

Annex 1

Terms of Reference

1. Background and objective:

The ESM Website (“**Website**”) is built on the open-source web content management system Drupal 11, following successive upgrades from earlier Drupal versions to ensure long-term sustainability, security, and compatibility with current web standards. The platform is actively maintained and benefits from modern Drupal core functionalities, improved performance, enhanced security mechanisms, and extended support for accessibility and multilingual content.

The primary business need for the Website Services is to enable the ESM to communicate transparently and effectively with financial markets, investors, policymakers, media, and the wider public. As a key international institution responsible for safeguarding euro area financial stability, the ESM must provide timely, accurate, and accessible information on its activities, including bond issuances, auction results, press releases, publications, and crisis prevention/support mechanisms. A reliable, secure, and user-friendly website is therefore essential for maintaining market confidence, fulfilling transparency obligations, and supporting the ESM’s institutional mandate. The Communications Department leads the day-to-day management of the Website. It coordinates multiple authorised editors (the user management is taken care of the ESM Communications Department) across the organisation who publish and update content on a daily basis. While the Communications Department retains full editorial control and ownership, the ESM has multiple authorised editors who contribute on a daily basis to the Website, publishing and maintaining a wide range of content such as press releases, bond-related information, auction results, newsletters, publications, and other institutional materials. The Website is primarily designed for anonymous users and does not currently include an intranet or extranet area with role-based or restricted-access content. Visitors consume content passively and do not interact with the Website through authenticated user actions.

From a technical and operational perspective, the ESM Website is supported by a Drupal-centric cloud-based infrastructure, designed to be scalable, resilient, and secure. The infrastructure supports elastic scaling to accommodate traffic peaks and incorporates industry-standard security controls to mitigate threats such as distributed denial-of-service (DDoS) attacks and other malicious activities.

The Website must be developed following a modern development workflow, including:

- a) A version-controlled source code repository integrated with development, testing, and live environments.
- b) Separate and consistent environments (e.g. development, staging, and production) with distinct URLs, including a dedicated subdomain for testing and validation.
- c) Continuous integration and deployment practices to ensure reliable, traceable, and auditable changes.
- d) Monitoring and logging mechanisms to support performance analysis, incident detection, and ongoing optimisation.

The Website has been progressively enhanced to align with the web accessibility best practices, with implementations guided by the Web Content Accessibility Guidelines (WCAG). While full AAA

compliance is not yet achieved across the entire Website, accessibility improvements have been introduced throughout key templates, components, and user journeys. Accessibility is treated as an ongoing process, closely linked to maintaining a consistent design system that supports inclusive user experiences.

The Website's architecture and setup are designed to be future-proof, allowing for the integration of additional web services, tools, and functionalities as required, while maintaining high standards of performance, security, accessibility, and brand consistency.

2. Description of the Services:

The ESM requires the service provider to provide the following Website Services, comprising both the implementation services described below (the “**Implementation Services**”) and the ongoing services described below (the “**Ongoing Services**”):

2.1. Implementation Services:

The ESM anticipates requiring the selected service provider (“**Service Provider**”) to be capable of delivering all the Implementation Services listed below. However, the ESM reserves the right, at its sole discretion, to determine whether and when any individual Implementation Service will be implemented. Nothing in this document shall be construed as a commitment by the ESM to proceed with, commission, or implement any of the Implementation Services.

2.1.1. Transition of Website Services and DCCSS migration

The Service Provider will be responsible for managing the transition of the Website and DCCSS migration from the incumbent website service provider (“**Incumbent Service Provider**”) to the Service Provider, to enable the Service Provider to commence the provision of the Services (the “**Transition Services**”). The Service Provider shall complete the Transition Services in a professional, well-planned, and coordinated manner no later than four (4) months after the Effective Date of the Framework Agreement. The parties acknowledge that the preferred target completion period is two (2) months after the Effective Date, and the Service Provider shall use reasonable efforts to achieve such target.

The Service Provider will play the leading role in executing the transition, including planning, coordination, preparation, and facilitation of all required activities to ensure a seamless and successful transition.

The Service Provider will develop a detailed, documented transition plan to be supplied to the ESM, which will include, but not be limited to, the individual tasks and work items to be performed; the roles and responsibilities of participants; scheduling; dependencies; critical paths; milestones; risks and related risk-mitigation measures; liaison and coordination with third parties; quality assurance; testing; security; and checklists (amongst others), in keeping with industry standards for such documents (the “**TP**”). The TP is to be developed in consultation with the ESM and/or its third-party experts, and the Service Provider will not implement the TP until the ESM has confirmed its acceptance of the TP in writing (e-mail will be sufficient). The Service Provider must deliver the TP within one (1) month as of the Framework Agreement's effective date. The Service Provider will deliver and maintain the TP in Microsoft Project format (unless otherwise agreed with the ESM) and include a Gantt chart. The Service Provider will maintain the TP as the transition services progress, to identify issues, update progress achieved, and record any other matters agreed with the ESM. Scheduled updates to the TP will be at least biweekly during the transition period.

2.1.2. Establishing a Drupal-centric cloud solution service hosting (DCCSS)

The Website is currently operated on a fully functional and mature Drupal-centric cloud solution service (DCCSS) on AWS. As the Website has already been successfully upgraded to Drupal 11, no large-scale platform or infrastructure upgrades is foreseen at this stage. Instead, the focus of the DCCSS is on the continuous operation, optimisation, enhancement, and future-proofing of the ESM Website.

The Service Provider will work with the Incumbent Service Provider during a transition period, not exceeding 4 months. While building up the new infrastructure, the existing one will keep on running being managed by the Incumbent Service Provider. The Service Provider will receive a snapshot of the code and files from the Incumbent Service Provider at the beginning of the transition period and yet another set at the time of the transition.

