DATA SERVICES PLATFORM 3 (DSP3)



SERVICES DESCRIPTION

1. **INTRODUCTION**
   1. This schedule specifies the intended scope of the Services to be provided by the Supplier under this Agreement and a description of what each of the Services entails.
   2. The requirements for the Services have been categorised under the following headings:
2. Implementation Services, comprising the Transition Services (set out in paragraph 2.1), and the Transformation Services (set out in paragraph 2.2);
3. Operational Services, comprising the elements as set out in paragraph 3; and
4. Optional Services, comprising the elements as set out in paragraph 4.
5. **IMPLEMENTATION SERVICES**
   1. **Transition Services**
      1. TBC
   2. **Transformation Services**
      1. TBC
6. **OPERATIONAL SERVICES**
   1. **Introduction**
      1. This section defines the solution to be delivered at each ATP Milestone.

|  |  |  |  |
| --- | --- | --- | --- |
| **Section** | **To be provided from the ATP[X] Milestone** | **To be provided from the ATP[X] Milestone** | **To be provided from the ATP[X] Milestone** |
| 3.3. Non-functional requirements (Annex A) | Yes | Yes | Yes |
| 3.4. Functional requirements | | | |
| Annex B: General | No | No | Yes |
| Annex C: Interface | Yes | Yes | Yes |
| Annex D: Discovery and Search | Yes | Yes | Yes |
| Annex E: Guidance and Feedback | Yes | Yes | Yes |
| Annex F: Publishing | Yes | Yes | Yes |
| Annex G: Access Management | Yes | Yes | Yes |
| Annex H: Support | Yes | Yes | Yes |
| Annex I: Compliance | Yes | Yes | Yes |
| Annex J: Usage Reporting | Yes | Yes | Yes |
| Annex K: System Reporting | Yes | Yes | Yes |
| Annex L: Linked Data | Yes | Yes | Yes |
| Annex M: Data Services | Yes | Yes | Yes |
| Annex N: Metadata Catalogue | Yes | Yes | Yes |
| Annex O: Optional Services: Web Mapping | Yes | Yes | Yes |
| Annex P: Optional Services: Data Visualisation | Yes | Yes | Yes |
| Annex Q: Linked Data Applications | Yes | Yes | Yes |
| Annex R: Non-Linked Data Applications | Yes | Yes | Yes |

Table 1

* 1. **Capabilities and features**
     1. Capabilities are high-level elements of the Services that are required to be delivered as part of the Operational Services. The individual requirements have been grouped in capabilities as outlined in the table below.

|  |  |
| --- | --- |
| **Ref** | **Capability** |
| CP1 | Data Services |
| CP2 | Metadata Catalogue |
| CP3 | Linked Data |
| CP4 | Optional Service: Web Mapping |
| CP5 | Optional Service: Data Visualisation |
| CP6 | Linked Data Applications |
| CP7 | Non-Linked Data Applications |

Table 2

* 1. **Non-functional requirements**
     1. TBC
  2. **Functional requirements**
     1. TBC
  3. **Service management requirements**

*General management*

* + 1. The Supplier shall undertake all the IT Service Management (ITSM) general management practices set out in ITIL 4 and the standards in paragraph 7 ofSchedule 2.3 (*Standards*) in order to deliver the Operational Services.
    2. The Supplier’s Key Personnel for the delivery of the Operational Services shall be based in the United Kingdom.
    3. The Supplier shall have an appropriate number of suitably skilled and experienced Supplier Personnel to operate the Supplier Solution during the Operational Hours of [ten (10) hours five (5) Working Days per week].
    4. The Supplier shall give access and notify End Users within two (2) Working Days of any such request.
    5. The Supplier shall provide training on all relevant elements of the Supplier Solution to End Users.
    6. The Supplier shall provide ongoing training of the Supplier Solution informed by the Training Needs Analysis.
    7. The Supplier shall provide refresher training with each upgrade or change to the Supplier Solution or its functionality.
    8. The Supplier shall provide Documentation to accompany all training courses covering all relevant aspects of the course material.
    9. The Supplier shall produce and maintain Knowledge Articles for the Supplier Solution.
    10. The Supplier shall provide details to the Authority every month on End User satisfaction in accordance with the GDS Service Manual.
    11. As applicable to the Deliverable, the Supplier shall maintain the Deliverables identified in paragraph 2 throughout the Term to ensure they are consistent with the current version of the Supplier Solution.

*IT service management*

* + 1. The Supplier shall undertake all the IT Service Management (ITSM) service management practices set out in ITIL 4 and the standards in paragraph 7 ofSchedule 2.3 (*Standards*) in order to deliver the Operational Services.
    2. The Operational Services shall be operational [ten (10) hours a day], each Working Day of the year following the relevant Operational Service Commencement Date.
    3. The Supplier shall inform the Authority of any Permitted Maintenance with at least seven (7) days advance notification.
    4. The Supplier Solution shall broadcast a status upon shut down and/or re-start to all relevant End Users.
    5. The Supplier shall self-monitor its Services to support performance reporting as agreed between the Authority and the Supplier, including as set out in Schedule 2.2 (*Performance Levels*).
    6. The Supplier shall undertake IT Change Management in accordance with ITIL 4.
    7. The Supplier shall provide a UK-located Service Desk aligned to ITIL 4 practices, accessible as a minimum, via phone and e-mail, and which shall serve as a single point of contact End Users for all IT Service Management queries relating First Line, Second Line, and Third Line support of the Supplier Solution.
    8. The Supplier shall monitor and manage IT infrastructure and information assets.
    9. The Supplier shall log Incidents and Problems and associated updates with the Service Desk.
    10. The Supplier shall store and maintain records of all communications including, as a minimum, details and categorisation of what was received or sent, the communications transmitted, the date and time of communications received or sent, and End User details.
    11. The Supplier shall provide Supplier Solution configuration documentation and release notes for each Release.
    12. The Supplier Solution backed up Authority Data shall be made available to the Authority on request.
    13. The Supplier shall employ Supplier Personnel with appropriate information security management skills and experience to liaise with the Authority on a regular basis.
    14. The Supplier shall operate an IT Service Management toolset in delivery of its IT Service Management activities and provide access to the IT Service Management toolset to the Authority.

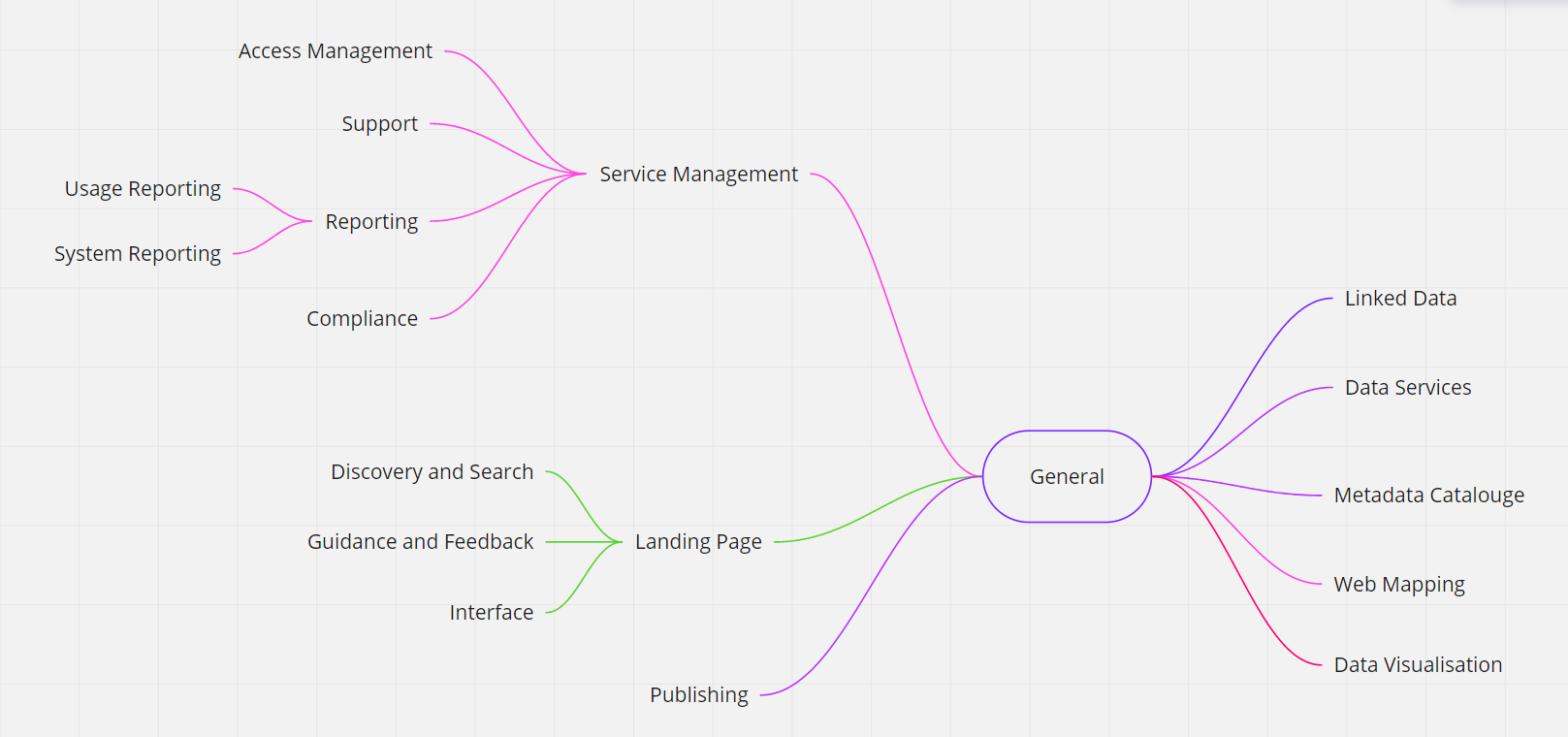
*Technical management*

* + 1. The Supplier shall undertake all the IT Service Management (ITSM) technical management practices set out in ITIL 4 and the standards in paragraph 7 of Schedule 2.3 (*Standards*) in order to deliver the Operational Services.
    2. The Supplier shall provide Pre-Production Environments that simulate live functionality.
    3. The Supplier shall maintain a minimum of one (1) Pre-production Environments, to support development, Testing and training, that are distinct and separate from the Live Environment to support Supplier Solution development before release into the Live Environment.
    4. The Supplier shall conduct training in the Pre-production Environments and will not use the Live Environment for the conduct of training.
    5. The Supplier’s Pre-production Environments shall be updated to represent the relevant elements of the Live Environment and shall include any test harnesses, simulators and hardware/or software updates required in accordance with the Testing Strategy.
    6. The Supplier’s Pre-production Environments shall use Good Industry Practice test automation tools to reduce the cost of Testing defined in Schedule 6.2 (*Testing Procedures*).
    7. The Supplier’s Pre-production Environments shall be correctly configured and available on an ongoing basis from the date of the first Test for the testing defined in the Testing Strategy.
    8. The Supplier’s Pre-production Environments shall be maintained so as to generate consistent results from Tests (in accordance with the Testing Strategy) that will allow new outputs to be comparable to baseline results.
    9. The Supplier shall provide End Users access to the Pre-production Environments to support Testing in accordance with Schedule 6.2 (*Testing Procedures*).
    10. The Supplier shall make available sufficient business and operational IT equipment (hardware and software), IT processing power, IT storage and IT bandwidth to deliver the Services.
    11. The Supplier will implement and deploy Software enhancements and fixes to the Supplier Solution in accordance with ITIL 4.

1. **OPTIONAL SERVICES**
   1. A list of requirements to be delivered as part of the Optional Services is shown in Annex O and P.

