**TECHNICAL SPECIFICATION QUESTIONS**

**FOR**

**D589873 -** **Collation and Analysis of Weather Impacts from social media**

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The following section details the technical requirements that the service will be required to meet.

Please see Document 3 Tender Specification & Evaluation, section 4 which provides full details on the Evaluation of Tender Returns.

Mandatory Responses will be scored on a “Pass” or “Fail” basis and where they fail, this will disqualify the bid from further consideration.

Desirable Responses will be marked against the matrix outlined within Document 3 Tender Specification & Evaluation, section 4d

Bidders should give sufficient detail to explain the way in which the requirement is met and provide examples. Please use the box provided below each number.

Furthermore, your responses must provide explicit and comprehensive detail to give the Met Office confidence that you are able to meet each requirement. A statement of the form ‘this requirement will be met’ is not sufficient.

Please respond to all the following questions as indicated.

|  |  |
| --- | --- |
| **Compliance to Specification** | **60%** |
| Non-Functional Requirements |  |
| Number | Question Type | Description | Weighting |
| 1.1 | Mandatory | **Software as a Service**A Software as a Service (SaaS) approach is required. The tool shall be web-based. Document 7 Pricing Schedule – For informationPlease provide a rate card that would cover several small-scale developments to enhance functionality over the course of the contract. | *Pass/Fail* |
| **Response** | [Bidder to enter text here] |
| 1.2 | Mandatory | **Browsers**The tool shall work as expected on a range of modern browsers (Chrome, Firefox, and Microsoft Edge as a minimum).  | *Pass/Fail* |
| **Response** | [Bidder to enter text here] |
| 1.3 | Mandatory | **Access to the service**We require:* 20-35 users to be able to access the service concurrently on a busy weather day and the service will need to accommodate this. Typically, the number of users would be significantly less with large variations in day-to-day use.
* named logins for 80 individual users (who would be using them on a rostered basis).
* Describe how your solution shall meet these needs.
 | *Pass/Fail* |
| **Response** | [Bidder to enter text here] |
| 1.4 | Mandatory | **Username management**There shall be easy to use username management (e.g. an agreed process between the supplier and Met Office for control of access, usernames and passwords OR an automated username management via the service on the web). * Describe the user management processes that will be employed.
 | *Pass/Fail* |
| **Response** | [Bidder to enter text here] |
| 1.5 | Mandatory | **Technical support**The supplier shall provide a high standard of technical and user support during regular office hours (0900 – 1700 Monday to Friday). Support out of hours, including overnight, during weekends and UK (United Kingdom) bank holidays is only expected on a best endeavours basis. A high standard of support implies rapid query responses and resolutions with good communication in plain English. * Describe the technical support that will be provided.
 | *Pass/Fail* |
| **Response** | [Bidder to enter text here] |
| 1.6 | Mandatory | **Service downtime** Downtime for the service (planned or otherwise) shall be minimal. Any planned downtime shall be agreed in advance to allow for minimum disruption to operational work. * Describe the expected downtime and how this will be planned for and managed.
 | *Pass/Fail* |
| **Response** | [Bidder to enter text here] |
| 1.7 | Mandatory | **Performance** The performance of the service shall be optimised for speed and reliability. This relates to both the processing and display of data, as well as individual software features. Any software features shall be responsive, reliable with minimal lag. * Describe how the service shall meet these needs.
 | *Pass/Fail* |
| **Response** | [Bidder to enter text here] |
| 1.8 | Mandatory | **GDPR**The service shall be General Data Protection Register (GDPR) compliant. This includes any live visualisations and exports from the tool. * Describe how the service shall meet these needs.
 | *Pass/Fail* |
| **Response** | [Bidder to enter text here] |
| 1.9 | Mandatory | **Routine software maintenance and bugs**The supplier shall provide for routine software maintenance during the life of the contract to ensure the service continues to perform well, remains up to date/safe and that any bugs or problems are resolved. * Describe how the service shall meet these needs.
 | *Pass/Fail* |
| **Response** | [Bidder to enter text here] |
| 1.10 | Desirable | **Software enhancements**It is desirable for Several small-scale developments to enhance functionality over the course of the contract. Any enhancements are to be agreed through regular meetings, which the supplier will project manage. Any product backlog will be owned and managed by the supplier. * Provide detail on how software enhancements shall be provided and will be managed.
 | ***2*** |
| **Response** | [Bidder to enter text here] |
| 1.11 | Desirable | **User experience, interface and in-line documentation**It is desirable the supplier optimise and continually improve user experience and user interface. The software should be very intuitive. Sufficient detail should be available within the service that gives the user ‘enough’ to know how the service is working, its strengths and weaknesses. Sufficient written documentation should also be provided on the service and approach. * Describe how a good user experience and interface will be delivered via the service.
 | **3** |
| **Response** | [Bidder to enter text here] |
| 1.12 | Desirable | **Training and documentation (service and science)**It is desirable the supplier provide a training session on how to use the service, as well as underpinning science on how the social sensing filtering service works and its inherent strengths and weaknesses. This is expected to take the form of an online/remote session, probably 1-2 hrs which can be recorded to allow to for re-use. The supplier may provide updates to this training if needed during the contract and provide further training and documentation on any new features that are introduced during lifetime of the contract.  | **2** |
| **Response** | [Bidder to enter text here] |
| 1.13 | Desirable | **Training (underpinning web technologies)**It is desirable the supplier provides up to a half day training session, for non-experts, on the underpinning web technologies that have been used to create the service. The full requirements are to be determined by discussion, but are likely to include the hosting arrangements, how the Twitter API is called, how the visualisation system works. This may include an interactive tutorial for extracting data from APIs and displaying this to the web. | **1** |
| **Response** | [Bidder to enter text here] |