During this time the Service Provider will build their own infrastructure, from scratch, for the DCCSS, and integrate it with version control (ex Git-driven) workflows, Composer-based dependency management, automated CI/CD, layered security, and configuration as code. This includes the TMT integration (see 2.2.1), a Web Application Firewall (“WAF”), file server and a separate server to handle a Chat bot. It can be specialised Drupal Platform (such as Acquia or Pantheon) as a service or Hybrid orchestration such as DevPanel, AWS etc.

The Service Provider will consult the Incumbent Service Provider to establish correct stack requirements (which includes version of Drupal, PHP, MySQL, CDN, object storage for files, cache, CDN layer, WAF and OWASP rule set (or equivalents), HTTPS settings, etc.

The Service Provider shall write a report to document the new DCCSS. This report will be reviewed by the Incumbent Service Provider and ESM.

The Service Provider will test and confirm the DCCSS with the Incumbent Service Provider and ESM. The Incumbent Service Provider will hand over code and files.

Once the capability to take over service has been confirmed, a transition date within the transition period is agreed. The Service Provider will be able to consult the Incumbent Service Provider until the end of the transition period (4 months maximum from the contract’s effective date).

The Service Provider shall ensure that the DCCSS meets the following minimum requirements throughout the term of the Framework Agreement:

(A) Core platform and infrastructure:

- Provide a minimum uptime of 99.95% during a 12-month period, in line with the Availability Standard;
- Operate on a highly available, auto-redundant cloud architecture;
- Support elastic scalability to accommodate traffic spikes and peak demand;
- Include robust permission and access management mechanisms;
- Integrate content delivery network (CDN) technology to ensure optimal global performance and full-page caching capabilities;
- Support HTTPS certificate management, including monitoring, renewal, and coordination with ESM;
- Include DDoS protection and a web application firewall (WAF).

(B) Performance, Monitoring and Automation:

- Provide advanced performance optimisation, including page caching and backend optimisation;
- Implement state-of-the-art monitoring and alerting tools to detect incidents, performance degradation, and security threats;
- Support automated system administration and maintenance tasks;
- Enable continuous monitoring of Drupal core, contributed modules, and dependencies, including prioritisation of security-related updates.

(C) Development, Integration and DevOps Practices:

Support professional Drupal development workflows, including:

- At least three (3) identical environments: Development, Staging, and Live;
- Enable industry-standard continuous integration and deployment (CI/CD) pipelines;
- Integrate with a version control system (VCS) such as Git.

(D) Security and Maintenance:

- Ensure timely implementation of security updates across the entire stack, including operating system, middleware, Drupal core, contributed modules, and custom code;
- Apply updates in a manner that avoids service interruption wherever possible;
- Closely coordinate with the ESM's IT Security team on security-related activities and improvements.

(E) Accessibility, Design Consistency and Branding:

- Support ongoing implementation and refinement of web accessibility standards, guided by the Web Content Accessibility Guidelines (WCAG);
- Maintain and evolve a consistent design system that supports accessibility requirements, usability, and inclusive user experiences;
- Ensure that all technical and functional enhancements are aligned with the ESM's Brand Guidelines and visual identity.

(F) Continuous Improvement and Future Readiness:

The DCCSS shall be operated as a living platform, capable of accommodating future enhancements, new web services, integrations, and evolving regulatory or technical requirements. The Service Provider is expected to proactively identify areas of improvement and propose enhancements related to performance, security, accessibility, usability, and maintainability, in close cooperation with the ESM.

(G) Web Services, Integrations and Platform Set-ups:

The Website is supported by a set of web services, integrations and platform set-ups that together ensure its secure, scalable and efficient operation. These include content management, cloud and infrastructure services, performance optimisation and content delivery, monitoring and security services, automation and deployment tools, analytics, and integrations with third-party applications, including conversational and interactive web services where applicable. All services are operated in a manner that supports future evolution while maintaining high standards of performance, accessibility, branding and security. Examples of integrations through APIs:

- A feed of vacancies [Vacancies | European Stability Mechanism](#);
- A vanity URL <https://vacancies.esm.europa.eu/> website mirroring an Oracle cloud website;

- Integration of emails to targeted groups subscribing to various newsletters, press releases and blogs to a third party provider, currently Govdelivery.

The required services include:

- Web application services supporting the Website (CMS, APIs, integrations);
- Cloud-based services and managed services required for operation;
- Monitoring, logging and analytics services;
- Security-related services (WAF, DDoS, vulnerability monitoring);
- Automation and CI/CD services;
- Third-party tools integrated with the Website;
- Conversational interfaces / chatbot services;
- Content delivery, performance optimisation and caching services.

(H) **Chatbot:**

The Service Provider shall manage, maintain, and continuously optimise the conversational interface and AI search (Chatbot Services) capabilities integrated into the ESM Website. The ESM reserves the right, at its sole and absolute discretion, to modify, suspend, or terminate the chatbot services in line with the terms and conditions of the framework agreement. Based on the established Google Cloud Platform (GCP) architecture, the Service Provider must ensure the system meets the following standards:

- Core Architecture & AI Services:** Maintain and support the highly available microservices architecture (Cloud Run) powering the Dispatcher, Fulfilment, Search API, and Conversation History. The Service Provider must ensure seamless operation of Dialogflow CX for intent resolution and integration with Google APIs (Vertex AI Search and Gemini) for advanced natural language processing.
- Drupal Integration & Automated Indexing:** Ensure the Chatbot widget and the custom Search UI remain fully functional, accessible, and correctly injected within the Drupal 11 environment. The Service Provider must maintain the automated indexing pipeline (via Cloud Functions), ensuring that when new content or PDF documents are published in Drupal, the Vertex AI Datastore is instantly triggered via API to crawl and index the new URLs.
- Compliance, Data Privacy & Analytics:** Guarantee strict data privacy and compliance by managing the established data pipeline. This includes utilizing the Data Loss Prevention (DLP) API to anonymise user interaction data before it is securely routed via Pub/Sub to BigQuery storage. The Service Provider shall also support Looker Studio to provide ongoing analytics and insights.
- Multi-Environment Workflow:** Align the chatbot's deployment lifecycle with the broader DCCSS development workflow by managing distinct, identical environments: Development (DEV), Quality Assurance (QA), Pre-production (PRE), and Production (PRO).
- Monitoring & Performance:** Implement comprehensive monitoring across the GCP infrastructure. This includes tracking Cloud Run resource usage (CPU and memory), managing API and Dialogflow quotas to avoid service disruption, and proactively monitoring custom error logs to detect and resolve issues.

2.2. Ongoing Services

2.2.1. Hosting, maintenance and support

2.2.1.1 Hosting

The Service Provider shall provide hosting services for the DCCSS environment, as described in section 2.1.2.

The current DCCSS environment as of August 2026 has the following characteristics and it is required that the Hosting service provided by the Service Provider will meet at least the below requirements:

2.2.1.1.1 Compute / Server Resources (EC2 or equivalent)

- Number and types of instances/servers currently in use (e.g., instance families like t3, m5, or Graviton-based; sizes such as medium/large).
- Average and peak CPU utilization (%) and memory (RAM) usage over the last 1–3 months (or longer if available).
- Auto-scaling, with typical min/max number of instances.
- Uptime pattern (24/7 production vs. any scheduled environments).

The table below describes the EC2 instances usage by family, the covered services are:

- Drupal CMS
- Drupal Proxy Service
- Gutenberg Service
- Solr Service

These services are available for 4 environments (CI, QA, STAGE, PRO) and running 24/7 for all environments. Please notice that ESM uses Spot instances (Docs) as a saving method for non-production environments.

EC2 Instance by Family	Amount	Top CPU usage last 180 days	Auto scaling limit	Usual Amount	Instance lifecycle
t3.medium	3	9%-18%	1-4	3	Spot
t3a.medium	4	6%	1-4	4	Spot
t3a.large	2	8%	1-3	2	Normal
c7i.2xlarge	1	45%	1-4	1	Normal

Any use of containers (ECS / EKS / Fargate), serverless, or Reserved Instances / Savings Plans. DCCSS uses ECS cluster, using EC2 instances as nodes so are included in the EC2 instances info. DCCSS also uses lambda as a monitoring tool.

2.2.1.1.2 Storage

- Total disk/storage used (EBS volumes for servers + any S3 for media, files, assets and backups).
- Breakdown if possible: application files, media library, logs, backups.

- Storage type/class (e.g., SSD gp3, Standard S3 vs. Infrequent Access) and growth trend.
- Snapshot/backup volume and retention policy.

EBS (Amazon Elastic Block Store): DCCSS uses a total of 430 Gb of EBS storage all of them gp3

S3: For S3 several buckets are being used for a storage total of 180 Gb with a growth in the last month of 33 Gb all this without versioning and stored in STANDARD storage class. The larger growing S3 bucket in the past 3 months is associated with Drupal SQL Backups and Development testing results (Sonar) 23Gb.

EFS (Amazon Elastic File System): For persistence in the autoscaling environments NFS service provided by AWS is used (EFS) currently it has 50 Gb of total storage usage, backup policy is set to 35 Days retention only for PRO environments 14Gb. The approximate growth in the last 3 months is 2 Gb in total.

2.2.1.1.3 Database (critical for Drupal, often RDS, Amazon Relational Database Service)

- Database engine and version (typically MySQL/MariaDB or PostgreSQL).
- Instance size/type, storage allocated and used (GB), and IOPS if provisioned.
- Average/peak connections, CPU, and memory usage.
- Multi-AZ (AWS's usual way to get high-availability).
- Database size growth over recent months.

The following table describes the database RDS instances that correspond to the CI, QA, STAGE, PRO environments.

RDS Name	Engine + Version	Instance	Multi AZ	Storage Alloc	Storage Used	IOPS	CPU Avg	CPU Peak	DB Conn Peak	90 days Net Growth
esm-drupal-ci	Mysql 8.4.8	db.t4g.medium	FALSE	80 GB	6,33 GB	3000	3%	53%	4	0,44 GB
esm-drupal-pro	Mysql 8.4.8	db.t3.medium	TRUE	80 GB	8,78 GB	3000	5%	61%	177	0,37 GB
ersm-drupal-qa	Mysql 8.4.8	db.t4g.medium	FALSE	80 GB	6,04 GB	3000	3%	53%	9	0,23 GB
esm-drupal-stage	Mysql 8.4.8	db.t4g.medium	TRUE	80 GB	6,61 GB	3000	4%	55%	7	-0,06 GB

Currently there are 69 Snapshots stored in total for the different environments.

2.2.1.1.4 Traffic & Data Transfer

The DCCSS shall be capable to handle current level traffic and data transfer and be flexible to deal with 50% growth within the next four years.

- Monthly (and peak daily/hourly) outbound data transfer / bandwidth in GB.
- Approximate monthly page views, unique visitors, or requests (from analytics or server logs).
 - Annual average (Aug 2025 - Aug 2026, divided by 12):
 - - Unique Visitors: ~31,900 / month
 - - Page Views: ~65,250 / month
 - - Requests (Event Count): ~221,160 / month
- CDN usage (e.g., CloudFront): traffic served via CDN vs. origin, cache hit rate if available.
- Any significant spikes (e.g., related to news or reports on the ESM site).