**ANNEX A – NON-FUNCTIONAL REQUIREMENTS**

| **Group** | **ID** | **Requirement** |
| --- | --- | --- |
| Compatibility | NF1 | The Supplier shall ensure that any APIs within the Supplier Solution are based on RESTful or JSON. |
| Compatibility | NF2 | The Supplier shall ensure that the Supplier Solution complies with industry open standards. |
| Compatibility | NF3 | The Supplier shall ensure that the Supplier Solution exposes its main functions as services. |
| Compatibility | NF4 | The Supplier shall ensure that the Supplier Solution exposes, uses and integrates services provided by other (external) systems. |
| Compatibility | NF5 | The Supplier shall ensure that the Supplier Solution exposes, uses and integrates data provided by other (external) systems. |
| Compatibility | NF6 | The Supplier shall provide a service that can connect with other systems (internal and external) so that other systems can use the data directly without the need for unwieldy export-import activities. |
| Compatibility | NF7 | The Supplier shall ensure that the Supplier Solution has a flexible and open software architecture. |
| Compatibility | NF8 | The Supplier shall ensure that the Supplier Solution has provisions for legacy integration using mechanisms such as an adapter framework. |
| Compatibility | NF9 | The Supplier shall ensure that the Supplier Solution modules provide services that are published using the Open API Specification. See Schedule 2.3 (*Standards*). |
| Compatibility | NF10 | The Supplier shall ensure that the Supplier Solution modules provide services that are described in such a way so they can be used by an (expert) third party. |
| Compatibility | NF11 | The Supplier Solution shall be compliant with Government Digital Service technology and digital standards as identified in Schedule 2.3 (*Standards*). |
| Compatibility | NF12 | The Supplier Solution shall be designed and built-in order to Progressive Web App platform. |
| Compatibility | NF13 | The Supplier Solution shall enable interoperability of components. |
| Compatibility | NF14 | The Supplier Solution shall provide an API (using RESTful or JSON) for the bulk download and upload of data. |
| Compatibility | NF15 | The Supplier Solution shall provide the ability for End Users to access (read only) all “live” data via API (RESTful or JSON) conforming to [API technical and data standards (v2 - 2019) - GOV.UK](https://www.gov.uk/guidance/gds-api-technical-and-data-standards) where relevant. |
| Compatibility | NF16 | The Supplier Solution shall use open standards and file formats. |
| Compatibility | NF17 | The Supplier Solution will provide APIs that will allow other applications direct access to data at source or will allow data to be extracted into another data repository. |
| Maintainability | NF18 | The Supplier shall ensure maintainability of components without a disproportionate impact on other components. |
| Maintainability | NF19 | The Supplier Solution shall enable enhancement of components without disproportionate effort. |
| Maintainability | NF20 | The Supplier Solution shall enable re-usability of components. |
| Portability | NF21 | The Supplier shall design the Cloud Service Deployment Models used in the Supplier Solution to deliver a modern IT platform and more efficient Services. |
| Portability | NF22 | The Supplier shall design the Cloud Service Models used in the Supplier Solution to deliver a modern IT platform and more efficient Services. |
| Portability | NF23 | The Supplier shall ensure that the Supplier Solution consists of discrete pieces of software (modules) that provide application functionality through well-defined services to other modules and applications. |
| Portability | NF24 | The Supplier shall ensure that the Supplier Solution modules provide services that impose low consumer coupling and that themselves are decoupled from its surrounding environment. |
| Portability | NF25 | The Supplier Solution shall be supplied as a cloud-based software service. |
| Portability | NF26 | The Supplier Solution shall enable portability to alternative architectures or platforms |
| Portability | NF27 | The Supplier Solution shall have the ability to export data in bulk when required for disclosure purposes, including any metadata associated with the information which provides context and the ability to understand how the information is structured once it is outside of the Supplier Solution. |
| Portability | NF28 | The Supplier Solution shall provide access to all services and environments through an appropriate user interface so that I can help support users and manage the service. |
| Portability | NF29 | The Supplier Solution shall ensure all 'at rest' data (including archives) to be sited within the United Kingdom, European Union, or a European Economic Area member state so that the service is compliant with the Data Protection Act 2018 |
| Portability | NF30 | The Supplier Solution shall be able to manage the distribution of data under the licences specified by the Supplier so that the service can support flexible data licensing. |
| Portability | NF31 | The Supplier Solution shall not conflict with the Authority’s IT Standards and Guidance so that the service will run smoothly. |
| Reliability | NF32 | Software application errors in the Supplier Solution shall be logged through an agreed ITSM process that is controlled from receipt of the initial fault report to fix of the Software. |
| Reliability | NF33 | The Supplier’s Disaster recovery site shall be kept at a safe distance in accordance with Good Industry Practice to eliminate the risk of both sites being made unavailable at the same time due to any unforeseen Disaster. |
| Reliability | NF34 | The Supplier shall activate the Disaster recovery site within twelve (12) hours for Tier 2 and two (2) hours for Tier 1 of the Disaster. |
| Reliability | NF35 | The Supplier shall automate monitoring of the Supplier Solution to optimise the delivery of the Services. |
| Reliability | NF36 | The Supplier shall provide a Disaster recovery site in accordance with Good Industry Practice and the requirements of Schedule 8.6 (Service Continuity Plan and Corporate Resolution Planning) to allow full recovery of the Services should the primary site fail. |
| Reliability | NF37 | The Supplier shall store data and information in persistent storage that allows for efficient retrieval to support data analysis. |
| Reliability | NF38 | The Supplier shall take regular backups that ensure in the event of disaster, that no data is more than twenty-four (24) hours out of date. |
| Reliability | NF39 | The Supplier Solution shall a deliver a maximum Recovery Point Objective (RPO) of one (1) minute for Tier 1 data. |
| Reliability | NF40 | The Supplier Solution shall a deliver a maximum Recovery Time Objective (RTO) of one (1) hour for Tier 1 data. |
| Reliability | NF41 | The Supplier Solution’s ‘standard’ operational (Tier 2) service shall be available between 08:00 and 17:30 Monday to Friday with Tier 1 services being available twenty-four (24) daily for every day of the year and in accordance with Schedule 2.2 (*Performance Levels*). |
| Reliability | NF42 | The Supplier Solution shall be capable of ‘rolling back’ to a known working state should the introduction of an upgrade or enhancement be found to be causing Incidents and Problems in the Live Environment. |
| Reliability | NF43 | The Supplier Solution shall be resilient to multiple and cascading subsystem failures. |
| Reliability | NF44 | The Supplier Solution shall broadcast a status upon shut down and/or re-start to all relevant End Users. |
| Reliability | NF45 | The Supplier Solution shall enable the capture of usage information to support benefits realisation. |
| Reliability | NF46 | The Supplier Solution shall have a function that logs all commands generated by the software applications/modules and the End Users. |
| Reliability | NF47 | The Supplier shall provide a method of allowing critical specified end users to carry on accessing agreed datasets during an outage so that critical end user services are not impacted. |
| Reliability | NF48 | The Supplier shall provide visibility of the methods by which continuous availability is maintained do not involve service components (or connections to main networks) that are a single point of failure so that they will not be impacted by the same catastrophic event (e.g., power outage, flooded buildings etc.). |
| Security | NF49 | The Supplier must demonstrate any security certification (e.g. ISO27001, Cyber Essentials Plus) and provide independent certificates for validation. |
| Security | NF50 | The Supplier must provide a security management plan referencing their security policies and procedures. |
| Security | NF51 | The Supplier must ensure that all staff with access to Authority information, data or systems are vetted to appropriate standards (minimum BPSS or national equivalent with elevated clearance levels for certain administrative role types to be agreed with the Authority). |
| Security | NF52 | The Supplier must identify all third parties involved in the supplier's service, detail the services they provide and provide evidence that they will meet the same security standards of the Supplier. |
| Security | NF53 | The Supplier must comply with the Defra Security Assurance process (process can be provided on request). |
| Security | NF54 | The Supplier must provide details of the incident management process relating to security incidents involving Authority information, data or systems. |
| Security | NF55 | The Supplier must provide details of the vulnerability management process relating to the systems processing or hosting Authority information as part of the supplier's service. |
| Security | NF56 | The Supplier must agree to, and provide support for, an IT Health Check of the service carried out by an independent 3rd party under the NCSC CHECK Scheme prior to go live and at agreed intervals throughout the life of the Service. Vulnerabilities discovered as part of this activity will be remediated in line with Authority risk appetite. The latter can be provided on request. |
| Security | NF57 | The Supplier must make the Authority aware of any significant changes to the service. Such changes might include re-hosting, architectural changes, major code changes or changes to support arrangements. |
| Security | NF58 | The Supplier must provide details on how the service is segregated from other customers so that the Authority can determine whether the service is adequately protected, including evidence of adherence to established best practice such as adherence to security controls recommended by (e.g.) OWASP, NIST, etc. |
| Security | NF59 | The Supplier must provide details on how they will manage access control to ensure that access to Authority data is limited to only that required for users to perform their roles. |
| Security | NF60 | All access to the service by Supplier staff must be logged and stored securely for an agreed period should analysis of this information be required. |
| Security | NF61 | The Supplier should provide evidence of management of the integrity of the service data, e.g., after a service outage. |
| Security | NF62 | The Supplier must provide evidence of monitoring for unusual activity and maintenance of records of events for future analysis and make available any logs and audit data relating to the service if required by the Authority. |
| Security | NF63 | The Supplier must confirm that data will only be stored and processed for its intended purpose and that the storage and processing will comply with relevant legislation. |
| Security | NF64 | The Supplier must confirm that the service will be capable of supporting data up to a maximum protective marking of OFFICIAL- SENSITIVE. |
| Security | NF65 | The Supplier must confirm that system data will not be shared with any other party without prior approval and that only the minimum data will be shared to meet the approved needs. |
| Security | NF66 | The Supplier should confirm that passwords and account management capabilities of the Service meet the criteria set out in the Authority's Password Policy. |
| Security | NF67 | The Supplier must detail any international supply chains upon which the service is dependent, to include software, hardware and/or services. |
| Usability | NF68 | The Supplier shall design the Supplier Solution in accordance with the standards and policies listed in Schedule 2.3 (*Standards*). |
| Usability | NF69 | The Supplier shall design the Supplier Solution to meet the identified needs of the End Users. |
| Usability | NF70 | The Supplier shall ensure that colour is used in presentation of information to support the End User in the processes of completing the required operational task. |
| Usability | NF71 | The Supplier shall ensure that the screen lay-out supports the End User in the processes of completing the required operational task. |
| Usability | NF72 | The Supplier shall ensure that the End User interface for the Supplier Solution is consistent as to the design of controls, warnings, indicators and layout of presentation elements. |
| Usability | NF73 | The Supplier shall ensure that the End User interface for the Supplier Solution draws the natural focus of the End User to the place where attention is required to complete the required operational task. |
| Usability | NF74 | The Supplier shall ensure the Supplier Solution is accessible to End Users who have communication difficulties stemming from a protected characteristic as set out in the Equality Act, with the outcome not being inferior in terms of quality or standard. |
| Usability | NF75 | The Supplier shall provide a End User interface for the Supplier Solution to meet (or exceed) Level AA of the Web Content Accessibility Guidelines (WCAG) 2.1 (W3C Recommendation June 2018). |
| Usability | NF76 | The Supplier shall provide an End User interface for the Supplier Solution to support the avoidance of erroneous input e.g., using data validation, on screen tips and context dependent help being available. |
| Usability | NF77 | The Supplier shall provide a End User interface for the Supplier Solution to support experienced End Users by providing quick entry input means. |
| Usability | NF78 | The Supplier shall provide a End User interface for the Supplier Solution so as to support the overall objectives for efficiency by providing an efficient experience for End Users so as to minimise the delays in performing tasks. This shall include as a minimum: |
| a)    consideration of the number of clicks to carry out processes; |
| b)    presentation of information as to be readily identifiable as to its relevance; |
| c)    grouping of related functions to simplify processes; |
| d)    pre-filling of screens as End Users progress through standard workflows; |
| e)    use of auto-complete; |
| f)     consistency. |
| Usability | NF79 | The Supplier Solution shall be configured to perform all internal Supplier Solution calculations using the international system of units (e.g. metre and seconds). |
| Usability | NF80 | The Supplier Solution shall be configured to publish date and information using the most appropriate units of time for the circumstances, consideration having been given to End User needs. |
| Usability | NF81 | The Supplier Solution shall enable effective use of role-based access control and measures such as single sign on to remove any need for End Users to re-authenticate needlessly. |
| Usability | NF82 | The Supplier Solution shall enable persistence of End User-settings between sessions. e.g., when logging in to the system it displays the same location and layer state as when the End User logged out. |
| Usability | NF83 | The Supplier Solution shall ensure no End User-side software installation required. |
| Usability | NF84 | The Supplier Solution shall integrate with the Authority’s identity management service for single sign on purposes. |
| Usability | NF85 | The Supplier Solution shall provide an ergonomic End User interface. |
| Usability | NF86 | The Supplier Solution shall provide latency that is acceptable to End Users |
| Usability | NF87 | The End User interface for the Supplier Solution shall be browser-based and shall work with Open Web Platform, World Wide Web Consortium (W3C) standards-compliant (cross browser), and cross-platform compliant web browsers (e.g., Google Chrome and Firefox). |
| Standards | NF88 | The Supplier Solution shall follow the government [Digital by Default Service Standard](https://www.gov.uk/service-manual/digital-by-default) to be compliant with the standards set for IT services by the Government Digital Service (GDS). |
| Standards | NF89 | The Supplier shall ensure that each service component will operate correctly on the GDS list of [supported browsers and devices](https://www.gov.uk/service-manual/user-centred-design/browsers-and-devices). |
| Standards | NF90 | The Supplier Solution shall meet the W3C Web Content Accessibility Guidelines (WCAG) conformance level AA, the latest guidelines are known as [WCAG 2.1](https://www.w3.org/TR/WCAG21/), so that the service and the services it provides are compliant with the GDS policy on accessibility. |
| Standards | NF91 | The Supplier shall adhere to the [GOV.UK Open Standards principles](https://www.gov.uk/government/publications/open-standards-principles/open-standards-principles) so that the service and the services it provides are compliant with the GDS principles on open standards. |
| Standards | NF92 | The Supplier shall adhere to the compulsory open standards profiles that have been [adopted for use in government](http://standards.data.gov.uk/challenges/adopted) so that the service and the services it provides are compliant with the open standards that GDS have approved. |
| Standards | NF93 | The Supplier Solution shall be able to read, create and revise documents according to GOV.UK guidance on ['Sharing or collaborating with government documents](https://www.gov.uk/government/publications/open-standards-for-government/sharing-or-collaborating-with-government-documents)' and the [Open Document Format 1.3 standard](https://www.oasis-open.org/2021/06/16/opendocument-v1-3-oasis-standard-published/) so that the service and the services it provides are compliant with GDS guidance on the formats that should be used for editable documents that can be shared with emergency responders, partners or the general public. |
| Standards | NF94 | The Supplier Solution shall provide service outputs provided through GOV.UK web pages to conform to [GDS design patterns](https://www.gov.uk/service-manual/user-centred-design/resources/patterns), [service look and feel](https://www.gov.uk/service-manual/design), [page elements](https://design-system.service.gov.uk/), [standard header and footer element](https://www.gov.uk/service-manual/user-centred-design/resources/header-footer.html) and [accessibility](https://www.gov.uk/service-manual/user-centred-design/accessibility) so that the services provided to the general public are compliant with GDS standards. |
| Standards | NF95 | The Supplier Solution shall provide services which are provided to the general public to record and monitor the cost per transaction as defined in the [Digital by Default Service Standard](https://www.gov.uk/service-manual/measurement/cost-per-transaction.html) so that the cost of publishing data for various customers can be measured and improved upon. |
| Standards | NF96 | The Supplier Solution shall provide service components to report performance data via the [GDS Performance Platform](https://www.gov.uk/service-manual/measurement/performance-platform.html). |
| Standards | NF97 | The Supplier shall ensure that standard application program interfaces (APIs) are exposed so that data can be passed into and out of the service to other Authority services, and where appropriate, also as open data. |
| Standards | NF98 | The Supplier shall use data standards that adhere to national/international standards wherever possible so that others will be able to use our data more easily. |
| Standards | NF99 | The Supplier shall use data standards that are consistent with other Authority services where national/international standards cannot be used so that data can be used in Authority corporate reporting without having to edit or transform it. |
| Performance efficiency | NF100 | The Supplier shall design the Supplier Solution to minimise the total ongoing running cost of the Supplier Solution, including operating and maintenance costs. |
| Performance efficiency | NF101 | The Supplier Solution shall be capable of managing the traffic of [500] concurrent End Users carrying out mixed tasks, such that the End User experience is acceptable for normal web application usage. Typical tasks performed via the Supplier Solution will be: |
| a)    viewing the map interface; |
| b)    searching for data; |
| c)    viewing report records; and |
| d)    downloading data. |
| Performance efficiency | NF102 | The Supplier Solution shall be resilience in the event of peaks in demand. |
| Performance efficiency | NF103 | The Supplier Solution shall be resilient to the volume of stored Authority Data without degradation of the Services during peaks in demand. |
| Performance efficiency | NF104 | The Supplier Solution shall be scalable, not requiring disproportionate effort to meet changing Authority requirements. |
| Performance efficiency | NF105 | The Supplier Solution shall have an initial storage capacity of [25TB]. This shall be expandable to meet future needs. |
| Performance efficiency | NF106 | The Supplier Solution shall index data for fast searching. |
| Performance efficiency | NF107 | The Supplier Solution shall provide adequate bandwidth to enable satisfactory End User experience. |
| Performance efficiency | NF108 | The Supplier Solution shall provide adequate storage. |
| Performance efficiency | NF109 | The Supplier Solution shall utilise relational data models for storage and retrieval of data. |
| Performance efficiency | NF110 | The Supplier Solution will be scalable to support an additional concurrent End Users as required by the Authority over the Term. |
| Backup | NF111 | The Supplier shall ensure running of the backup will have no impact on the live environment(s) so that performance and availability are not affected when data backups are being run. |
| Backup | NF112 | The Supplier Solution shall ensure all data backups will be stored in a secure location, physically separated from the live environment(s), for a retention period agreed with the Authority so that data backups are available for analysis or restore and are independently resilient of the live environment(s). |
| Backup | NF113 | The Supplier shall ensure data backups are disposed of in a secure method (to be agreed with the Authority) at the end of the retention period so that data backups that are no longer required are dealt with appropriately. |
| Backup | NF114 | The Supplier Solution shall ensure that all non-live environments will be backed up using the same approach taken for the live environment(s) but to have their own schedules so that all environments are backed up using a consistent approach and at an appropriate frequency. |
| Backup | NF115 | The Supplier Solution shall ensure all non-live environments will be refreshed from the live environment(s) as required so that all environments can be synchronised when required. |
| Change Management | NF116 | The Supplier shall ensure releases and planned maintenance are agreed with the Supplier and the Authority at least 10 working days in advance in accordance with an agreed change management schedule so that associated risks can be managed. |
| Change Management | NF117 | The Suppler facilitate a go/no-go discussion with the Authority on the day of the planned downtime so that major incidents (such as flooding or a disease outbreak) can be considered. |
| Change Management | NF118 | The Supplier shall keep all software (operating system, firewalls, servers, applications, databases, etc.) in support using a documented security patch regime so that the service is appropriately managed and maintained. |
| Change Management | NF119 | The Supplier shall provide evidence that all patches are being implemented on a regular basis. |
| Change Management | NF120 | The Supplier shall inform the Authority who is responsible, accountable, consulted and informed (RACI) for changes so that changes can be appropriately managed. |
| Change Management | NF121 | The Supplier shall inform the Authority of the risk and impact of changes so they can be appropriately managed. |
| Change Management | NF122 | The Supplier shall provide a documented process for making changes to the Service so that I can determine whether this meets our needs. |
| Change Management | NF123 | The Supplier shall inform the Authority of the owner and terms of use for each element of background intellectual property used in the service so that dependencies are understood. |
| Change Management | NF124 | The Supplier shall inform the Authority of the owner and terms of use for any foreground intellectual property where a service component is developed for us by the Supplier so that I can ensure it is appropriately managed. |
| Archive | NF125 | The Supplier shall archive datasets so that data can be retired if required. |
| Archive | NF126 | The Supplier shall ensure archived datasets are retained according to the defined retention period (which is configurable and is set on a per dataset basis in agreement with Authority data custodian). |
| Archive | NF127 | The Supplier shall ensure archived datasets that have exceeded their retention period to be permanently disposed of (the method of disposal to be agreed on a per dataset basis with the Authority data custodian). |
| Archive | NF128 | The Supplier shall update and override the default retention period for all datasets, a group of datasets or a single specified dataset so that legal changes to retention requirements or decisions regarding the retention of specific datasets can be actioned. |
| Audit | NF129 | The Supplier shall flag which data needs to be auditable so that only flagged data is audited. |
| Audit | NF130 | The Supplier shall provide a service to record information (such as user, date amended, changes made, etc.) against flagged data so that a full audit trail can be maintained. |
| Audit | NF131 | The Supplier shall provide audit logs to be read only so that their integrity is maintained. |



