party which sets out a general description of the change ("Request for Change"). This will include but is not limited to the following details:

(a) the reason for the change;
(b) description of the change including any specifications;
(c) provisional start date for the change;
(d) benefit to the Parties of the change;
(e) the potential financial implications of the change;
(f) a unique identifier for the Change Request.

The Party receiving the Request for Change will respond in writing within the time specified in the Request for Change ("Response"). For changes which are material, the Response will include but is not limited to the following details:

(a) the description of the solution for the change;
(b) impact statement on the effect of the change on the operation of the Services;
(c) an impact statement including costs and savings as a result of implementing the change;
(d) whether the change requires any change in the existing sub-contracts supporting the operation of Services;
(e) whether the change requires award of any new sub-contract to effect the change;
(f) whether the change requires actions to be taken to comply with Procurement Regulations and what such actions will be;
(g) any change is required in the terms of the Arrangement or its Schedules;
(h) time scales to deliver the change;
(i) validity period for the Request for Change; the Request for Change unique identifier.

The recipient of the Response will evaluate the Response within the period of validity of and may:

(a) accept the Response and confirm acceptance by requesting the Secretariat update the controlled spreadsheet, or taking any other action as defined in the table above e.g. the filing of signed letters;
(b) request that the Response is revised and/or a new Response is prepared; or
(c) reject the Response.

Each Party will bear its own costs for the preparation of Requests for Change and Responses.

Change Control Spreadsheet

This Change Control spreadsheet is to be used by the Met Office and DSIT to record changes to the CSA when agreed by all relevant parties. Each entry is to be signed off by appropriate authorised persons representing all relevant parties. Changes agreed via the Change Control spreadsheet will be incorporated in the Agreement and/or Service Definition.

This spreadsheet is controlled and maintained by the PWSCG Secretariat held within the PWSCG Secretariat folders in DSIT, with appropriate levels of security and backup in place and is available on request.

Change id no. (000/FY)	Date agreed	Details	Change relates to document no:	Signoff (attach emails)

MS Copilot was used in the editing of this document.