The following tables describe the total amount of data outbound on the AWS account by Network traffic and Cloudfront CDN traffic, also the cache behavior for the PRO environment.

Source	Outbound Data (30D)
Cloudfront Outbound	310,71 GB
EC2 Network Out	386,13 GB
Total Outbound	696,84 GB

Environment	Total Requests	Cache hit rate	% Served by CDN	% Served by Origin
Pro	9054773	63,17	63,17	36,83

2.2.1.1.5 Other Common Services & Overhead

- Load balancers (number and type, data processed).
- Caching layer (e.g., ElastiCache/Redis/Memcached) if present.
- Monitoring/logging (CloudWatch metrics/logs volume).
- Any other notable services (Route 53 DNS queries, WAF, backups beyond EBS, etc.).
- Region(s) used (affects pricing).
- Current approximate monthly AWS bill breakdown by service (or total), if they can share aggregated figures—this is often the most direct input for estimation.

There are currently 7 load balancers in the account that in total have served 512 Gb of traffic in the past 90 days.

DCCSS uses cloudwatch for storing services logs, monitoring and alarms for availability.

The services are protected using WAF.

Regions used for resources are mainly Ireland eu-west-1 and N. Virginia us-east-1 for global services like CDN and WAF.

2.2.1.1.6 Drupal-Specific / Operational Context

Approximate number of content nodes/pages, media files, or modules that heavily impact performance.

Total nodes	7,138 (5,417 published, 1,721 unpublished)
Content types	31
Paragraphs	9,117 (47 types)
URL aliases/redirects	8,070/1,757
Node revisions	34,829 (~4.9 per node)
Paragraph revisions	53,169 (~5.8 per paragraph)
Average number of entities	7,423 (9 bundles: 4,254 image, 2,503 document, rest video/audio/gallery)
Files	9.610 / 5,56 GB

- All this information is an approximation because the web is continuously getting new contents and files.
- Environments and whether non-production ones run continuously.

Env	Resources	Availability
Pro	Web Server instance: c7i.2xlarge Database Server: db.t4g.medium	24/7
Stage	Web Server instance: t3.medium Database Server: db.t3.medium	24/7
CI	Web Server instance: t3.medium Database Server: db.t3.medium	7:45 to 22:00
QA	Web Server instance: t3.medium Database Server: db.t3.medium	7:45 to 22:00

AWS instance description:

- C7i.2xlarge: 16GB RAM/ 8 vCPUs
- T3.medium: 4GB RAM/ 2 vCPUs
- Db.t4g.medium: 4GB RAM/ 2 vCPUs
- Db.t3.medium: 4GB RAM/ 2 vCPUs

2.2.1.2 Maintenance of DCCSS Infrastructure

Maintenance and Operation Services

The Service Provider will be responsible for ensuring the availability, security and performance of the ESM Website and its DCCSS infrastructure. The Service Provider must therefore be capable of delivering maintenance (and support services) for the existing infrastructure, including the hosting environment and all associated platform components. The Service Provider will be fully responsible for the maintenance of their hosting platform and supporting infrastructure for the duration of the Framework Agreement, unless otherwise agreed in writing with the ESM.

The Service Provider will be required to provide the following maintenance services for the ESM Website Infrastructure (the “**Maintenance Services**”):

- a) Ensure the ESM Website is maintained and operational in accordance with the Availability Standard (see point 3.1.1.);
- b) Ensure the availability and performance of the ESM Website servers;
- c) Install critical patches, and/or recommended security updates (related to core Drupal or contrib modules) to the ESM Website system components;
- d) Investigate and resolve incidents and issues with the ESM Website;
- e) Remediation of defects, bugs, misconfigurations and any other non-desired functionality or non-functional requirements;
- f) Install new releases of core Drupal, major or minor;
- g) Propose improvements to the ESM Website and if agreed with the ESM, implement these improvements or supply other Website Services. If improvements are required to the ESM Website resulting from residual issues with the Existing Infrastructure, such improvements will be covered under Development Services as defined in Section 2.2.4 below. The responsibilities will be undertaken in accordance with the pre-agreed governance and implementation protocols to be agreed with the Service Provider as part of the Framework Agreement;
- h) Ensure the current version of the ESM Website’s core Drupal, including all contrib modules, is up to date. When there is a new version of a contrib module available, the Service Provider will test such module on its test environments and after successful completion of non-regression testing, provide the ESM with a report on the results of the testing. The ESM will review the report and if the ESM accepts the results, the ESM will provide the Service Provider with written approval and the Service Provider will deploy it in the production environment of the ESM Website;
- i) For the Chat Bot, there will be about 1,000 interactions per year by anonymous users. The processing of these requests and responses are included in the operation. Periodic review of Google Cloud Platform service billing to ensure cost stability and alignment with expected figures, and to anticipate the impact of any pricing changes;
- j) Continuous monitoring of infrastructure sizing metrics based on the actual consumption of deployed services to ensure optimal performance and cost-efficiency;
- k) Analysis of service logs to verify correct system behaviour and to proactively detect exceptions not covered by the current alerting model;
- l) Regular review of infrastructure components and services to identify deprecated elements, optimisation opportunities, and necessary updates to maintain and improve the overall solution;

- m) Propose proactive improvements for the evolution and optimisation of the virtual assistant, and, if agreed, implement such improvements in accordance with the agreed governance and implementation protocols.
- n) Regular reporting. The Service Provider will ensure that the Google Analytics works properly and that statistics is collected on the Chat Bot.
 - For Google Analytics a monthly report shall be sent to ESM with statistics on the website.
 - For the Chat Bot there shall be a separate monthly report shall be sent to ESM with statistics on the Chat Bot interactions.