**FUNCTIONAL REQUIREMENT’S STRUCTURE**

**ANNEX B – GENERAL**

| **ID** | **Requirement** |
| --- | --- |
| FR\_GE\_1 | The Supplier Solution shall provide the capability to expand the service so that the Authority can meet future requirements or obligations to share data. |
| FR\_GE\_2 | The Supplier shall provide the capability to modify, revise and update current services so that services are able to be changed in a flexible and cost-effective manner in response to changing circumstances, drivers (e.g. legislation changes) or service demand. |
| FR\_GE\_3 | The Supplier shall provide URLs that are persistent so that the Service meets Government guidance on URL persistence and is seen as a trusted source of data that users can be confident will continue to make data available. |
| FR\_GE\_4 | The Supplier shall ensure URLs to be unique and predictable so that the Authority can ensure that identification of data is simple and works across multiple systems (metadata, data publishing, etc.). |
| FR\_GE\_5 | The Supplier shall provide URLs that are supplier agnostic and portable so that users’ access to data is not impacted by any future change of Supplier. |
| FR\_GE\_6 | The Supplier shall ensure URLs in existing services and API end points must be maintained and transferred in the next iteration of the Data Services Platform. |
| FR\_GE\_7 | The Supplier shall provide the capability to test, implement, operate and manage new services so that services are productionised and operationally managed. |
| FR\_GE\_8 | The Supplier Solution shall have the capability to be able to build Apps with near real time data so that users can access the most up-to-date source data |
| FR\_GE\_9 | The Supplier Solution shall be scalable so that the Authority can meet future requirements to share data. |
| FR\_GE\_10 | The Supplier Solution shall provide higher dedicated service levels to specified datasets and/or users, as required so that the level of service that is provided by the Supplier to the Authority is based on identified priority needs. |
| FR\_GE\_11 | The Supplier Solution shall provide capabilities for Defra users to publish [W3C Star Open Data](https://www.w3.org/2011/gld/wiki/5_Star_Linked_Data) |
| FR\_GE\_12 | The Supplier Solution shall not rely on manual process where possible. |
| FR\_GE\_13 | The Supplier Solution shall have the capability to make creation and updating of records to be as simple as possible so that the service can be used by users with varying skillsets. |
| FR\_GE\_14 | The Supplier Solution shall be flexible so that when datasets are changed or updated, or new datasets are introduced, the service will continue to work correctly and be updatable in a cost-effective manner. |
| FR\_GE\_15 | The Supplier shall support users of the Service so that they are able to easily access and utilise the data they require. |
| FR\_GE\_16 | The Supplier Solution shall be designed in a responsive manner for use on mobile devices. |
| FR\_GE\_17 | The Supplier Solution shall ensure there is capability to specify customised requirements to develop services and implement changes. |
| FR\_GE\_18 | The Supplier Solution shall provide a service where customised requirements can be supplied so the changes and new services can be developed. |
| FR\_GE\_19 | The Supplier Solution shall provide the capability to modify, revise, test and update existing data services so that services are able to be changed in a flexible and cost-effective manner in response to changing circumstances, drivers (e.g. legislation changes) or service demand. |
| FR\_GE\_20 | The Supplier Solution shall provide the capability to create, test, modify, revise and update new data services so that services are able to be changed in a flexible and cost-effective manner in response to changing circumstances, drivers (e.g. legislation changes) or service demand. |
| FR\_GE\_21 | The Supplier Solution shall have a formal change control process so new and amended data products and services are managed appropriately. |
| FR\_GE\_22 | The Supplier Solution shall have the ability to update and incorporate new data service specifications so that the latest services specifications are available to users. |
| FR\_GE\_23 | The Supplier Solution shall have the capability to specify that the service only actively presents the latest version of a data product (marking earlier versions as withdrawn or obsolete) or retains earlier versions and continues to make those available to users of the Service so that the service is flexible enough to meet our needs. |

**ANNEX C – INTERFACE**

| **ID** | **Requirement** |
| --- | --- |
| FR\_IN\_1 | The Supplier Solution’s interface shall be easy to configure and maintain by System Administrators so that content can be incorporated and managed elsewhere in the platform (E.g., search/dashboards/ posts etc.) |
| FR\_IN\_2 | The Supplier Solution shall have consistent Defra branding across all components of the service so that users are aware that it is a Defra group service. |
| FR\_IN\_3 | The Supplier Solution shall have text content and image/elements of the platform to be configurable and maintained by Service Administrators so that the service can be amended without Supplier input. |
| FR\_IN\_4 | The Supplier Solution Apps will be made available as a searchable catalogue, ensuring Apps are easily accessible and presented to user in a manner that allows quick assessment of what is available and which App is relevant to their needs. App gallery to be easy to configure and maintain by System Administrators. |
| FR\_IN\_5 | All elements in the Supplier Solution shall be integrated so that users have a uniform experience across the service. |
| FR\_IN\_6 | The Supplier Solution shall ensure that pattern designs following <https://pautva.github.io/dd3-wireframes/#/main-content/introduction> and Introductory blog post at: https://geospatialcommission.blog.gov.uk/2021/09/10/the-secret-to-great-geospatial-data-portals-start-with-the-user/ best practice can be used. |
| FR\_IN\_7 | The Supplier shall ensure all guidance, internal and external, is accessible and embedded within the solution rather than as a separate resource. |
| FR\_IN\_8 | The Supplier Solution shall provide a dynamic interface re-using elements, such as the Knowledgebase to keep users informed of developments and updates. |
| FR\_IN\_9 | The Supplier Solution shall have the capability to created/updated by automation, use of templates or controlled lists. |
| FR\_IN\_10 | The Supplier shall ensure that any APIs within the Supplier Solution, related to reporting, such as Help Desk, Service Levels etc. include a human-readable interface or output. |

**ANNEX D – DISCOVERY AND SEARCH**

| **ID** | **Requirement** |
| --- | --- |
| FR\_DS\_1 | The Supplier Solution shall have the capability to search for data based on a map, using a pre-defined/user defined area so that users can find data particular to a specific area. |
| FR\_DS\_2 | The Supplier Solution shall provide functionality to offer suggestions based on associated searches e.g. 'if you are interested in this then you might also be interested in that' so that users are informed of data that are related to their searches. |
| FR\_DS\_3 | The Supplier Solution shall provide the capability to search by category, such as Topic or Theme (e.g. Flood) or other criteria, including location, so that all datasets relevant to the search term are returned. |
| FR\_DS\_4 | The Supplier Solution shall have the capability to search for multiple datasets and add to a basket so that users can find and access data packages are needed for analysis. |
| FR\_DS\_5 | The Supplier Solution shall have the capability to filter by service type (WMS, WFS, Download etc.) with signposting where data is if published on a different platform other than the DSP alongside the web resource link. |
| FR\_DS\_6 | The Supplier Solution shall have the capability for public facing Metadata to be available to generalist search engines so that metadata catalogue results are returned from an internet search (e.g. Chrome, Google). |
| FR\_DS\_7 | The Supplier Solution shall have the capability to publish metadata records with a Google dataset tag so that metadata catalogue results are shown in a Google Dataset search. |
| FR\_DS\_8 | The Supplier Solution shall have the capability to provide a search interface for data across the Defra group so that it is accessible to human and machine searches. |
| FR\_DS\_9 | The Supplier Solution shall have the capability to limit search capability to user access permissions so that users can only search for data they have access to or access under a Conditional Licence. |
| FR\_DS\_10 | The Supplier Solution shall have the ability to search/filter specifically for data format, service type etc. (including spatial services, APIs Apps etc.) so that use of DSP Apps is maximised and to provide users with an efficient service. |
| FR\_DS\_11 | The Supplier Solution shall have the capability for searches to apply a filter prior to search and sorting by publisher/organisation, ascending date modified/revision, last time data was modified on DSP, by organisation. |
| FR\_DS\_12 | The Supplier Solution shall have the capability to search metadata on how data is made available and to which User Groups so that metadata can be searched on how data is made available. |
| FR\_DS\_13 | The Supplier Solution shall have the functionality to allow users to search for information and data across the entire service - with results shown in one place, e.g. a search widget. |
| FR\_DS\_14 | The Supplier Solution shall have the capability for Metadata catalogue content to be available to search/query from other interfaces e.g. intranet or SharePoint linked to user access permissions. |
| FR\_DS\_15 | The Supplier Solution shall have the capability to query the data for an associated metadata record. |
| FR\_DS\_16 | The Supplier Solution shall have the capability to filter search results by date of last update so that a user can view by search results by last update. |
| FR\_DS\_17 | The Supplier Solution shall have the capability to search for data based on a query (distance, LiDAR currency) so that users can find data relevant for my analysis. |
| FR\_DS\_18 | The Supplier Solution shall have the capability to filter search results by organisation or theme so that a user can view search results by data owner/publisher. |
| FR\_DS\_19 | The Supplier Solution shall be able to search for third party datasets that are available and have correct permissions set to be able to access them when appropriate. Relevant Ts&Cs to be available with the Third Party Data so that users do not need to acquire them again. |
| FR\_DS\_20 | The Supplier Solution will provide Data Services available on the Platform available as a searchable catalogue, ensuring content is easily accessible and presented to user in a manner that allows quick assessment of what is available and which App/API is relevant to their needs. API portal to be easy to configure and maintain by the System Administrators. |
| FR\_DS\_21 | The Supplier Solution shall have the capability to search through all metadata by any attribute or combination of attributes (including dates and date ranges) so that users can search for the type of data they need to access. |
| FR\_DS\_22 | The Supplier Solution shall have the capability to filter the values of attributes when selecting metadata search parameters and autocomplete for existing values so that users can select attribute values that exist and do so efficiently. |
| FR\_DS\_23 | The Supplier Solution shall have the capability to be able to control the number of records that are displayed on each page of search results so that when metadata is searched users are able to navigate more easily through the results. |
| FR\_DS\_24 | The Supplier Solution shall have the capability to be able to control the order in which search results are displayed (e.g. recency, relevance etc.) so that the results are displayed in the order are preferred for each search. |
| FR\_DS\_25 | The Supplier Solution shall have the capability to filter the search results that are being displayed by selecting/deselecting various attribute values in the results display so that the search results are reduced to those that are of interest to users. |
| FR\_DS\_26 | The Supplier Solution shall ensure the capability to return a search result (JSON) entered in the Data Services Platform site from the Metadata Catalogue via an API so that search results are consistent between Data Service Platform components. |
| FR\_DS\_27 | The Supplier Solution shall have the capability for rephrasing, autofill, and suggestions in user searches. |
| FR\_DS\_28 | The Supplier Solution shall have the capability to define which metadata attributes are displayed in the search results so that users can control what others will see as the most important attributes to show users when search results are displayed in list form. |
| FR\_DS\_29 | The Supplier Solution shall have the capability to easily search, find and access data in a format suitable to user needs. |
| FR\_DS\_30 | The Supplier Solution shall have the capability to quickly and easily ascertain which data have been recently updated (last week/last month/since last visit) so that users can identify data requiring update. |
| FR\_DS\_31 | The Supplier Solution shall ensure Services and Apps consuming DSP but not directly hosted on the DSP are discoverable and accessed via DSP services. |
| FR\_DS\_32 | The Supplier Solution shall have the capability to search API and widget documentation that is integrated with associated metadata so that users can reuse the data service that is needed. |
| FR\_DS\_33 | The Supplier Solution shall ensure there is capability to search API and widget documentation are integrated with associated metadata. |

**ANNEX E – GUIDANCE AND FEEDBACK**

| **ID** | **Requirement** |
| --- | --- |
| FR\_GF\_1 | The Supplier Solution shall provide accessible guidance and support so that users can seamlessly get support and guidance. |
| FR\_GF\_2 | The Supplier Solution shall have the capability to configure help text and/or links to further help information for some attributes so that Technical Leads can access this help when they are creating or editing metadata records and know who to contact if they need further assistance. |
| FR\_GF\_3 | The Supplier Solution shall provide the capability for users to ask and submit questions or feedback on a service or data held on the Data Services Platform. |
| FR\_GF\_4 | The Supplier Solution shall provide the capability to respond to specific user questions, automatically, based on previous Knowledgebase responses. |
| FR\_GF\_5 | The Supplier Solution shall provide the capability to notify Service Administrators of the service about issues, feedback and ask questions about the Service and update and respond to users. |
| FR\_GF\_6 | The Supplier Solution shall provide the capability to provide feedback and ask questions via Social Media platforms. |
| FR\_GF\_7 | The Supplier Solution shall provide the capability to automatically capture the context of associated user feedback, such as functionality or data being accessed, so that support tickets can be pre-populated for ease of response by the Supplier or Service Manager as required. |
| FR\_GF\_8 | The Supplier Solution shall provide the capability to respond to questions on the service, relevant to the service the user is accessing. |
| FR\_GF\_9 | The Supplier Solution shall provide the capability for users to ask a question or raise a fault. |
| FR\_GF\_10 | The Supplier Solution shall provide the capability to automatically provide Help or respond to user questions through the user's context on the Data Services Platform. |
| FR\_GF\_11 | The Supplier shall provide a notification on the landing page of the Supplier Solution of any outage. |