|  |  |
| --- | --- |
| Functional Requirements |  |
| Number | Question Type | Description | Weighting |
| 2.1 | Mandatory  | **Core social sensing capability**The service shall provide impact reports of flooding, snow\* impacts and wind impacts extracted from Twitter in near real time (i.e. within 30 mins or less of the Tweet being sent). As a minimum and the reports shall be:* Filtered and relevant with minimal noise (focussing on reports of impact),
* Geo-located with as much accuracy as possible.

**\* The snow impact type is not needed operationally until 1 October 2022, but commitment to develop this weather type by this date is necessary.** | *Pass/Fail* |
| **Response** | [Bidder to enter text here] |
| 2.2 | Mandatory  | **Core visualisation requirements**The core visualisation requirements are:* Interactive map display for the whole of the United Kingdom (England, Wales, Scotland, and Northern Ireland).
* Ability to change the view validity time;
* Ability to change the view aggregation period e.g. display tweets over a period of 1, 6hr, 24hrs or several days.
* The tool should be able to show the detailed information generated for at least 5 days.
* Reports aggregated and presented in map form by county/unitary authority area (with geometry files to be provided by the Met Office to the supplier).
* Reports presented in list form with hyperlink to report on Twitter
 | *Pass/Fail* |
| **Response** | [Bidder to enter text of up to 800 words here] |
| 2.3 | Desirable | **Anomalies/exceedances**It is desirable the tool provides a comparison of current activity levels against a longer-term average to indicate unusualness or anomalous activity. This should be presented at a county/unitary authority level (with geometry files to be provided by the Met Office to the supplier). | **3** |
| **Response** | [Bidder to enter text here] |
| 2.4 | Desirable | **Additional visualisation requirements** It is desirable the tool meet these additional visualisation requirements:* Ability to display reports as point data.
* Ability to display reports against other geometries such as grids (with files to be provided by the Met Office)

Ability to visualise the confidence of the spatial geo-location accuracy for each report. | **1** |
| **Response** | [Bidder to enter text here] |
| 2.5 | Desirable | **Viewing and exporting historic information**It is desirable the service have the facility to allow for recent reports to be downloaded so that they can be saved locally. The data should be made available in csv or Excel documents. Any exported data should include appropriate information, for instance as a minimum – Tweet identifier, location and associated text. * Describe how your solution would provide this functionality.
 | **2** |
| **Response** | [Bidder to enter text here] |
| 2.6 | Desirable | **Ability to view report (e.g. Tweet) volume over time**It is desirable for the Provision of a feature which plots, as a minimum, volume of tweets against time (hours and days) on an interactive graph allowing interrogation of historical data and comparison to past events for a given spatial area. The period of interest that will be displayed on this plot should be user-definable but is expected to be flexible to show a range of data periods up to several years. * Describe how your solution would provide this functionality.
 | **3** |
| **Response** | [Bidder to enter text here] |
| 2.7 | Desirable | **Alerting**It is desirable the service be able to provide alerting functionality to the user. Alerting should be implemented so it is not unnecessarily distracting or can be turned off.The user should be alerted to where the most recent weather impacts have been reported. * Describe how your solution would provide this functionality.
 | **2** |
| **Response** | [Bidder to enter text here] |
| 2.8 | Desirable | **Continual improvement and refinement of filters**It is desirable the service be able to be “trained” through the lifetime of the contract to continuously improve precision and recall of the approach, i.e.. improvement of:1. the relevance of weather impact information being displayed
2. the geographical accuracy of this information