Examples from existing reports are available as Appendices 1 and 2 to these Terms of Reference.

Reporting and improvement proposals:

The Service Provider shall provide analytics and reporting services relating to the performance and usage of the ESM Website (the “**Analytics and Reporting Services**”). The Analytics and Reporting Services shall comprise, at a minimum, the following elements:

- a) Collection of all relevant data measured during each reporting period, including but not limited to performance indicators, user activity metrics, and any additional data points reasonably required for the assessment of the Website’s functioning;
- b) Analysis of the collected indicators against the objectives and performance targets communicated or otherwise established by the ESM, with a view to assessing the Website’s effectiveness and identifying potential areas for improvement;
- c) Preparation and delivery to the ESM of a Monthly Executive Report;
- d) Implementation (upon the ESM’s request) and proposing adjustments to the measurement plan, including modifications to the data sets, metrics, or analytical methodologies applicable to the Website;
- e) Preparation and delivery to the ESM of Quarterly Improvement Proposals, outlining recommended actions, optimizations, or strategic adjustments based on observed data trends and analytical findings.

The Monthly Executive Report shall constitute the principal standard deliverable under the Analytics and Reporting Services. The Monthly Executive Report shall summarise key performance indicators, analytical conclusions, trends, and any recommended measures that may support the ESM’s decision-making processes.

The Quarterly Improvement Proposals shall set out medium-term recommendations and optimization opportunities arising from the cumulative analysis conducted during each quarter.

The Monthly Executive Report and the Quarterly Improvement Proposals shall be delivered to the ESM in English, in PDF format, no later than one month following the end of the relevant reporting period.

Ticketing Tool and Incident Management

For the purposes of providing Ongoing Services, the Service Provider will supply and maintain an online, state-of-the-art trouble/issue ticket management tool (the “**TMT**”), accessible to the ESM’s authorised representatives, that will allow the Service Provider, and the ESM where necessary, to record all Changes (as defined in section 2.2.4), defects, requests, and other issues for tracking, analysis, and resolution by the Service Provider.

The Service Provider may resolve issues by email, phone, or remote access, but the Service Provider must record all actions in the TMT.

Each ticket will be uniquely identifiable, time-stamped, prioritised, and categorised by the Service Provider in accordance with the methodology agreed with the ESM. Tickets will be analysed by the Service Provider, and the ESM will verify the prioritisation. The advancement of tickets associated with new Changes shall be pre-approved in writing by the ESM (e-mail shall be deemed sufficient), and the scope and timing (amongst other matters) of these Changes shall be agreed between the Service Provider and the ESM.

The TMT will display the priority level of each ticket, and it shall be possible to link each ticket to a tentative scope and to a final scope of a Change. The TMT will not actively monitor the Website, but all information about the Website (change requests, defects, incidents, etc.) will be recorded there, and the Service Provider can use this information to monitor, assess, and report on the Service Provider's performance and the Website's performance.

Automated Monitoring Tool

The Service Provider will also provide a tool that monitors the ESM Website's modules and core versions and detects new updates and their priority (e.g., security-related or not, highly critical or not, etc.) (the "**Automated Monitoring Tool**"). The monitoring tool used must integrate with the VCS and be capable of automatically updating Drupal core versions.

Support Services:

The Service Provider will provide support services (the "**Support Services**") from Monday to Friday from 08:00 – 18:00 CET, except for ESM holidays. Support Services will be provided via phone, email and remote access and the service provider will record all requests for Support Services in the TMT.

The ESM may request CS Services, Maintenance Services and Development Services via the Support Services.

The Service Provider will provide an emergency contact for urgent Support Services requests. Emergency requests for Support Services are unlikely to be frequent. It is envisaged that such requests may arise on average once per month. The Service Provider will also provide 24/7 monitoring of the ESM Website and immediately resolve any issues that result in the ESM Website becoming unavailable or lead to significant issues in operation e.g. major errors, unavailability of the Website, incorrect rendering of pages, etc.

2.2.4. Development Services

The ESM will require the Service Provider to perform development services on the ESM Website (the "**Development Services**"). As part of the Development Services, the Service Provider will make changes to the ESM Website ranging from small improvements to larger improvements and the introduction of new functionalities, including updates of graphic items, updates to content, etc. (the "**Changes**").

The Service Provider shall record all Changes in the TMT.

The ESM will promote an agile approach to Development Services where the scope of Changes will be agreed between the ESM and the Service Provider.

For the purposes of managing Development Services, Changes shall be divided into the following categories:

- **BAU Changes** – covering minor, routine, ad-hoc development, maintenance, enhancement or configuration activities relating to the ESM Website that are limited in scope, low in complexity, low in implementation risk, do not require substantial architectural modifications, and can be implemented by the Service Provider with no more than 24 hours of effort. BAU Changes typically include minor content updates, graphical adjustments,

configuration changes, bug fixes, usability improvements, minor functional enhancements and similar activities. BAU Changes shall not include major developments, significant new functionalities, material changes to the architecture, integrations, security model or infrastructure of the ESM Website, or any other Change that the ESM reasonably determines should be managed as a separate project under a Work Order.