**ANNEX F – PUBLISHING**

| **ID** | **Requirement** |
| --- | --- |
| FR\_PU\_1 | The Supplier Solution shall provide the capability for data publication to be automated as far as possible so that the service can be used to respond to an immediate business need to publish data. |
| FR\_PU\_2 | The Supplier Solution shall have the capability to host and publish large datasets (e.g. the Digital Elevation Model) without having to decompose them into smaller datasets so that consumers do not have to join the smaller datasets to get the whole dataset |
| FR\_PU\_3 | The Supplier Solution shall ensure a formal change control process for data publication both when new datasets are brought into the service and when existing datasets are amended so that changes are appropriately managed and risks mitigated. |
| FR\_PU\_4 | The Supplier Solution shall have the capability to bulk upload new or updated datasets into the service for publication, without Supplier support. |
| FR\_PU\_5 | The Supplier Solution shall have the capability to publish data without users having to email or send physical media so that efficiencies can be achieved by using a standard data transfer mechanism for all datasets. |
| FR\_PU\_6 | The Supplier Solution shall be able to publish data autonomously so that data does not need to be sent to the Supplier. |
| FR\_PU\_7 | The Supplier Solution shall have the capability to upload data without completing metadata fields that are not relevant to a user’s data or can be auto populated. |
| FR\_PU\_8 | The Supplier Solution shall provide an instance where a dataset is published through multiple DSP services (for example spatial Data Services and Linked Data) the update process is seamless and with no delay. |
| FR\_PU\_9 | The Supplier Solution shall provide the capability to support self-publication of data, with no or minimal Supplier involvement, for assigned Defra group users. |
| FR\_PU\_10 | The Supplier Solution shall provide the capability to support the publication of both structured and non-structured data. |
| FR\_PU\_11 | The Supplier Solution shall provide the capability to share data via a simple public facing service, to timescales defined in Schedule 2.2 (*Performance Levels*) so that data can be published quickly and efficiently. |
| FR\_PU\_12 | The Supplier Solution shall have the capability to manually upload new data to the service, without Supplier support or the need for bespoke software. |
| FR\_PU\_13 | The Supplier Solution shall ensure validation errors are written in plain English so that errors can be easily understood to facilitate record correction. |
| FR\_PU\_14 | The Supplier Solution shall have the capability to schedule publication for a specific day and time so that publication can be scheduled to co-ordinate with a specific event (e.g., an announcement) without having to wait for that day and time. |
| FR\_PU\_15 | The Supplier Solution shall be able to identify which specific records do not validate when harvested (not just the number of non-validating records) so that records can easily be corrected. |
| FR\_PU\_16 | The Supplier Solution shall have the capability to specify and supply styling/display specifications/symbolisation to users alongside data and to incorporate standardised styling/symbolisation into services, such as WMS, so that data supplied via the service is directly usable by users. |
| FR\_PU\_17 | The Supplier Solution shall provide the capability to publish authorised data quickly during a major incident (such as flooding or a disease outbreak), if necessary, bypassing certain processes such as data quality validation or change management sign-off. |
| FR\_PU\_18 | The Supplier Solution shall have the capability for some attributes of a metadata profile pre-populated so that users can choose to use these pre-populated values instead of having to type them in. |
| FR\_PU\_19 | The Supplier Solution shall be able to assign supporting information, or links to supporting information, such as licences, guidance documents and metadata records so that data supplied via the service contains all relevant supporting information. |
| FR\_PU\_20 | The Supplier Solution have the capability for each Defra organisation to be able to publish (harvest) its own metadata so that any Defra organisation can act autonomously. |
| FR\_PU\_21 | The Supplier Solution shall have the capability for each Defra organisation to be able to pass the publishing capability to another so that the organisations can choose to operate in a semi-autonomous manner where it is more efficient to do so. |
| FR\_PU\_22 | The Supplier Solution shall have the capability to edit and update the generic contact details used by the service when transforming records for external publication and have the changes applied to all newly harvested records so that contact details can be kept current. |
| FR\_PU\_23 | The Supplier Solution shall provide the capability to notify when new data has been successfully uploaded, received and published so that suitable assurance is in place. |
| FR\_PU\_24 | The Supplier Solution shall provide a service to support the publication of both structured and non-structured data with no spatial component. |
| FR\_PU\_25 | The Suppliers Solution shall have the capability to suppress the publication of specific attributes contained in a metadata profile supported by the Metadata Service so that these attributes are not visible outside of Defra. |
| FR\_PU\_26 | The Supplier Solution shall provide the necessary interfaces and import mechanisms to enable the provision of new, updated and changed data products so that updating the service is flexible and cost effective. |
| FR\_PU\_27 | The Supplier Solution shall provide a service to check new, updated or changed data for errors upon receipt and if errors are detected either advise the Servicer Administrator that they constitute acceptable errors or reject the data product entirely so that the quality of data and the resilience of the service can be assured. |
| FR\_PU\_28 | The Supplier Solution shall provide the capability to notify users when new data for my organisation has been successfully uploaded, received and published so that suitable assurance is in place. |
| FR\_PU\_29 | The Supplier Solution shall ensure that the metadata that is captured internally adheres to the relevant standards to which Defra needs to publish externally so that metadata is compliant and usable by others. |
| FR\_PU\_30 | The Supplier Solution shall have the capability to harvest or bulk import metadata mastered in different metadata catalogues into the Defra Metadata Catalogue (where metadata standards permit) so that existing sources of metadata can be consolidated into an authoritative system. |
| FR\_PU\_31 | The Supplier Solution shall provide the capability to bulk (including file based) import and harvest from other metadata systems and view in the same structure and format as existing records so that metadata from Defra group organisation can be combined in a single repository without manual entry. |
| FR\_PU\_32 | The Supplier Solution shall have the capability to automatically harvest metadata from internal systems so that metadata can be easily acquired and support enhanced discovery of datasets. |
| FR\_PU\_33 | The Supplier Solution shall provide the capability for updating data links in metadata to be simple – e.g., automated between metadata and data services; properties of a dataset link to be populated automatically; without the need for laborious manual entry. so that metadata can be managed easily |
| FR\_PU\_34 | The Supplier Solution shall be able to add new metadata standards and associated templates so that relevant metadata can be created depending on the data published. |
| FR\_PU\_35 | The Supplier Solution shall have the capability to publish datasets in an area of DSP that is private and define which users can access it so that Service Managers can control which consumers have access to this dataset |
| FR\_PU\_36 | The Supplier Solution shall provide the capability for the maintenance of metadata records across TEST/UAT/LIVE environments to be simple and automated where possible, without the need for laborious manual entry so that metadata can be managed easily. |
| FR\_PU\_37 | The Supplier Solution shall utilise managed vocabularies from external and internal sources and allocate values from these vocabularies to records as keywords or categories so that vocabularies managed externally to the metadata catalogue can be incorporated. |
| FR\_PU\_38 | The Supplier Solution shall provide automated harvesting or publishing of metadata through a customisable schedule so that metadata is harvested/published at appropriate times. |
| FR\_PU\_39 | The Supplier Solution shall have the capability to publish non-spatial metadata from the Metadata Catalogue so that metadata for non-spatial data can be easily published to [DATA.GOV.UK](https://data.gov.uk) without unnecessarily transforming to a spatial format. |
| FR\_PU\_40 | The Supplier Solution shall publish Catalogue Services for the Web (CSW) so that users can query data before it is accessed. |
| FR\_PU\_41 | The Supplier Solution shall ensure that internal validation of records aligns with the validation applied to records by [DATA.GOV.UK](https://data.gov.uk) when harvesting so that records can be harvested with minimal constraint and delay. |
| FR\_PU\_42 | The Supplier Solution shall replace personal staff details with generic contact details (per Defra organisation) prior to its publication on public facing metadata catalogues (such as [DATA.GOV.UK](https://data.gov.uk)) so that people outside of the Defra group can use the official contact channels and do not access information that would enable them to contact staff directly. |
| FR\_PU\_43 | The Supplier Solution shall have the capability to publish non-spatial datasets without needing to complete spatial dataset elements, conforming to best practice so that a wider range of datasets can be made available to consumers. |
| FR\_PU\_44 | The Supplier Solution shall integrate the Metadata Catalogue with the publication of Linked Data (API) so that a Metadata record is automatically updated when Linked Data are published. |
| FR\_PU\_45 | The Supplier Solution shall ensure that the most recently approved/published version of a metadata record remains live on the Metadata Catalogue/Data Services Platform whilst new edits are completed. |
| FR\_PU\_46 | The Supplier Solution shall ensure a publication facility for metadata that adheres to the ['Guidance for users, publishers and sysadmins](https://github.com/datagovuk/guidance)' provided by [DATA.GOV.UK](https://data.gov.uk) so that metadata is published to [DATA.GOV.UK](https://data.gov.uk) in a standardised and consistent manner. |
| FR\_PU\_47 | The Supplier Solution shall enable publishing of metadata records to the Defra Data Services Platform, [DATA.GOV.UK](https://data.gov.uk) and other external commitments such as [MEDIN](https://medin.org.uk) so that Defra's commitments to make data discoverable. |

**ANNEX G – ACCESS MANAGEMENT**

| **ID** | **Requirement** |
| --- | --- |
| FR\_AM\_1 | The Supplier Solution shall manage user accounts for Internal Users (Defra Active Directory) and External Users (Identity or GOV.UK Accounts) so that users have single sign on and do not need to register for a separate service. |
| FR\_AM\_2 | The Supplier Solution shall be able to define who can supply new data into the service so that supply is restricted to a set of people who are then empowered to make changes. |
| FR\_AM\_3 | The Supplier Solution shall provide a metadata profile template is available for datasets without the need to populate or display fields appropriate to the associated data so that data can be easily published, and only relevant attributes viewed that are associated with the data e.g. non-spatial data. |
| FR\_AM\_4 | The Supplier Solution shall enable a Local Administrators, for each Defra body, to submit and manage the publication of its own data so that any Defra body can act autonomously. |
| FR\_AM\_5 | The Supplier Solution shall allow Local Administrators for each Defra body to be able to run and maintain all elements of the service specifically corresponding to their organisation, on behalf of that organisation (E.g., user management, metadata and data publishing, etc.) so that Defra bodies can manage and maintain their own data supply with no or minimal Supplier involvement. |
| FR\_AM\_6 | The Supplier Solution shall be able to publish new and manage existing data and data services on behalf of any Defra Group organisation and expose licensing conditions in metadata so that supply is restricted to a set of people who are then empowered to make changes. |
| FR\_AM\_7 | The Supplier Solution shall provide the capability for each Defra body to be able to pass the publishing capability to another so that the organisation can choose to operate in a semi-autonomous manner where it is more efficient to do so. |
| FR\_AM\_8 | The Supplier Solution shall have the capability for users to be accept all applicable T&Cs prior to submitting an order for data so that users to be able to view and explicitly accept all applicable T&Cs before submitting an order for data |
| FR\_AM\_9 | The Supplier Solution shall provide the functionality to be able to define the access rights for specific dataset and user/user type so that the service can support flexible data licensing. |
| FR\_AM\_10 | The Supplier Solution shall have the capability to support sharing non-Open Data with a specified Partner User type (e.g. Defra bodies, Local Authorities, partners and co-deliverers, incident responders, etc.) so that the Authority can work collaboratively and share authorised data in a standardised manner, following rules agreed in the relevant data licence. |
| FR\_AM\_11 | The Supplier Solution shall provide a simple approach to permission management based on defined role/group. |
| FR\_AM\_12 | The Supplier Solution shall support sharing Open Data with all users without the need to register and log in to the service so that users can work collaboratively and share authorised data in a standardised manner, following rules agreed in the relevant data licence. |
| FR\_AM\_13 | The Supplier Solution shall have the capability to define who can modify existing data in the service, e.g. update data so that supply is restricted to a set of people who are then empowered to make changes. |
| FR\_AM\_14 | The Supplier Solution shall provide the capability to amend user registration details (such as contact information, password, etc.) so that users can maintain my account without the need for support. |
| FR\_AM\_15 | The Supplier Solution shall be to enable/disable Contractor access to so that they cannot access data when out of contract. |
| FR\_AM\_16 | The Supplier Solution shall be able to manage the membership of users to certain groups to allow/restrict access to records. |
| FR\_AM\_17 | The Supplier Solution shall provide a solution that restricts access to Data/Metadata based on user role/groups. |
| FR\_AM\_18 | The Supplier Solution provide a solution that can distinguish between data available for public use, public use under specific conditions, public use on request under specific conditions, partner use (by Organisation), Internal only use and manage access accordingly. |
| FR\_AM\_19 | The Supplier Solution shall provide a system that can allocate, restrict and report ownership of data/metadata to a named individual/role. |
| FR\_AM\_20 | The Supplier Solution shall ensure users are prompted to review/update records they are responsible for, at an agreed interval so that data/metadata is kept up to date. |
| FR\_AM\_21 | The Supplier Solution shall ensure allocation of owning organisation, business areas and sub-business areas from a managed list of those entities so that a single, centrally managed list can be maintained without the need for the metadata catalogue to hard code/manage/update a separate version. |
| FR\_AM\_22 | The Supplier Solution shall restrict access to reports/dashboard according to organisation, role, user profile etc. so that reports can be accessed by those with the relevant permissions. |
| FR\_AM\_23 | The Supplier Solution shall have the capability to access data that is not publicly accessible so that users can acquire data users are legally allowed to use. |
| FR\_AM\_24 | The Supplier Solution shall have the capability for Service Administrators, for each Defra organisation, to manage user roles on behalf of their organisation so that service administration is maintained locally. |
| FR\_AM\_25 | The Supplier Solution shall be able to define who can edit/submit or publish the metadata that I have created so that editing is restricted to a set of people who are then empowered to make changes. |
| FR\_AM\_26 | The Supplier Solution shall have the capability to transfer ownership of a metadata record when, for example, a Technical Lead leaves or changes role so that the data owner contact data is kept up-to-date. |
| FR\_AM\_27 | The Supplier Solution shall have the capability to create and edit profiles for different types of dataset so that these attributes are defined by default and ensure that datasets of that type are described consistently. |
| FR\_AM\_28 | The Supplier Solution shall provide the capability for sharing data covered by specific licensing conditions with users who are entitled to access it so that the Authority can work collaboratively and share authorised data in a standardised manner, following rules agreed in the relevant data licence. |
| FR\_AM\_29 | The Supplier Solution shall provide the capability to control and restrict access to metadata for certain data sharing partners or specific Defra groups (subject to appropriate access restrictions) and control which are exposed externally or only available to the Defra group. |
| FR\_AM\_30 | The Supplier Solution shall ensure there is capability to allow read-only access to all metadata records for staff across Defra based on their existing digital identity. |
| FR\_AM\_31 | The Supplier Solution shall have the capability to specify a role that can both create and approve metadata records so that the general rule about keeping the two activities separate can be broken. |
| FR\_AM\_32 | The Supplier Solution shall provide the capability to accept user accounts so that user details and roles do not need to be re-set if accounts are transferred. |

**ANNEX H – SUPPORT**

| **ID** | **Requirement** |
| --- | --- |
| FR\_SU\_1 | The Supplier Solution shall provide the capability to log and track issues and feedback in a structured and consistent format so that a structured knowledge base can be built and stored, and issues are managed/resolved efficiently and actioned. |
| FR\_SU\_2 | The Supplier Solution shall provide the capability to log and track feedback and questions about the Service and track progress on resolution or response. |
| FR\_SU\_4 | The Supplier Solution shall provide the capability to report on issues, feedback and questions asked about the service so that customer satisfaction can be monitored. |
| FR\_SU\_5 | The Supplier Solution shall provide an internal and external facing Knowledgebase so that there is an up to date, consistent and shared resource that requires minimal manual input and Service Managers can update. |
| FR\_SU\_6 | The Supplier Solution shall provide the capability for a configurable ticket solution. |
| FR\_SU\_7 | The Supplier Solution shall provide the capability to define and change the type of information that is provided to users in the issue/feedback/question ticket solution so that Service Administrators can amend user feedback templates. |
| FR\_SU\_8 | The Supplier Solution shall provide the capability to pass information to all users of the service as needed and provide the functionality to inform users of changes to the service, issues, etc. without the need to email/contact them directly. |
| FR\_SU\_9 | The Supplier Solution shall provide the capability for survey / questions tools so that feedback can be collated. |
| FR\_SU\_10 | The Supplier Solution shall provide the capability for defined roles to access UAT and Test environments so that publishers can have sight of data being published. |
| FR\_SU\_11 | The Supplier Solution shall have the capability to provide updates and communications via Social Media. |
| FR\_SU\_12 | The Supplier Solution shall have the capability to answer user questions and communicate about the Data Services Platform via Social Media. |
| FR\_SU\_13 | The Supplier Solution shall provide the capability to automate flags when tickets are outside of the SLA or overdue so that Service Administrators know when to escalate issues. |
| FR\_SU\_14 | The Supplier Solution shall provide the capability to quickly notify the service provider of any significant issues, such as service failures, so that these issues will be looked at immediately. |
| FR\_SU\_15 | The Supplier Solution shall provide the capability to inform users about the latest releases of data and data services. Updates are required to be published automatically to assure information is kept up to date. |
| FR\_SU\_16 | The Supplier Solution shall provide the capability for user questions or feedback to be monitored and progress communicated to the user. |
| FR\_SU\_17 | The Supplier Solution shall provide the capability for configurable views of the Knowledgebase so that views can be created without input from the Supplier. |
| FR\_SU\_18 | The Supplier shall triage support tickets and have the functionality for Service Managers to escalate in accordance with the impact to the Business and as defined by SLAs. |