There should be the ability for users to flag tweets that are not relevant, and these are removed from view. * Describe how your solution would do this.
 | **2** |
| **Response** | [Bidder to enter text here] |
| 2.9 | Desirable | **Other weather hazards**It is desirable the service may include the ability to gather information from other weather impact parameters such as heat, fog, and lightning. Document 7 Pricing Schedule – For informationPlease provide price to include other weather sources | **1** |
| **Response** | [Bidder to enter text here] |
| 2.10 | Desirable | **Incorporation of other media sources**It is desirable the solution has a social sensing capability, integration, and inclusion of data from sources other than Twitter (e.g., Facebook, YouTube, news websites or other media). Document 7 Pricing Schedule – For informationPlease provide price to incorporate other media sources | **1** |
| **Response** | [Bidder to enter text here] |
| 2.11 | Desirable | **Adding user defined attributes to Reports (i.e.. Tweets)**It is desirable to allocate additional attributes within the system to individual Tweets by a user. For instance, the user should be able to manually assign a Tweet an impact level (e.g. Minor, Significant or Severe) and manually assign a flood source (e.g. Rivers, Surface Water, Coastal/Tidal, Groundwater). These attributes persist in the service beyond the current session and are global for all users within a user group. | **2** |
| **Response** | [Bidder to enter text here] |
| 2.12 | Desirable | **Accessing social sensing information via API**It is desirable the service includes an API that should allow for users to ingest reports into Met Office systems. Access to the API should be included as part of this service.The API should be designed to use standard protocols and data formats. The API should be efficient, responsive, and safe. * Provide detail on the API functionality.

Document 7 Pricing Schedule – For informationPlease provide price for either API access or implementation | **2** |
| **Response** | [Bidder to enter text here] |
| 2.13 | Desirable | **Accessibility, usability, and inclusion**It is desirable the Supplier demonstrate how they have taken appropriate steps to ensure accessibility of the software to meet a range of accessibility user needs. For instance, colour blindness. | **1** |
| **Response** | [Bidder to enter text here] |
| 2.14 | Information Only | **Automated image analysis**Describe whether your solution can automatically analyse images to discern impact level, type, or source. Where plans exist to incorporate automatic image analysis, provide some detail on expected challenges and timelines. | N/A |
| **Response** | [Bidder to enter text here] |
| 2.15 | Information Only | **Incorporation of third-party data within the service**Describe whether your solution could overlay third party data, such as rainfall radar (which is available as open data via the Met Office) or other weather parameters and how it achieves this. | N/A |
| **Response** | [Bidder to enter text here] |
| 2.16 | Information Only | **Other relevant functionality and expertise**Describe any additional functionality or expertise you may be able to offer to assist the Met Office and FFC (Flood Forecasting Centre) gather and analyse weather impacts from media sources. | N/A |
| **Response** | [Bidder to enter text here] |
| **Social Value 10%**[Procurement Policy Note 06/20 – taking account of social value in the award of central government contracts - GOV.UK (www.gov.uk)](https://www.gov.uk/government/publications/procurement-policy-note-0620-taking-account-of-social-value-in-the-award-of-central-government-contracts)The Social Value Model (‘the Model’) sets out government’s social value priorities for procurement. It includes a menu of social value options, there are 5 themes and 8 policy outcomes which flow from these themes.Social value legislation requires buyers of public sector services to consider whether there are related social, economic, or environmental benefits that can be delivered through the contracts they award. |
| 3.1 | Desirable | **Effective stewardship of the environment**Describe the commitment your organisation will make to ensure that opportunities under the contract deliver effective stewardship of the environment and deliver the following criteria:1. Deliver additional environmental benefits in the performance of the contact including working towards net zero greenhouse gas emissions.
2. Influence staff, supplies, customers, and communities through the delivery of the contract to support environmental protection and improvement.

Include in your answer, your ‘Method Statement’ stating how you will achieve this and how your commitment meets the criteria above. Also include a timed project plan and process, including how you will implement your commitment and by when. Finally, include how you will monitor, measure and report on your commitments and the impact of your proposals. You should include but not be limited to:* Timed action plan
* Use of metrics
* Tools/processes used to gather data
* Reporting
* Feedback and improvement
* Transparency.
 | **1** |
| **Response** | [Bidder to enter text here] |  |