- **"Project Changes"** covering any Changes that do not qualify as BAU Changes, including Changes that exceed 24 hours of effort, are significant in scope, complex in nature, or involve a higher degree of implementation, operational, security, architectural or business risk. Project Changes include, without limitation, the development of significant new functionalities, material enhancements to existing functionalities, integrations with third-party systems, substantial user experience or design changes, modifications to the architecture, infrastructure or security model of the ESM Website, or any other Change that requires dedicated project planning, governance, coordination, testing, or deployment activities. Project Changes shall be performed pursuant to a separate Work Order agreed between the Parties. Notwithstanding the foregoing, the ESM may, at its sole discretion, designate any proposed Change as a Project Change where the ESM reasonably determines that the Change requires enhanced governance, detailed specifications, phased implementation, dedicated project management, specific acceptance criteria, or otherwise warrants management outside the BAU Change process.

BAU Changes

BAU Changes may be requested by the ESM or proposed by the Service Provider through the TMT or via e-mail.

Each BAU Change request (by the ESM) or proposal (by the Service Provider) shall include a description of the Change and any relevant information regarding scope, objectives, timing and priority.

Where the Service Provider identifies improvement, enhancement, optimization, correction, or other change that may benefit the ESM Website, the Service Provider may submit a BAU Change proposal through the TMT or via e-mail. Such proposal shall include a description of the proposed Change, its rationale, estimated effort and costs, anticipated benefits, timing and any other relevant information.

Upon receipt of a BAU Change request from the ESM the Service Provider shall provide through the TMT an estimate of the effort required to implement the Change, including the proposed number of hours, consultants engaged, the estimated cost, timing and priority.

The ESM shall review the Service Provider's proposal and determine whether to proceed with the Change.

No BAU Change shall be implemented unless and until the ESM's authorised representatives have approved the relevant Change in writing through the TMT or by e-mail. Following such approval, the Service Provider shall implement the Change in accordance with the agreed priority and delivery schedule.

For efficiency, planning and resource management purposes, approved BAU Changes may be grouped, prioritised and managed through development sprints. The ESM and the Service Provider shall jointly determine which approved BAU Changes are to be included in a given sprint and the order in which such BAU Changes will be addressed, provided that the ESM shall retain the final decision regarding priorities. For planning purposes, a sprint should typically not exceed two (2) weeks in duration.

(b) Project Changes

Project Changes shall not be performed through the BAU Change process and shall instead be subject to a separate Work Order issued under the Framework Agreement.

For each Project Change, the Service Provider shall submit a proposal setting out the scope of work, assumptions, estimated effort, project plan, milestones, deliverables, timetable, fees and any other information reasonably requested by the ESM.

The Service Provider shall not commence any Project Change unless and until the parties have agreed the relevant Work Order and the ESM has issued any required Release Order or other approval in accordance with the Contract.

Implementation of Changes:

The Service Provider will test all Changes to be deployed in a staging environment that is accessible to the ESM and in a developer testing environment. A protocol will be established setting out what each Change contains, which tests were made, and the test results. Unless otherwise agreed in writing, the Service Provider must receive prior written approval from the ESM via the TMT prior to deploying any Change on the ESM Website's live environment. Deployments will be prepared and undertaken so they can be accomplished without the ESM Website going offline. The Service Provider will implement the deployment process in a consistent, repeatable, and automated manner in accordance with the highest industry standards and practices.

Content Support Services, as part of Development services

The ESM will from time to time require content support services ("**CS Services**"), which consist of editorial support of ESM Website page(s), a block, or content support improvements. The Service Provider will record these services in the TMT, but the ESM may also request the CS Services via phone or email.

3. General Requirements

3.1. ESM Website Requirements

The ESM Website must meet the following general requirements:

3.1.1. Availability

It is required that the ESM Website is accessible to anonymous visitors 24 hours a day, 7 days a week, 365 days a year, excluding scheduled maintenance or pre-agreed outage periods. The ESM Website performance availability standard will be a minimum of 99.95% (the "**Availability Standard**"). All Website Services, supporting infrastructure, and software code must be robust, resilient, stable, and established and maintained in accordance with the highest industry practices and standards for website development and maintenance.

If the Service Provider fails to meet the Availability Standard, service credits may be payable by the Service Provider to the ESM, at the ESM's election.

In addition, if the Service Provider fails to meet the Availability Standard for two (2) consecutive months or in any three (3) months during any twelve (12)-month period, this will be considered a material breach of the Service Provider's obligations.

The Service Provider must agree planned outages in advance with the ESM and schedule these outside core working hours to minimise any disruption to the ESM.

3.1.2. Operating and Design Principles

- The ESM Website will be user-friendly, intuitive and easy to use, and support all leading browsers including Chromium-based browsers, Firefox and other major browsers for mobile phones and tablets.
- Any architectural solutions will have the ability to be integrated with new applications, services, and tools, allowing the Website to evolve over time without compromising stability or security.
- All ongoing and future capabilities of the ESM Website will be compatible with the latest technologies and standards, including the current and future supported versions of Drupal, modern frontend frameworks, and cloud-based service integrations.
- The ESM Website will be consistent with the ESM's Brand Guidelines and will follow a coherent and reusable design system, ensuring visual consistency, maintainability, and ease of evolution across templates, components, and content types.
- All graphical and interface elements of the ESM Website will be kept contemporary and appear as an integrated visual concept, while taking into account accessibility considerations and inclusive design principles as part of an ongoing improvement process.