**ANNEX I – COMPLIANCE**

| **ID** | **Requirement** |
| --- | --- |
| FR\_CO\_1 | The Supplier Solution shall provide the capability for personal data stored within the system to be anonymised after a set time that can be defined by Service Administrators, in accordance with GDPR. |
| FR\_CO\_2 | The Supplier Solution shall be able to make users inactive after a set time that can be configured by Service Administrators, in accordance with GDPR. |
| FR\_CO\_3 | The Supplier Solution shall have the capability for users to be notified if their account has been inactive after a set time that can be configured by Service Administrators, so that users are notified before their accounts are deleted. |
| FR\_CO\_4 | The Supplier Solution shall be able to delete inactive accounts, after a set time that can be configured by Service Administrators, after their profile was made inactive (if no further activity is noted) the Authority is compliant with GDPR. |
| FR\_CO\_5 | The Supplier Solution shall have the capability for suppliers to monitor the accuracy of the existing Cookie policy and instigate updates when necessary (for example when list of cookies used changes through development). |
| FR\_CO\_6 | The Supplier shall adhere and be compliant with Privacy and Electronic Communications Regulations (PECR) and Accessibility guidelines. |
| FR\_CO\_7 | The Supplier Solution shall have the capability for users to be notified before and when their account is made inactive and before it is deleted so that users can activate their account if it is still needed. |
| FR\_CO\_8 | The Supplier shall ensure the implementation of a fully operational, GDPR compliant Cookie policy across the service for all components. |

**ANNEX J – USAGE REPORTING**

| **ID** | **Requirement** |
| --- | --- |
| FR\_UR\_1 | The Supplier Solution shall provide the capability for assigned parent / child relationships to be preserved within service reports so that the continued validity of such relationships outside the service can be reviewed. |
| FR\_UR\_2 | The Supplier Solution shall provide the capability to monitor the volume of data held in the service and identify significant trends and variations so that data volumes can be managed. |
| FR\_UR\_3 | The Supplier Solution shall provide a reporting capability that can be made available to other users on a role/permission basis so that they can create and configure their own reports on the data they publish and be able to share their reports with others. |
| FR\_UR\_4 | The Supplier Solution shall provide the capability to create reports based on information available within the service (e.g. usage data, availability, audit data etc. as agreed with the Authority) so that KPIs performance against SLAs and the overall quality of the service can be monitored. |
| FR\_UR\_5 | The Supplier Solution shall have the capability to create reports based on other data that is available in the service (e.g. user/usage data, audit data etc.) so that Service Administrators can monitor KPIs and the overall quality of the service. |
| FR\_UR\_6 | The Supplier Solution shall be able to report on data that have not been updated for a specified time period or have not been updated according to the dataset’s update frequency so that KPIs and performance against SLAs can be monitored. |
| FR\_UR\_7 | The Supplier Solution shall have the capability to access validation reports, including reports of errors that are acceptable and errors that result in rejection, browse the reports and export them in a readily accessible format so that Service Administrators can manage and support improvements in data quality. |
| FR\_UR\_8 | The Supplier Solution shall have the capability for a simple export function that provides a comprehensive extract and download of all raw metadata within the service so that internal reporting requirements can be met. |
| FR\_UR\_9 | The Supplier Solution shall provide a reporting capability that can be made available to other users on a role / permission basis so that users can create their own reports on the metadata they have access to and be able to share their reports with others. |
| FR\_UR\_10 | The Supplier Solution shall have the capability to report metadata records that have not been updated for a specified time period or have not been updated according to the dataset’s update frequency so that KPIs can be monitored. |
| FR\_UR\_11 | The Supplier Solution shall have the capability to search for metadata information and then select, report and export/publish a list of metadata attributes in a variety of formats (including text, CSV and XML formats) so that information (users are entitled to see) in other applications can be used or communicated to others. |
| FR\_UR\_12 | The Supplier Solution shall have the capability to report in detail on which metadata records have not been completed or have failed validation and how long they have been left as such so that the quality of our metadata can be monitored and identify who needs to take action to improve the situation. |
| FR\_UR\_13 | The Supplier Solution shall have the capability to report on users’ feedback on the service so that customer satisfaction can be monitored and improve the service. |
| FR\_UR\_14 | The Supplier Solution shall have the capability for Service Administrators to build and access dashboards that are linked to the reports that are required. |
| FR\_UR\_15 | The Supplier Solution shall provide a reporting solution that is configurable by Service Administrators so that reports can be built for specific purposes. |
| FR\_UR\_16 | The Supplier Solution shall provide the capability to report on all aspects of Apps, APIs, data or metadata held on the Data Service Platform. |
| FR\_UR\_17 | The Supplier Solution shall provide the capability to filter out Bot hits (e.g. Google crawler) from reports. |
| FR\_UR\_18 | The Supplier Solution shall have the capability to sort and filter all reports on relevant fields, including filtering by date range so that reporting data is more easily accessible. |
| FR\_UR\_19 | The Supplier Solution shall have the capability to sort and filter all reports on relevant fields, including filtering by date range. Filtered reports should clearly show how they have been filtered so that users can more readily access the reporting data that users require. |
| FR\_UR\_20 | The Supplier Solution shall provide the capability to ensure all reports are anonymised so that GDPR legislation is not breached. |
| FR\_UR\_21 | The Supplier Solution shall have the capability to download all reports in csv format. Downloaded reports should reflect the filters that are applied so the reporting data that are required is more accessible. |
| FR\_UR\_22 | The Supplier Solution shall have the capability to configure and provide reports by user groups e.g. data custodians (i.e. a department or sub-business area), records owned by a specific owner so that specific reports can be configured for defined users groups. |
| FR\_UR\_23 | The Supplier Solution shall have the capability to generate automated reports/dashboards for customers and notify customers based on certain conditions or triggers e.g. quarterly so that data owners are notified to update their metadata and ensure they are up-to-date. |
| FR\_UR\_24 | The Supplier Solution shall have the capability to track which data are available by user category so that data available by user role can be reported. |
| FR\_UR\_25 | The Supplier Solution shall have the capability to integrate data/metadata usage reports with all Data Services Platform components. |
| FR\_UR\_26 | The Supplier Solution shall have the capability to enable Service Administrators to configure and provide dashboards/reports by user groups |
| FR\_UR\_27 | The Supplier Solution shall have the capability to generate automated reports/dashboards for customers based on certain conditions or triggers |
| FR\_UR\_28 | The Supplier Solution shall have the capability to track which data are available by user category |
| FR\_UR\_29 | The Supplier Solution shall have the capability to provide integrated data/metadata usage reports integrated with all Data Services Platform components so that the number of downloads, access, calls can be broken down by various Data Services Platform components. |
| FR\_UR\_30 | The Supplier Solution shall have the capability to access all the available analytic data. |
| FR\_UR\_31 | The Supplier Solution shall have the capability to bulk export all metadata records out of the Metadata Catalogue so that off-line copy of the data can be used outside of the system. |
| FR\_UR\_32 | The Supplier Solution shall have the capability for full reporting integration for all Data Services Platform components. |
| FR\_UR\_33 | The Supplier Solution shall provide a service that provides full reporting integration so that users can access reports for all service components. |
| FR\_UR\_34 | The Supplier Solution shall have the capability to run bespoke reports from the Metadata Catalogue on users, usage and content so that Service Administrators can manage, monitor, and provide statistics on the Metadata Catalogue. |

**ANNEX K – SYSTEM REPORTING**

| **ID** | **Requirement** |
| --- | --- |
| FR\_SR\_1 | The Supplier Solution shall have the capability to monitor network performance into and out of the Data Services Platform for both real time and trend analysis. |
| FR\_SR\_2 | The Supplier Solution shall provide the capability to monitor usage of the service and identify significant trends and variations so that short term and long-term capacity and demand requirements can be predicted to support improved service management and peaks can be associated to significant events (such as major incidents). |
| FR\_SR\_3 | The Supplier Solution shall have the capability to easily and quickly visualise details about the current health of the service and statistics about recent searches so that service can be monitored in an ongoing manner. |
| FR\_SR\_4 | The Supplier Solution shall have the capability to record user’s clicks on the Data Services Platform. |
| FR\_SR\_5 | The Supplier Solution shall have the capability to record the time users spend accessing the Data Services Platform. |
| FR\_SR\_6 | The Supplier Solution shall have the capability to track usage at the dataset level so that usage for each dataset published on the Data Services Platform can be reported. |
| FR\_SR\_7 | The Supplier Solution shall have the capability to track usage at dataset level |
| FR\_SR\_8 | The Supplier Solution shall have the capability to access the time users spend accessing the Data Services Platform so user access can be analysed. |
| FR\_SR\_9 | The Supplier Solution shall have the capability to record user’s clicks on the Data Services Platform so that user behaviour can be analysed. |
| FR\_SR\_10 | The Supplier Solution shall have the capability to record which search terms users have used |
| FR\_SR\_11 | The Supplier Solution shall have the capability to record which search terms a user has used so that search terms can be analysed for a better service. |
| FR\_SR\_12 | The Supplier Solution shall record which web page a user navigates to from search results so that user behaviour can be analysed. |
| FR\_SR\_13 | The Supplier Solution shall have the capability to access data and access all the available analytic data so that user behaviour can be analysed. |
| FR\_SR\_14 | The Supplier Solution shall provide the capability to filter out Bot hits (e.g. Google crawler) from reports. |

**ANNEX L – LINKED DATA**

| **ID** | **Requirement** |
| --- | --- |
| FR\_LD\_1 | The Supplier Solution shall provide the capability to publish and update data as Linked Data so that Professional Partners/Developers can create applications that make innovative use of our data. |
| FR\_LD\_2 | The Supplier Solution shall provide the capability to publish and update Linked Data through automated feeds from agreed data sources so that Professional Partners/Developers can create applications that make innovative use of our data. |
| FR\_LD\_3 | The Supplier Solution shall provide the capability to provide a Linked Data feed (API) so that data can be used directly in third party applications. |
| FR\_LD\_4 | The Supplier Solution shall provide a service to enable active query of our data using a suitable query language such as [SPARQL](https://www.w3.org/TR/sparql11-overview/) (<https://www.w3.org/TR/rdf-sparql-query/>) so that users can interrogate our data. |
| FR\_LD\_5 | The Supplier Solution shall provide a service to publish our vocabularies (ontologies) defining available terms (and how those terms relate) using appropriate standards such as [RDFS](https://www.w3.org/TR/rdf-schema/), OWL ([Web Ontology Language](https://www.w3.org/OWL/)) and SKOS ([Simple Knowledge Organization System](https://www.w3.org/TR/skos-reference/)) so that our data is published in context. |
| FR\_LD\_6 | The Supplier Solution shall be able to integrate Linked Data with Spatial Data so that a variety of users can access data published as Linked Data. |
| FR\_LD\_7 | The Supplier Solution shall have the capability to embed Defra bodies’ data quickly and easily into a web service so that present, up to date information is available to members of the public. |
| FR\_LD\_8 | The Supplier Solution shall ensure there is Linked Data service capability so that Defra Users can share data with Partner Users and Public Users, including via services developed by Professional Users / Developers. |
| FR\_LD\_9 | The Supplier Solution shall provide the capability for URLs and URIs to be supplier agnostic and portable so that users’ access to data is not impacted by any future change of Supplier. |
| FR\_LD\_10 | The Supplier Solution shall provide a service to use HTTP URIs so that so our users can use standard web client software to look up and access data that is published. |
| FR\_LD\_11 | The Supplier Solution shall have the capability to integrate and host existing Linked Data based applications within the overall service hosting and management so that disparate services are hosted, operated and supported as part of single integrated and managed linked data service. |
| FR\_LD\_12 | The Supplier Solution shall ensure there is capability to design and build new Linked Data services so that unforeseen future requirements or obligations can be met via the service. |
| FR\_LD\_13 | The Supplier Solution shall ensure there is capability to monitor and report on the status of automated Linked Data updates |
| FR\_LD\_14 | The Supplier Solution shall ensure there is capability to publish standards compliant applications |
| FR\_LD\_15 | The Supplier Solution shall ensure there is capability to test, implement, operate and manage new Linked Data services and applications so that services are productionised and operationally managed. |
| FR\_LD\_16 | The Supplier Solution shall ensure there is capability to make near real-time data collected from telemetry stations and other sources, as defined by the Authority, available to consumers as a Linked Data service |
| FR\_LD\_17 | The Supplier Solution shall ensure there is capability for the Linked Data service to support Professional Users’/Developers’ use of the Service (including APIs and widgets) |
| FR\_LD\_18 | The Supplier Solution shall ensure there is capability for detailed, standardised online documentation to enable use of the APIs and widgets so that services can be published that utilise or provide access to Defra Users’ data. |
| FR\_LD\_19 | The Supplier Solution shall use Uniform Resource Identifiers (URIs) to name (identify) things (entities, classes, concepts or properties) so that data is universally accessible in machine readable format to maximise its usability. |
| FR\_LD\_20 | The Supplier Solution shall the capability for a service to use HTTPS URIs where specified, such as for administrative access and authentication, so that authentication and security is ensured. |
| FR\_LD\_21 | The Supplier Solution shall ensure there is capability to provide useful information, represented using RDF ([Resource Description Framework](https://www.w3.org/RDF/)), when someone looks up a URI so that our data is modelled to appropriate and extensible standards that support consistent and ease of access/use. |
| FR\_LD\_22 | The Supplier Solution shall ensure there is capability to support alternative open formats such as JSON and CSV. |
| FR\_LD\_23 | The Supplier Solution shall ensure there is capability to include links to other URIs so that our users can discover more and integrate our data more seamlessly with others’ data. |