3.1.3. Navigation, Design, Usability and 'Look and Feel'

- The ESM Website will be easily accessible, modern, responsive, user-friendly, informative, well organised, visually attractive, up-to-date and reliable, taking into account state-of-the-art approaches to website design and development and applying a consistent methodology throughout.
- Graphic designs, web pages, web applications and usability efforts will provide a high-value user experience, balancing clarity, performance, accessibility, and visual consistency.
- The ESM Website will respect horizontal considerations on performance, accessibility and information quality, and take into account the Europa Web Guide, https://commission.europa.eu/resources/europa-web-guide_en, and other applicable standards and compliance requirements.
- Pages will render quickly (e.g. within 2 seconds under normal conditions), and the Website will not slow down when links are clicked on or content is launched, including during peak traffic periods.
- The information architecture of the ESM Website will ensure it is easy for users to understand the structure and site map of the Website and to quickly retrieve necessary information such as policies, guidelines, publications, and documents.
- Navigation structures, templates and reusable components will be designed and maintained with accessibility in mind, guided by the Web Content Accessibility Guidelines (WCAG). While full AAA compliance may not be achieved across the entire Website, accessibility is treated as a continuous process, closely linked to maintaining a consistent, inclusive and usable design across all devices and screen sizes.

3.1.4. Brand Integrity and Enhancements

- The Service Provider will ensure that all development work respects and consistently reflects the then current ESM image and ESM Brand Guidelines.

3.1.5. Future-Proofing and Other Requirements

- The Service Provider will undertake any enhancements or developments of the ESM Website in keeping with common W3C standards and Drupal coding standards.

- For all enhancements and developments the Service Provider will conduct visual tests and usability tests in the stage environment and the Service Provider is required to validate the ESM Website on different devices, OS versions, screen sizes, and resolutions (including mobile devices).
- Prior to the release of all enhancements and developments, the Service Provider will also validate the ESM Website by employing testing approaches as further described in this document to verify the ease of use of the user interface.

3.1.6. Performance Requirements

- In order to optimise the performance of the ESM Website, the Service Provider must consider and implement appropriate complementary technologies and techniques, such as database optimization, advanced caching mechanisms (including binary and HTML5 caching where applicable), and other performance-enhancing configurations. The Service Provider must demonstrate that all necessary software and configuration measures have been undertaken to optimise performance through targeted and focused testing.
- For all significant enhancements, releases and Changes to the ESM Website, the Service Provider must carry out performance, load and stress testing covering all relevant functionalities within the scope of the Changes, ensuring that performance standards are maintained and that no degradation is introduced into the live environment.

3.2 Version Control System (“VCS”)

- The Service Provider will use a VCS for all codes and Changes. Each commit shall clearly indicate the purpose of the Change and also link to the specific ticket of the TMT to ensure a robust audit trail.
- Each release candidate (i.e. each Change ready for testing) will be tagged and it will be possible for the ESM to identify the content of each Change.
- The complete repository of the VCS shall be available and easily accessible via online access for ESM to view.

3.3 Documentation Suite

The Service Provider will develop and maintain a comprehensive, sufficiently detailed, and accurate suite of ESM Website documentation consistent with industry standards. The documentation suite will include, but not be limited to the following:

- the complete source code;
- external libraries and scripts;
- details of designs, layouts, and configurations;
- technical design documentation with established traceability;
- Architectural setup of AWS;
- TMT content;
- test plans and test design specifications with established traceability;
- the methodology requirements documentation;
- test cases and horizontal requirements;
- user Interface (UI), graphical design models, and interactive mock-ups;
- Change related documentation;

- reports and other related documentation and artefacts as may be applicable.

The Service Provider will maintain the documentation suite contents in sufficient detail to constitute a virtual and permanent resource material library and a handover manual to permit a reasonably qualified professional, in the website development and maintenance industry (be they ESM or any other third party) to properly manage, host, operate, maintain, and enhance the ESM Website independently.

The Service Provider will make the documentation suite accessible to the ESM at all times. The Service Provider will store and maintain the documentation suite in the VCS.

Upon the execution of the Framework Agreement, the Service Provider will provide the ESM with comprehensive, unfettered, easy and uninterruptible access to its VCS, to allow the ESM to use, review, and extract all related ESM Website documentation, materials and/or other artefacts for its purposes in its sole discretion. The access methodologies to be supplied and used by the ESM will be consistent with industry practice for same.

Notwithstanding the ESM's access to the VCS, on request by the ESM, the Service Provider will provide the ESM with a fully executable copy of the current version of the ESM Website's Drupal object code reflecting the ESM Website content. The exact frequency and media format of such code delivery to the ESM will be pre-determined by the ESM.

3.4. Transition to the new provider

The Service Provider shall provide all reasonable transition assistance, including knowledge transfer, documentation, source code repositories, configurations, access credentials, operational procedures, and other support reasonably required to facilitate an orderly transfer of the services to the ESM and/or a replacement service provider.

3.5 Language

The ESM's official working language is English. The ESM Website and the Website Services must be delivered in English. All business exchanges and all administrative matters with the selected Service Provider, including but not limited to the Framework Agreement, any orders issued under the Framework Agreement, invoicing, account management, analysis, reporting and other documentation must also be in English.

3.6 Hosting and Data Locations

All hosting, storage, processing, replication, backup, logging, archiving and disaster-recovery of DCCSS data (including personal data, content, metadata and telemetry) shall take place exclusively in data centres located in the European Union or the European Economic Area.

The Service Provider shall identify, at contract signature, the specific data-centre region(s) and country/countries that will be used. Those locations shall form part of the contract. The Service Provider shall not change them, add new locations, or use additional regions for any copy of the data without the ESM's prior written consent.

The Service Provider shall ensure that its subprocessors and any further subcontractors used for hosting or processing DCCSS data are likewise restricted to EU/EEA locations, unless the ESM has given prior written consent.

Remote access by support, operations or development staff located outside the EU/EEA is not permitted unless the ESM has given prior written consent and equivalent safeguards apply. The Service Provider shall keep an up-to-date register of all persons and entities with access to DCCSS data and of the locations from which that access occurs.