**ANNEX M – DATA SERVICES**

| **ID** | **Requirement** |
| --- | --- |
| FR\_DS\_1 | The Supplier Solution shall have the capability for spatial data to be provided as OGC API – Features ([OGC API - Features](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fogcapi.ogc.org%2Ffeatures%2F%3Futm_source%3Dphplist829%26utm_medium%3Demail%26utm_content%3DHTML%26utm_campaign%3DCompliance%2Btesting%2Bnow%2Bavailable%2Bfor%2B%25E2%2580%2598OGC%2BAPI%2B-%2BFeatures%2B-%2BPart%2B2%25E2%2580%2599%2Bstandard&data=04%7C01%7Cjon.mitchell%40environment-agency.gov.uk%7C0d7d03a4785449d5c87b08d9bedfe535%7C770a245002274c6290c74e38537f1102%7C0%7C0%7C637750691093316867%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=%2Bq486zVyTUTkiGq%2BK4TtMh5yr29gi2k%2F%2FQkAx%2FybKvs%3D&reserved=0), [GitHub - opengeospatial/OGC-Web-API-Guidelines](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fgithub.com%2Fopengeospatial%2FOGC-Web-API-Guidelines&data=04%7C01%7Cjon.mitchell%40environment-agency.gov.uk%7C0d7d03a4785449d5c87b08d9bedfe535%7C770a245002274c6290c74e38537f1102%7C0%7C0%7C637750691093326827%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=QbXLHPxx58jgqVTf%2BJZ44oC2AkeZTxIcDRNpOzfiDIg%3D&reserved=0)) Services. |
| FR\_DS\_2 | The Supplier Solution shall provide the capability for an OGC Compliant View (WMS, WMTS, WCS) ([Web Map Service | OGC](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.ogc.org%2Fstandards%2Fwms&data=04%7C01%7Cjon.mitchell%40environment-agency.gov.uk%7Ced1c4122d2b14eead4a208d9b59c8694%7C770a245002274c6290c74e38537f1102%7C0%7C0%7C637740506132984755%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=uLF%2BdVgWwVNOCehE3IwqahwnCVtW0OqNCFbstD7%2FRow%3D&reserved=0), [OpenGIS Web Map Tile Service Implementation Standard | OGC](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.ogc.org%2Fstandards%2Fwmts&data=04%7C01%7Cjon.mitchell%40environment-agency.gov.uk%7Ced1c4122d2b14eead4a208d9b59c8694%7C770a245002274c6290c74e38537f1102%7C0%7C0%7C637740506132984755%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=wSH7k8LiR4VBxEdT%2BiGUs1fm6i4NKeC00zg7GmMAc%2B0%3D&reserved=0), [Web Coverage Service | OGC](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.ogc.org%2Fstandards%2Fwcs&data=04%7C01%7Cjon.mitchell%40environment-agency.gov.uk%7Ced1c4122d2b14eead4a208d9b59c8694%7C770a245002274c6290c74e38537f1102%7C0%7C0%7C637740506132994714%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=GKAKofPNYE9nSmhfMXBGMQPcxQ6w5Ku9CCWjMPyNb5k%3D&reserved=0)) service that meets the published technical obligations of relevant legislation (such as the INSPIRE Regulations ([Data Specifications | INSPIRE (europa.eu)](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Finspire.ec.europa.eu%2Fdata-specifications%2F2892&data=04%7C01%7Cjon.mitchell%40environment-agency.gov.uk%7Ced1c4122d2b14eead4a208d9b59c8694%7C770a245002274c6290c74e38537f1102%7C0%7C0%7C637740506133004669%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=ng1es4LNh6M4Lm%2FRH2nCryKQHL8h3vbtHCOftYhULbQ%3D&reserved=0), [http://inspire.ec.europa.eu/](https://eur03.safelinks.protection.outlook.com/?url=http%3A%2F%2Finspire.ec.europa.eu%2F&data=04%7C01%7Cjon.mitchell%40environment-agency.gov.uk%7Ced1c4122d2b14eead4a208d9b59c8694%7C770a245002274c6290c74e38537f1102%7C0%7C0%7C637740506133004669%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=QyB4SDMEi829snCRlHUwGmWkUJ2z7RsJMEKopvsr%2Bxg%3D&reserved=0)) so that Defra group organisations are compliant with the obligations placed upon it. |
| FR\_DS\_3 | The Supplier Solution shall have the capability for all spatial data to be provided as Web Map Service (WMS) / Web Map Tile Service (WMTS) Web Coverage Service (WCS) and Web Feature Service (WFS) to be supplied via a service that allows multiple datasets to be selected and made available via a single URL. |
| FR\_DS\_4 | The Supplier Solution shall provide the capability for an OGC Compliant Download WFS ([Web Feature Service | OGC](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.ogc.org%2Fstandards%2Fwfs&data=04%7C01%7Cjon.mitchell%40environment-agency.gov.uk%7Ced1c4122d2b14eead4a208d9b59c8694%7C770a245002274c6290c74e38537f1102%7C0%7C0%7C637740506133014621%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=CA2uUJVK%2BGeHDRUQSilP1YRui2LpvHbfLF3%2BtHp8hHk%3D&reserved=0)) service that meets the published technical obligations of relevant legislation (such as the INSPIRE Regulations so that my organisation is compliant with the obligations placed upon it. |
| FR\_DS\_5 | The Supplier Solution shall have the capability to support current WMS Services and WFS Services that have been published to OGC standard that have been superseded (WMS 1.3.0; WFS 1.0.0, 2.0.0) so that current Services continue to be supported. |
| FR\_DS\_6 | The Supplier Solution shall have the capability to support the implementation of future API developments and Open Source Standards as agreed with the Authority. |
| FR\_DS\_7 | The Supplier Solution shall have the capability to link to data directly so that users can reduce the need to download data that requires version control thus reducing the data management burden for my organisation. |
| FR\_DS\_8 | The Supplier Solution shall have the capability to show geographical areas that extend outside of the UK so that datasets that are regional, continental or worldwide in nature can be described. |
| FR\_DS\_9 | The Supplier Solution shall have the capability be able to order data via an API interface to specify the area of coverage and the type/year of data. |
| FR\_DS\_10 | The Supplier Solution shall have the capability to select a pre-defined geographical area from a list of area types (e.g. national areas, counties, administrative areas) so that users can quickly and easily define the area that the dataset covers. |
| FR\_DS\_11 | The Supplier Solution shall have the capability to show the geographic area using more than one administrative area or standard shape (e.g. 2-3 adjacent or non-adjacent administrative areas, 2-3 shapes that may or may not overlap) so the area that the dataset covers using multiple shapes can be described. |
| FR\_DS\_12 | The Supplier Solution shall have the capability to order data for a user defined area using my organisation's (default) area of interest or an uploaded area of interest so that national large, complex datasets that would otherwise be difficult to manage can be utilised. |
| FR\_DS\_13 | The Supplier Solution shall have the capability to draw a geographical area by way of a set of standard shapes (e.g. square, rectangle, circle, and polygon) so that if there are no pre-defined areas that are suitable users can describe the area that the dataset covers. |
| FR\_DS\_14 | The Supplier Solution shall have the full capability for our most complex datasets (Such as [Risk of Flooding from Rivers and Sea](https://environment.data.gov.uk/dataset/8d57464f-d465-11e4-8790-f0def148f590)) to be used for spatial analysis as a WFS without issue. |
| FR\_DS\_15 | The Supplier Solution shall have the capability to access data via an application program interface (API) so that access to data can be programmatically utilised. |
| FR\_DS\_16 | The Supplier Solution shall adhere to standard coordinate systems as defined by the Authority and in-line with reporting commitments, such as those defined under the INSPIRE Regulations. |
| FR\_DS\_17 | The Supplier Solution shall have the capability to make data available at different zoom extents/display scales - to be able to define a scale range relevant to all services - map display/WFS/WMS/WCS etc.so that users can view and use data set at different view scales. |
| FR\_DS\_18 | The Supplier Solution shall ensure there is capability to make data authorised for sharing linkable to a specified metadata record on www.data.gov.uk |
| FR\_DS\_19 | The Supplier Solution shall have the capability to download large survey datasets, e.g. LiDAR composite, in an efficient way by ordering several grid-squares of data simultaneously, without having to select each tile individually. |
| FR\_DS\_20 | The Supplier Solution shall have the capability to download datasets, in an efficient way, based on my area of interest. Preferably the Solution shall be able to order the data via an API interface that lets a user specify an area of coverage and the type/year of data. |
| FR\_DS\_21 | The Supplier Solution shall provide a service to check new, updated or changed data for errors (using suitable data quality standards, such as ISO 19157:2013, as agreed by the Authority and the Supplier) upon receipt and if errors are detected either advise the Service Administrator that they constitute acceptable errors or reject the data product entirely, so quality and resilience of the service is ensured. |
| FR\_DS\_22 | The Supplier Solution shall provide the capability to receive, convert and share data in multiple different spatial (raster and vector) and non-spatial data formats so that re-use of authorised Defra data is maximised. |
| FR\_DS\_23 | The Supplier Solution shall have the capability for data to be accessible in a range of appropriate data formats as defined by the Authority so that a wide range of users and usage is supported. |
| FR\_DS\_24 | The Supplier Solution shall ensure data is available at different zoom extents/display scales. |
| FR\_DS\_25 | The Supplier Solution shall provide Imagery data as Analysis Ready so that data doesn't need to be pre-processed. |
| FR\_DS\_26 | The Supplier Solution shall ensure there is capability to acquire and make available third party datasets e.g. Ordnance Survey, from source. |
| FR\_DS\_27 | SS\_3 ITT The Supplier Solution shall ensure the service is OGC compliant and meets technical obligations of relevant legislations (e.g. INSPIRE Regulations) |
| FR\_DS\_28 | The Supplier Solution shall ensure there is capability to download data in a variety of formats as defined and agreed with by the Authority. |
| FR\_DS\_29 | The Supplier Solution shall ensure that the Corporate Addressing Data Standard is used, where applicable, as their addressing solution so that the service meets Corporate Addressing Data Standards. |

**ANNEX N – METADATA CATALOUGE**

| **ID** | **Requirement** |
| --- | --- |
| FR\_MD\_1 | The Supplier Solution shall have the capability to create and store metadata (for both spatial and non-spatial datasets) that conforms to the Metadata Profile, derived from the UK GEMINI standard Schedule 2.3 (*Standards*) or newly defined metadata standards so that relevant metadata standards and data discovery legislative obligations are complied with. |
| FR\_MD\_2 | The Supplier Solution shall ensure there is capability for all metadata XML be validated using GEMINI Schematron schema so that ISO 19139 technical specification (which sets out an [XML grammar for encoding ISO 19115 metadata](https://www.iso.org/standard/32557.html)) is complied with. |
| FR\_MD\_3 | The Supplier Solution shall ensure there is capability to enable creation of [INSPIRE compliant metadata](https://inspire.ec.europa.eu/metadata/6541). |
| FR\_MD\_4 | The Supplier Solution shall provide the capability to be flexible and implement changes or extensions to the Metadata Profile, or a new metadata profile such as the marine metadata standard, [MEDIN](https://medin.org.uk/medin-discovery-metadata-standard) (Schedule 2.3 (*Standards*)) and ensure updates are automated where change would impact an existing standard. |
| FR\_MD\_5 | The Supplier Solution shall provide a service that allows the Metadata Profile to be extended to support specific elements that meet the needs of different business areas whilst ensuring that the base profile remains standards-compliant so that the service meets the wider needs of business areas in a consistent manner. |
| FR\_MD\_6 | The Supplier Solution shall have an import mechanism so that so I can ingest / update single records or multiple records as a bulk upload. |
| FR\_MD\_7 | The Supplier Solution shall ensure there is capability to import metadata for datasets that are hosted elsewhere |
| FR\_MD\_8 | The Supplier Solution shall ensure there is capability to define metadata attributes that have pre-defined pick lists (e.g. administrative areas, status values, GEMET terms related to environmental data etc.). |
| FR\_MD\_9 | The Supplier Solution shall ensure there is capability to add, change and delete the contents of the pre-defined pick lists. |
| FR\_MD\_10 | The Supplier Solution shall ensure there is capability to select multiple keywords ('tags') from one or more vocabularies so that these keywords can be applied to a dataset and used in searches and reports. |
| FR\_MD\_11 | The Supplier Solution shall ensure there is capability to define vocabularies of keywords ('tags') that Technical Leads can choose from a list of valid keywords. |
| FR\_MD\_12 | The Supplier Solution shall ensure there is capability to create different types of metadata attributes (e.g. free text fields of a fixed length, multi-line fields, date fields, drop-down lists, numeric fields, tick-box fields etc.) which are named using standards. |
| FR\_MD\_13 | The Supplier Solution shall provide the capability to integrate the metadata system with internal controlled lists/reference datasets to ensure standardised population of metadata records e.g. owning business area/sub-business area/custodian etc. |
| FR\_MD\_14 | The Supplier Solution shall ensure there is capability to update metadata from source data systems. |
| FR\_MD\_15 | The Supplier Solution shall provide the ability to access additional resources from a metadata record e.g. user documentation, feature catalogue. |
| FR\_MD\_16 | The Supplier shall ensure metadata is available with the data at the point of use so that metadata is available to internal and external users irrespective of the access format (e.g. WMS/WFS and other endpoints and Downloads will have associated metadata). |
| FR\_MD\_17 | The Supplier Solution shall ensure metadata stored within the system is available to other applications and data systems within and outside the organisation (where appropriate) to enable automated integration e.g. via API (subject to appropriate access restrictions etc.). |
| FR\_MD\_18 | The Supplier Solution shall ensure metadata is available at the point of use and created where data is available so that metadata is consistent with the data available to users. |
| FR\_MD\_19 | The Supplier Solution shall ensure metadata quality is controlled and improved by well-designed systems and controls so that data is consistent and of high quality and prevent against entry of duplicate metadata. |
| FR\_MD\_20 | The Supplier Solution shall ensure there is capability to be able to view previous versions of a metadata record and who made the change. |
| FR\_MD\_21 | The Supplier Solution shall ensure there is capability to be able to approve changes to new/changed metadata records. |
| FR\_MD\_22 | The Supplier Solution shall ensure there is capability to create a draft version of a metadata record which will replace the current version when it is approved. |
| FR\_MD\_23 | The Supplier Solution shall ensure there is capability for all metadata records to be validated before they are submitted for approval. |
| FR\_MD\_24 | The Supplier Solution shall ensure there is capability to indicate security level information or publishing approval status for each dataset. |
| FR\_MD\_25 | The Supplier Solution shall ensure there is capability to have a process for the quality control and assurance of metadata prior to its publication. |
| FR\_MD\_26 | The Supplier Solution shall ensure there is capability to reject new/changed metadata records that require approval and indicate reason(s) so that the new/changed metadata records can be corrected (or discarded) by the Technical Lead who made them. |
| FR\_MD\_27 | The Supplier Solution shall ensure there is capability to discard changes to a metadata record made by Technical Leads. |
| FR\_MD\_28 | The Supplier Solution shall ensure there is capability to enter a review date against some metadata records. |
| FR\_MD\_29 | The Supplier Solution shall provide the capability to distinguish between the creation and approval of metadata records so that under normal circumstances the same person cannot approve records that they have created. |
| FR\_MD\_30 | The Supplier Solution shall ensure there is capability to set the status of a metadata record (or to have it automatically set, where appropriate). |
| FR\_MD\_31 | The Supplier Solution shall ensure there is capability to mark a metadata record as 'archived'. |
| FR\_MD\_32 | The Supplier Solution shall provide the capability to differentiate between retired metadata and superseded metadata records. |
| FR\_MD\_33 | The Supplier Solution shall have the ability to update 'Revision Date' in metadata via automated processes (as well as manually where applicable) so that latest update date of a dataset or service is the date of extract from a source system rather than the date the update was implemented. |
| FR\_MD\_34 | The Supplier Solution shall provide the capability for all metadata records to detail dataset/service attribution so that information on the underlying published data and service the metadata record relates to. |
| FR\_MD\_35 | The Supplier Solution shall provide a service that provides a profile (i.e. template) based system for metadata record management so that metadata records are created and updated in a consistent and efficient manner. |
| FR\_MD\_36 | The Supplier Solution shall have the capability to list all metadata records (sorted by title and/or other attributes) so that records can be browsed without a search criteria. |
| FR\_MD\_37 | The Supplier Solution shall incorporate licensing information into a metadata record or derive from a separate source so that appropriate, up-to-date licensing information is held for each metadata record. |
| FR\_MD\_38 | The Supplier Solution shall have the capability to define metadata for spatial datasets that visually shows the geographic extent of the dataset so that data users can see a map of the area that the dataset covers in a consistent manner. |
| FR\_MD\_39 | The Supplier Solution shall have the capability to browse a list of metadata records that I am able to change so that a single metadata record for editing or use the list in a bulk edit can be selected. |
| FR\_MD\_40 | The Supplier Solution shall have the capability to save a metadata record part way through its creation so that all metadata attributes can be completed according to User schedules. |
| FR\_MD\_41 | The Supplier Solution shall have the capability for metadata to be periodically saved (automatically) so that the metadata attributes being processed are not lost. |
| FR\_MD\_42 | The Supplier Solution shall provide the capability to navigate to where a dataset is located and insert that address (e.g. URI, URL, file path) into the metadata record of that dataset so that the likelihood of inserting the wrong location into the dataset's metadata is reduced. |
| FR\_MD\_43 | The Supplier Solution shall have the capability to paste information into a metadata attribute so that attribute information can be transferred between records or use information that is held elsewhere (e.g. a document or spreadsheet). |
| FR\_MD\_44 | The Supplier Solution shall have the capability to share metadata record(s) such as XML, in both the full internal and cleansed external format. |
| FR\_MD\_45 | The Supplier Solution provide a service that will allow the owner of a dataset to be notified (if they so wish) of any changes that are being made to the metadata that describes that dataset to ensure metadata and data are aligned. |
| FR\_MD\_46 | The Supplier Solution shall have the capability to populate the metadata with a flag/filter with a flag/filter according to which data platforms and applications the datasets are hosted in. e.g. internal data stores, internal and external corporate web applications, e.g. SPIRE/MAGIC, DSP, ArcGIS Online, ArcGIS Enterprise federated portals, partner data portals so that source data can be located more easily. |
| FR\_MD\_47 | The Supplier Solution shall have the capability for the creation and updating of metadata for non-spatial datasets to be as simple as possible (i.e. simplified interface/templates for non-spatial rather than standard spatial interface). |
| FR\_MD\_48 | The Supplier Solution shall ensure there is capability to provide a repository for all Defra group metadata. |
| FR\_MD\_49 | The Supplier Solution shall ensure there is capability to enable management of metadata for all types of data. |
| FR\_MD\_50 | The Supplier Solution shall ensure there is capability to create metadata for third party datasets. |
| FR\_MD\_51 | The Supplier Solution shall ensure there is capability to have a unique file identifier that is assigned to each metadata record which does not change when the metadata record itself is changed. |
| FR\_MD\_52 | The Supplier Solution shall ensure there is capability for optional attributes of different types of dataset so that Technical Leads can leave these attributes empty and are not forced to enter 'dummy values'. |
| FR\_MD\_53 | The Supplier Solution shall ensure there is capability to see which metadata attributes are mandatory and which are optional. |
| FR\_MD\_54 | The Supplier Solution shall ensure there is capability to define both the official name and an alternative title for some (or all) datasets. |
| FR\_MD\_55 | The Supplier Solution shall ensure there is capability for a method of selecting existing metadata records and bulk editing specific attributes (e.g. custodian details, new metadata attributes) |
| FR\_MD\_56 | The Supplier Solution shall ensure there is capability to define one or more metadata attributes that link to a place where additional resource information is held (e.g. how to use the data, evidence reports). |
| FR\_MD\_57 | The Supplier Solution shall ensure there is capability to state who the owners are of both the dataset and the metadata record that describes it. |
| FR\_MD\_58 | The Supplier Solution shall ensure there is capability to be able to add contact information (which includes email address and telephone details) and data owner to a metadata record. |
| FR\_MD\_59 | The Supplier Solution shall ensure there is capability to be able to assign parent and child status to metadata records, where necessary and to be preserved when new versions of the metadata records are created. |
| FR\_MD\_60 | The Supplier Solution shall ensure there is capability to indicate any licence and access restrictions for a dataset. |
| FR\_MD\_61 | The Supplier Solution shall ensure there is capability to import definitions of new/revised geographical areas (e.g. new water catchment boundaries, revised Defra Area boundaries). |
| FR\_MD\_62 | The Supplier Solution shall ensure there is capability to define geographic extent using different coordinate systems such as British National Grid, WGS84, ETRS89, WGS84 Mercator, etc. |

**ANNEX O – OPTIONAL SERVICE: WEB MAPPING**

| **ID** | **Requirement** |
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| FR\_WM\_1 | The Supplier Solution shall provide the capabilities to create web mapping applications, combining datasets from DSP into simple web mapping applications for end users. |
| FR\_WM\_2 | The Supplier Solution shall ensure there is capability to add functionality from a catalogue of web mapping application data at different zoom extents/display scales relevant to all services. |
| FR\_WM\_3 | The Supplier Solution shall ensure there is capability to use drawing tools that can edit and style on an interactive map. |
| FR\_WM\_4 | The Supplier Solution shall provide the capability to search within a data layer that is available on my service so that users can interrogate and select relevant objects or attributes in data. |
| FR\_WM\_5 | The Supplier Solution shall provide the capability for measurement tools to find the area or perimeter of a feature so that users can attain the size of a feature defined on my service. |
| FR\_WM\_6 | The Supplier Solution shall ensure there is capability to use measurement tools to find distance on an interactive map |
| FR\_WM\_7 | The Supplier Solution shall provide location when I click on an interactive map so that users can return the gird reference, Easting/Northing, NGR, Postcode District or other spatial references. |
| FR\_WM\_8 | The Supplier Solution shall provide the capability to create a map layout and share as a unique url. |
| FR\_WM\_9 | The Supplier Solution shall provide the capability to query data on an interactive map. |
| FR\_WM\_10 | The Supplier Solution shall provide spatial analysis tools such as the ability to buffer. |
| FR\_WM\_11 | The Supplier Solution shall provide the capability to select/deselect features in a dataset by area or attribute. |
| FR\_WM\_12 | The Supplier Solution shall provide the capability to create a maps and export as an image file. |
| FR\_WM\_13 | The Supplier Solution shall provide the capability to create a map legend for all data layers added to a map. |
| FR\_WM\_14 | The Supplier Solution shall ensure there is capability to search all layers in the services table of contents listed by Theme, subtheme and minimum/maximum display scale. |
| FR\_WM\_15 | The Supplier Solution shall adhere to standard coordinate systems as defined by the Authority and in-line with reporting commitments, such as those defined under the INSPIRE Regulations. |
| FR\_WM\_16 | The Supplier Solution shall ensure there is capability for users to pan, zoom in and out and query on an interactive map. |
| FR\_WM\_17 | The Supplier Solution shall ensure there is capability to load user data as a Map/Feature/WMS or spatial file formats such as Shapefile/Personal Geodatabase etc. |
| FR\_WM\_18 | The Supplier Solution shall have the capability to select layers and set the visible scale range so that users can ensure data is only visible at set zoom scales. |
| FR\_WM\_19 | The Supplier Solution shall ensure there is capability to access an interactive help menu that can be searched by users |
| FR\_WM\_20 | As a Service Administrator I want to an interactive map service that can be shared with public facing users. |
| FR\_WM\_21 | The Supplier Solution shall provide the capability to load multiple data layers including OS background mapping scales. |
| FR\_WM\_22 | The Supplier Solution shall ensure there is capability to search by a range of spatial references such as County, Place, Postcode, Region or Coordinate/Position. |
| FR\_WM\_23 | The Supplier Solution shall ensure there is capability to select and add data layers to an interactive map. |
| FR\_WM\_24 | The Supplier Solution shall ensure there is capability to search and download data layers in a range of file formats. |
| FR\_WM\_25 | The Supplier Solution shall ensure there is capability to select/deselect features in a dataset by area or attribute |
| FR\_WM\_26 | The Supplier Solution shall ensure there is capability to specify customised requirements to develop services. |
| FR\_WM\_27 | The Supplier Solution shall ensure the service has capability to allow scheduled changes/updates |
| FR\_WM\_28 | The Supplier Solution shall ensure the service has capability to accommodate hyperlinks to further sources of information. |
| FR\_WM\_29 | The Supplier Solution shall ensure there is capability to that allows calls by third party websites via a URL and URL parameters. |
| FR\_WM\_30 | The Supplier Solution shall ensure the service allows storage of supporting documents and files in a range of formats. |

**ANNEX P – OPTIONAL SERVICES: DATA VISUALISATION**

| **ID** | **Requirement** |
| --- | --- |
| FR\_DV\_1 | The Supplier Solution shall ensure there is capability for allocated Defra group users to create web-based data visualisation/dashboard applications combining datasets so that data visualisations can be published on the Data Services Platform. |
| FR\_DV\_2 | The Supplier Solution shall ensure there is capability for allocated Defra group users to add functionality from a catalogue of components to a data visualisation/dashboard application so that data visualisations can be published on the Data Services Platform. |
| FR\_DV\_3 | The Supplier Solution shall provide the capability for allocated Defra group users to prepare data held on the DSP so that data visualisations can be created so that Defra group users can publish visualisations on the Data Services Platform. |
| FR\_DV\_4 | The Supplier Solution shall provide the capability for allocated Defra group users to create data visualisations from data held on the DSP so that Defra group users can publish them on the Data Services Platform. |
| FR\_DV\_5 | The Supplier Solution shall provide the capability for allocated Defra group users to create customisable dashboards to provide insights into data so that data visualisations can be published on the Data Services Platform. |
| FR\_DV\_6 | The Supplier Solution shall provide the capability for allocated Defra group users to understand and visualise trends e.g. using graphs or charts, in data so that data visualisations can be published on the Data Services Platform. |
| FR\_DV\_7 | The Supplier Solution shall provide the capability for allocated Defra group users to view data through a range of chart and graph types so that data visualisations can be published on the Data Services Platform. |
| FR\_DV\_8 | The Supplier Solution shall provide the capability for allocated Defra group users to visualise data quality metrics in data attributes and publish them on the Data Services Platform. |
| FR\_DV\_9 | The Supplier Solution shall provide the capability for allocated Defra group users to navigate between dashboards and datasets published on the Data Services Platform. |
| FR\_DV\_10 | The Supplier Solution shall provide the capability for allocated Defra group users to update data visualisations published on the Data Services Platform when data held on the Data Services Platform are updated. |
| FR\_DV\_11 | The Supplier Solution shall provide the capability for allocated Defra group users to create templates so that data visualisations can be published on the Data Services Platform. |
| FR\_DV\_12 | The Supplier Solution shall provide the capability for allocated Defra group users to create data animations so that data visualisations can be published on the Data Services Platform and data insights can be understood and communicated. |

**ANNEX Q – DEFRA DSP: LINKED DATA APPLICATIONS**

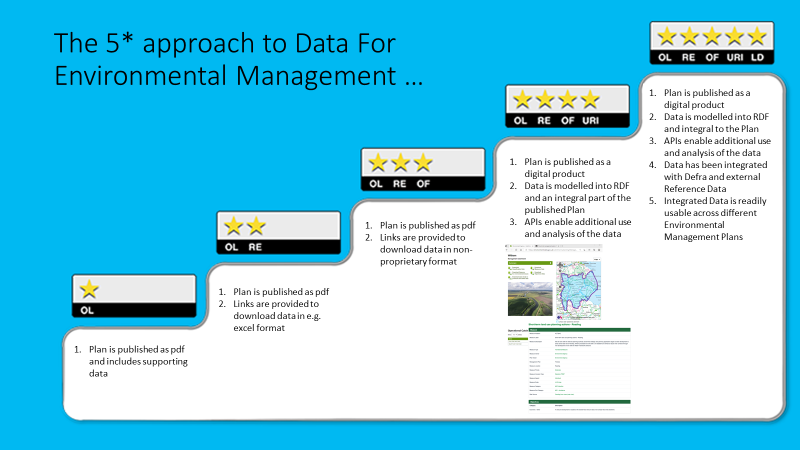
The Applications set out in this section have been delivered as Linked Data and available on the Semantic Web. A core aim of the Data Services Platform is to support our objectives through the implementation of 5-star Open Data. It is recognised that the full benefits of 5-star Open Data have not yet been fully realised. As shown below in **Figure 1**, many of the applications outlined in this Annex might only be considered 4 Star Data. Progression is sought to realise this ambition fully with the following benefits envisaged:

* Increasing the value of the data through the Network effect
* Defining and use of internal and external Reference data
* Discovering more (related) data while users consume the data
* Maximise and support joined-up policy making
* Enabling other publishers to link to Defra group data
* Making data fully discoverable

**Figure 2** outlines the progress of applications published in support of 5-star data in support of environmental planning. Further work is required to improve the links between the underlying data in the relevant applications, in addition to defining external relationships. It is recognised that to fulfil this there may be amendments required in to improve the source data in addition to work in delivering these links.

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***Figure 1: 5-star deployment scheme for Open Data****[[1]](#footnote-2)*

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***Figure 2: 5-star deployment scheme for Environment Management.***