Upon request, the Service Provider shall provide evidence of the actual data locations (for example certificates, architecture diagrams, or independent audit reports) and shall cooperate with any verification the ESM reasonably requires.

3.7 Security

The Service Provider must approach security of the ESM Website as a strategic requirement. The Service Provider is required to protect the ESM Website (including, for the avoidance of doubt, the associated hosting environment) from all security breaches and incidents including, for example, defacement, unauthorised access, data tampering, denial-of-service attacks, or any other actions or attacks carried out by third parties that interfere with the ESM Website including, but not limited to, cross-site scripting (XSS) attacks or sending unsolicited (spam) email.

When conducting the Website Services the Service Provider must give due consideration to matters of security from the outset, in particular, where there is possibility of impact on the ESM Website's (including the environment) integrity, and/or data, roles, rights and permissions models. The Service Provider will closely involve the ESM's IT Security Team in security activities to the extent possible.

The Service Provider must plan for and carry out (at a frequency to be determined in consultation with the ESM) internal, independent, automated, and/or manual penetration testing against all the ESM releases of packages of deployed code and Changes of the ESM Website during the term. Such measures will take into consideration the OWASP Top 10. In addition, the service provider will fully cooperate with the ESM (and/or its third-party experts) if and when the ESM determines it wishes to test or otherwise review various integral or quality security matters pertaining to the ESM Website.

3.8 Account Management

The Service Provider will appoint an account manager to be responsible for the service provider's activities (the "**Project Manager**") and an alternate in the event the Project Manager is unavailable.

For the performance of Development Services, the Service Provider shall make available suitably qualified personnel corresponding to the profiles listed below. The applicable daily rates for these profiles shall be provided in the Commercial Response Template.

A Project Manager with at least five years of relevant experience in managing website development, maintenance, cloud-hosting or comparable IT service projects. The Project Manager shall be responsible for coordinating the delivery of the Services, managing resources, timelines, risks, reporting, stakeholder communication and the implementation of Changes and Work Orders.

A Senior Developer with at least five years of relevant experience in Drupal or comparable web development, including experience with custom module development, integrations, upgrades, security, testing, deployment and troubleshooting in complex website environments.

A Developer with at least two years of relevant experience in Drupal or comparable web development, including experience with configuration, frontend or backend development, testing, bug fixing, maintenance and the implementation of approved Changes.

The Service Provider shall assign personnel with the appropriate profile and level of experience, taking into account the nature, complexity and risk of the relevant task.

3.9 Required Skills and Competencies

The provision of the Website Services requires a multidisciplinary team with expertise in Drupal development and maintenance, cloud-based infrastructures, security and performance optimisation, continuous integration and deployment, quality assurance and testing, and support and incident management. The team must also demonstrate competencies in UX/UI and web

accessibility (WCAG), inclusive and consistent design practices, frontend development, content support, and the integration and operation of third-party web services. Qualified profiles will be made available as required to ensure the continuity, quality and sustainability of the ESM Website. Required skills of team, which should be evidenced by CVs:

- Drupal (core, contrib, custom modules, upgrades)
- Cloud & infrastructure (DevOps, scalability, security)
- CI/CD and version control
- UX/UI and Web accessibility (WCAG, inclusive design)
- Frontend & UX (responsive design, design systems)
- Security & compliance (OWASP, monitoring, incident response)
- QA & testing (functional, regression, performance, accessibility testing)
- Content support & editorial assistance
- Third-party integrations and web services
- Monitoring, analytics and operational tooling
- Support & incident management
- Conversational AI Architecture & Search Integrations (Dialogflow CX, Vertex AI, Gemini, GCP microservices)
- Conversational Design & Linguistics (prompt engineering, NLP tuning, UX writing)
- Data Analytics & Reporting (Looker Studio, BigQuery, conversation metrics, data visualisation)

3.10 Quality Assurance & Standards

The Service Provider is required to employ (on a consistent basis) best industry practices and methodologies in the website development and maintenance industry inclusive of “state-of-the-art” tried, tested, and proven systems and tools. The Service Provider will ensure that it maintains a formal quality management strategy to achieve the overarching quality objectives of the ESM Website. Listing on the Drupal Marketplace is an advantage.

The Service Provider will at minimum comply with the following standards, guidelines, and methodologies when providing the Website Services:

- formal project management methodologies
- ITIL methodologies for service delivery
- The ESM branding guidelines
- OWASP Top 10 (or equivalent for the then current year)
- Web Accessibility Guidelines (WCAG)
- W3C markup validation for various HTML, XHTML, SMIL etc. document types
- W3C CSS validation services
- Drupal coding standards
- The DCCSS hosting standards referred to in point 2.2.1.1. of this Annex 1

The Service Provider will ensure that its staff responsible for quality assurance work in close cooperation with, but independently of, their development teams in terms of reporting and management. The Service Provider will carry out its own quality assessments on any and all deliverables and/or services provided and will ensure formalised internal quality assurance sign-off prior to any delivery to the ESM.

3.11 Service Levels and Performance Standards

The Framework Agreement awarded as a result of this procurement procedure will include a service level agreement with key performance indicators (KPIs). If the Service Provider fails to meet the KPIs, service credits or other performance management arrangements to address contractual performance, including but not limited to site availability, performance, service delivery performance (service delivery, responsiveness, reporting, change management, support for incidents, etc.) may be enforced by the ESM at its sole discretion.

Appendix 1 to Terms of Reference – Example of Google Analytics monthly report

See attached

Appendix 2 to Terms of Reference – Example of ChatBot monthly report

See attached