| **ID** | **Service** | **Requirement** |
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| LA\_1 | Asset Management API | The Supplier Solution shall provide the capability to host and publish the API as documented https://environment.data.gov.uk/asset-management/doc/reference# on the Semantic Web as Linked data. |
| LA\_2 | Asset Information | The Supplier Solution shall provide the capability for users to explore maps of key Flood and Coastal Risk Management (FCRM) asset management datasets approved as Open Data, including Maintained Assets, Capital Schemes and completed capital schemes. |
| LA\_3 | Asset Information | The Supplier Solution shall provide the capability for users to pan, zoom in and out, query and search by place or postcode. |
| LA\_4 | Asset Information | The Supplier Solution shall provide the capability for users to search by Asset/Project ID as held in the Asset Inventory data. |
| LA\_5 | Asset Information | The Supplier Solution shall ensure underlying Asset Inventory data is automatically updated every week. |
| LA\_6 | Bathing Waters API | The Supplier Solution shall provide the capability to host and publish the API as documented https://environment.data.gov.uk/bwq/doc/api-reference-v0.6.html# on the Semantic Web as Linked data. |
| LA\_7 | Bathing Water Explorer | The Supplier Solution shall provide the capability for users to explore England's bathing water profiles by name or location, via an interactive map. |
| LA\_8 | Bathing Water Explorer | The Supplier Solution shall provide the details of weekly Environment Agency water quality assessments and at certain sites daily pollution risk forecasts. |
| LA\_9 | Bathing Water Explorer | The Supplier Solution shall provide annual ratings for bathing water sites. |
| LA\_10 | Bathing Water Explorer | The Supplier Solution shall provide the capability for users to pan, zoom in and out, query and search by place or postcode. |
| LA\_11 | Bathing Water Signage | The Supplier Solution shall provide the capability for controllers of bathing waters to create and download display signs which comply with the Bathing Water regulations 2013. |
| LA\_12 | Bathing Water Signage | The Supplier Solution shall provide the capability to search for a bathing water by name, bathing water ID or by the name of the Local Authority. |
| LA\_13 | Bathing Water Signage | The Supplier shall provide the capability to create a Simple sign for a selected bathing water. |
| LA\_14 | Bathing Water Signage | The Supplier Solution shall provide the capability to create an Enhanced Sign by allowing users to select additional fields presented to the user. |
| LA\_15 | Bathing Water Widgets | The Supplier Solution shall provide the capability to enable templates (Single bathing water, Comparison and On-Site) for web designers to create web widgets showing Environment Agency bathing water quality information in their own websites. |
| LA\_16 | Bathing Water Widgets | The Supplier Solution shall provide the capability for the selected template to be configured and users create their own web widget for use on their own web site. |
| LA\_17 | Catchment Data API | The Supplier Solution shall provide the capability to host and publish the API as documented https://environment.data.gov.uk/catchment-planning/ui/reference# on the Semantic Web as Linked data. |
| LA\_18 | Catchment Data Explorer | The Supplier Solution shall provide the capability for users to explore and download information about the water environment (supporting and building on the data in the Environment Agency's River Basin Management Plans). |
| LA\_19 | Catchment Data Explorer | The Supplier Solution shall provide the capability for users to pan, zoom in and out, query and search by place name or postcode. |
| LA\_20 | Catchment Data Explorer | The Supplier Solution shall provide the capability to search by coordinates or Catchment/Waterbody name. |
| LA\_21 | Catchment Data Explorer | The Supplier Solution shall provide the capability to make available water catchment areas, water bodies of interest and summary information about catchments. |
| LA\_22 | Flood Monitoring API | The Supplier Solution shall provide the capability to host and publish the API as documented https://environment.data.gov.uk/flood-monitoring/doc/reference# on the Semantic Web as Linked data. |
| LA\_23 | Flood Warning Widgets | The Supplier Solution shall provide the capability for web developers to embed the EA's Flood Warnings (summaries of flood alerts and warnings) into pages on their websites as a flood warning widget. |
| LA\_24 | Hydrology API | The Supplier Solution shall provide the capability to host and publish the API as documented https://environment.data.gov.uk/hydrology/doc/reference on the Semantic Web as Linked data. |
| LA\_25 | Hydrology | The Supplier Solution shall provide the capability to view open access to Environment Agency Hydrology data for England, e.g., river flow, on an interactive map. |
| LA\_26 | Hydrology | The Supplier Solution shall provide the capability for users to pan, zoom in and out, query and search by place name or postcode. |
| LA\_27 | Hydrology | The Supplier Solution shall provide the capability to search by coordinates, Station Name or WISKI ID. |
| LA\_28 | Hydrology | The Supplier Solution shall provide the capability to toggle UKCEH river layers on the interactive map. |
| LA\_29 | Hydrology | The Supplier Solution shall provide the capability to filter by station type. |
| LA\_30 | Hydrology | The Supplier Solution shall provide the capability to download the data in CSV or Excel format. |
| LA\_31 | Hydrology | The Supplier Solution shall provide the capability to check the raw data prior to daily update. |
| LA\_32 | Public Registers API | The Supplier Solution shall provide the capability to host and publish the API as documented https://environment.data.gov.uk/public-register/view/api-reference# on the Semantic Web as Linked data. |
| LA\_33 | Public Registers Online | The Supplier Solution shall provide a service which makes registers of licences held by industry, businesses and individuals available to the public. Such licences cover certain activities that have the potential to pollute the environment. |
| LA\_34 | Public Registers Online | The Supplier Solution shall provide the capability to make available licences that cover environmental permits, contaminated land, water resources, water quality, waste and Emissions Trading. |
| LA\_35 | Public Registers Online | The Supplier Solution shall provide the capability to comply with the Environmental Regulations by making them Public. |
| LA\_36 | Waste Carriers, Brokers and Dealers Widget | The Supplier Solution shall provide a Waste Carriers, Brokers & Dealers widget to provide a simple way for registered parties to demonstrate on their own website that they have a registered with the Environment Agency for their activities. |
| LA\_37 | Water Quality Data Archive API | The Supplier Solution hall provide the capability to host and publish the API as documented https://environment.data.gov.uk/water-quality/view/doc/reference on the Semantic Web as Linked data. |
| LA\_38 | Water Quality Data Archive | The Supplier Solution shall provide the capability to explore data on water quality measurements, including samples for coastal, estuarine waters, rivers, lakes, ponds, canals and groundwater for England on an interactive map. |
| LA\_39 | Water Quality Data Archive | The Supplier Solution shall provide the capability for users to pan, zoom in and out, query and search by place name. |
| LA\_40 | Water Quality Data Archive | The Supplier Solution shall provide the capability to search by Sample Point Name/ID, Environment Area, Sampling Point Type. |
| LA\_41 | Water Quality Data Archive | The Supplier Solution shall provide the capability for a user to tap the map to select a single point or enter the easting and northing values. |
| LA\_42 | Water Quality Data Archive | The Supplier Solution shall provide the capability to limit the maximum number of results to 500, 1000 or 25000. |
| LA\_43 | Water Quality Data Archive | The Supplier Solution shall provide the capability to demonstrate compliance to discharge permits, investigate pollution incidents and for general environmental monitoring |
| LA\_44 | Water Quality Data Archive | The Supplier Solution shall provide the capability to select by Area, Year and Purpose to download the data in CSV format. |
| LA\_45 | Asset Data Requirements Library API | The Supplier Solution shall provide the capability to host and publish the API as documented https://environment.data.gov.uk/asset-management/drl-app/revision/current/api/doc on the Semantic Web as Linked data. |
| LA\_46 | Asset Data Requirements Library | The Supplier Solution shall provide the capability to document the specific data attributes that are used to describe the properties of each Asset Type and its Element Types. |
| LA\_47 | Asset Data Requirements Library | The Supplier Solution shall provide the capability for View History and all Changes to be accessed for each Asset and Element Type. |
| LA\_48 | Ecology & Fish Data API | The Supplier Solution shall provide the capability to host and publish the API as documented https://environment.data.gov.uk/ecology/api/v1/index.html on the Semantic Web as Linked data. |
| LA\_49 | Ecology & Fish Data Explorer | The Supplier Solution shall provide the capability to view freshwater fish, macroinvertebrate, diatom and macrophyte data on an interactive map. |
| LA\_50 | Ecology & Fish Data Explorer | The Supplier Solution shall provide the capability for users to pan, zoom in and out, query and search by user defined area. |
| LA\_51 | Ecology & Fish Data Explorer | The Supplier Solution shall provide the capability for users to select between OpenStreetMap, OpenTopoMap, Esri WorldTopoMap, Esri WorldImagery Base mapping. |
| LA\_52 | Ecology & Fish Data Explorer | The Supplier Solution shall provide the capability to refine the data for Fish, Invertebrates, Macrophytes or Diatoms and filter by Site (Name/ID, Top Tier Site, Geo Waterbody, Species Name or Survey Date. |
| LA\_53 | Ecology & Fish Data Explorer | The Supplier Solution shall provide the capability to set filters for Fish, Invertebrates, Macrophytes or Diatoms datasets by selecting year of interest. |
| LA\_54 | Ecology & Fish Data Explorer | The Supplier Solution shall provide the capability to download the data that has been filtered by the user. |
| LA\_55 | Tide Gauge API | The Supplier Solution shall provide the capability to host and publish the API as documented https://environment.data.gov.uk/flood-monitoring/doc/tidegauge# on the Semantic Web as Linked data. |
| LA\_56 | Tide Gauge Readings | The Supplier Solution shall provide the capability for users to explore the United Kingdom's tide gauge stations and readings by station name or location, via an interactive map. |
| LA\_57 | Tide Gauge Readings | The Supplier Solution shall provide the capability for users to pan, zoom in and out, query and search by place or postcode. |
| LA\_58 | Tide Gauge Readings | The Supplier Solution shall provide the capability to select a time series for 1-, 7- or 30-day series. |
| LA\_59 | Tide Gauge Readings | The Supplier Solution shall provide the capability to view the tide gauge trends over the selected period. |
| LA\_60 | Tide Gauge Readings | The Supplier Solution shall provide the capability to access and download the data for the tide gauge, measures and readings as a Webpage, Spreadsheet or JSON. |
| LA\_61 | Rainfall API | The Supplier Solution shall provide the capability to host and publish the API as documented https://environment.data.gov.uk/flood-monitoring/doc/rainfall# on the Semantic Web as Linked data. |
| LA\_62 | Rainfall Demonstrator | The Supplier Solution shall provide the capability for users to explore England's rainfall profiles by station ID or location, via an interactive map. |
| LA\_63 | Rainfall Demonstrator | The Supplier Solution shall provide the capability for users to pan, zoom in and out, query and search by place or postcode. |
| LA\_64 | Rainfall Demonstrator | The Supplier Solution shall provide the capability to search by Station ID. |
| LA\_65 | Rainfall Demonstrator | The Supplier Solution shall provide the capability to view rainfall time series data. |
| LA\_66 | Data Flow Maps | The Supplier Solution shall provide the capability to host and publish the API as published on https://defra-prod.publishmydata.com on the Semantic Web as Linked data. |
| LA\_67 | Data Flow Maps | The Supplier Solution shall provide the capability to map dependencies between datasets and systems (as documented in Defra’s Service Catalogue) and display on a user interface. |
| LA\_68 | Data Flow Maps | The Supplier Solution shall provide integration with the Metadata Catalogue via API so that Data Flow Maps are updated with metadata. |
| LA\_69 | Data Flow Maps | The Supplier Solution shall provide the capability to structure and capture the Environment Agency's standard Article 30 Record of Processing Activities template so that data owners can undertake a Data Protection Impact Assessment. |
| LA\_70 | Data Flow Maps | The Supplier Solution shall provide bulk export Records of Processing Activity data stored in Data Flow Maps so I can share data and respond to requests such as from the Information Commissioner’s Office. |
| LA\_71 | Flood Plan Explorer | The Supplier Solution shall provide the capability for users to view, interrogate and search England's Flood Risk Management Plans by name or location, via an interactive map. |
| LA\_72 | Flood Plan Explorer | The Supplier Solution shall provide the capability for users to explore England's Flood Risk Management Plans by name or location, via an interactive map. |
| LA\_73 | Shoreline Management Plan Explorer | The Supplier Solution shall provide the capability for users to view, interrogate and search England's Shoreline Management Plans by name or location, via an interactive map. |
| LA\_74 | Shoreline Management Plan Explorer | The Supplier Solution shall provide the capability for updates for Action Plans and Policy Clarifiers with associated Policy Statements, detailed by Coastal Groups, to be hosted alongside the map interface. |
| LA\_75 | Shoreline Management Plan Explorer | The Supplier Solution shall provide the capability for Shoreline Management Plans to be queried on an interactive map interface. |
| LA\_76 | Integrated Environmental Data Service | The Supplier Solution shall provide the capability for an unified API and query capability service. |
| LA\_77 | Integrated Environmental Data Service | The Supplier Solution shall provide the capability for users to self-publish Linked Data and set up and define criteria-based queries. |
| LA\_78 | Integrated Metadata Dashboard | The Supplier Solution shall provide the capability for metadata to be consumed from internal (e.g. Metadata Catalogue) and external sources as feeds (JSON) and viewed through an interactive user interface. |
| LA\_79 | Integrated Metadata Dashboard | The Supplier Solution shall have the capabilities to receive updates from metadata repositories to ensure records are kept up to date. |
| LA\_80 | Integrated Metadata Dashboard | The Supplier Solution shall provide the capability to link metadata records to a description of initiatives or projects that are being progressed to deliver business outcomes. |
| LA\_81 | Integrated Metadata Dashboard | The Supplier Solution shall have the capability to record data, as an inventory, required or used for a specific project or initiative using metadata consumed through the dashboard. |
| LA\_82 | Integrated Metadata Dashboard | The Supplier Solution shall provide the capability to search and interrogate metadata through default criteria as defined by the Authority for projects, initiatives and data sued within them |
| LA\_83 | Integrated Data Explorer | The Supplier Solution shall provide the capability to integrate data from Data Explores (available on the [DSP App Gallery](https://environment.data.gov.uk/appgallery)) through a user interface. |
| LA\_84 | Integrated Data Explorer | The Supplier Solution shall provide the capability for integrated data to be visualised on an interactive map. |
| LA\_85 | Integrated Data Explorer | The Supplier Solution shall provide the capability to search and interrogate integrated data, through default criteria as defined by the Authority, and visualised through a user interface. |
| LA\_86 | Water Network Explorer | The Supplier Solution shall provide the capability to publish the water network as a OGC API Feature Service with appropriate authentication to allow users to accept an End User Licence. |
| LA\_87 | Water Network Explorer | The Supplier Solution shall provide the capability the water network to be associated with monitoring site locations published on the DSP. |
| LA\_88 | Water Network Explorer | The Supplier Solution provide the capability for the water network and associated monitoring sites to be queried on an interactive map. |
| LA\_89 | Water Network Explorer | The Supplier Solution shall provide the capability to search and interrogate the water network and associated monitoring sites, through default criteria as defined by the Authority, and visualised through a user interface. |
| LA\_90 | Water Network Explorer | The Supplier Solution shall provide the capability for users to identify, highlight and report improvements or errors in the association between monitoring site and water network stretch. |
| LA\_91 | Climate Change Knowledge Hub | The Supplier Solution shall provide the capability for users to consume and host resources relevant to climate change, such as research, policy and guidance documentation aligned to data held on the DSP. |
| LA\_92 | Climate Change Knowledge Hub | The Supplier Solution shall provide the capability to create a community of users to share information and create forums to discuss issues specific to Climate Change. |

**ANNEX R – DEFRA DSP: NON-LINKED DATA APPLICATIONS**

| **ID** | **Service** | **Requirement** |
| --- | --- | --- |
| NA\_1 | Drinking Water | The Supplier Solution shall provide capability for users to view Surface and Groundwater Safeguard Zone Action plans at https://environment.data.gov.uk/farmers. |
| NA\_2 | Drinking Water | The Supplier Solution shall provide a mandatory set of rules outlining management of nitrogen fertiliser and organic manure. |
| NA\_3 | Safeguard Zones and NVZs | The Supplier Solution shall have the capability to host Drinking Water Safeguard Zones (surface and groundwater) and Nitrate Vulnerability Zone maps, available at <https://environment.data.gov.uk/farmers/>. |
| NA\_4 | Safeguard Zones and NVZs | The Supplier Solution shall provide capability to draw an area on the map to select all applicable zones within a defined area. |
| NA\_5 | Safeguard Zones and NVZs | The Supplier Solution shall provide capability to turn selected zones on/off. |
| NA\_6 | Safeguard Zones and NVZs | The Supplier Solution shall provide the capability for users to pan, zoom in and out, query and search by place or address. |
| NA\_7 | Rural Payments Agency Land API | The Supplier Solution shall provide the capability to host and publish the API as documented https://environment.data.gov.uk/rpa/api |
| NA\_8 | Rural Payments Agency Land | The Supplier Solution shall provide the capability for farmers, land managers and land agents to obtain a current snapshot of their land data held by RPA by consuming it as a map service. |
| NA\_9 | Rural Payments Agency Land | The Supplier Solution shall provide the capability for farmers, land manager and land agents access Land Parcels, Land Cover, and Hedges that are recorded for EFA and Countryside Stewardship by their Single Business Identifier (SBI). |
| NA\_10 | Data Standards Registry | The Supplier Solution shall provide the capability to host a Registry to enable users to publish controlled list and Data Standards registers. |
| NA\_11 | Data Standards Registry | The Supplier Solution shall provide the capability to develop controlled lists of common terms in order to achieve data consistency across applications and business areas. |
| NA\_12 | Data Standards Registry | The Supplier Solution shall provide the capability to discover published Data Standards. |
| NA\_13 | Data Standards Registry | The Supplier Solution shall provide the capability for users to be notified of Data Standard changes so that standards can be kept up to date. |
| NA\_14 | Data Standards Registry | The Supplier Solution shall allow users to identify Data Standards specifications. |
| NA\_15 | Data Standards Registry | The Supplier Solution shall allow users to be able to identify status and compliance levels of relevant Data Standards that have been published. |
| NA\_16 | Data Standards Registry | The Supplier Solution shall allow to access to a Data Standard so that it can be implemented. |
| NA\_17 | Marine Activity Data | The Supplier Solution shall provide the capability for users to explore [Marine plan policies](https://explore-marine-plans.marineservices.org.uk/) via an interactive map by allowing a user to define a specific area. |
| NA\_18 | Marine Activity Data | The Supplier Solution shall provide the capability for users to pan, zoom in and out and query on an interactive map. |
| NA\_19 | Marine Activity Data | The Supplier Solution shall provide the capability for users to toggle on/off pre-defined spatial data layers. |
| NA\_20 | Marine Activity Data | The Supplier Solution shall provide the capability for documents, relevant to a marine plan policy, to be accessible via an associated link, |

**ANNEX S – MANDATORY THIRD PARTY SOFTWARE**

| **Software** | **Supplier (if an Affiliate of the Supplier)** | **Purpose** | **Number of Licences** | **Restrictions** | **Number of Copies** | **Type** | **Term/Expiry** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| TBC | TBC | TBC | TBC | TBC | TBC | TBC | TBC |

1. [5-star Open Data (5stardata.info)](https://5stardata.info/en/) [↑](#footnote-ref-2)