

# Emerging Technology Prioritization Framework

DRAFT PRE-DECISIONAL

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# 1. Executive Summary

In response to the President's <u>Executive Order 14110 on Safe, Secure, and Trustworthy Development</u> and Use of Artificial Intelligence (AI), FedRAMP is establishing a framework for prioritizing emerging technologies (ETs) for FedRAMP authorization. This framework will enable routine and consistent prioritization of the most critical ETs needed for use by Federal agencies. This prioritization will control how FedRAMP organizes its own work and review processes, and will not address how sponsoring agencies manage their own internal priorities.

This document describes the operational framework to prioritize certain Cloud Service Providers (CSPs) that include specific ETs in their system during the FedRAMP authorization process, how FedRAMP will govern and evaluate this new process, and details about the first prioritized technology (generative AI). Importantly, the prioritization process will be integrated on top of existing FedRAMP Authorization paths and will not create new pathways for authorization.

Not all ETs will be prioritized. Instead, the first prioritized technologies are three generative Al capabilities, as required by Executive Order 14110. FedRAMP will maintain an evolving list of capabilities of ETs, updated at least annually with approval from the Board. Technologies will be removed from prioritization either by decision of the FedRAMP Board, or when sufficient cloud service offerings (CSOs) with the desired capabilities are available to agencies.

FedRAMP will limit the prioritization to three CSOs with the identified capability to immediately move near the front of the authorization process. After three CSOs with the same capability of ET have been prioritized, additional offerings using the same technology will return to the standard prioritization process. Because this is a new paradigm for the program, FedRAMP will continually evaluate the process and make revisions as needed.

# 2. Purpose and Scope

This guidance document describes the prioritization framework for ETs for FedRAMP. The intent is to enable Agencies to make use of ETs in their cloud offerings more quickly.

This framework will initially be applied to artificial intelligence (AI), specifically the three generative AI capabilities discussed in Executive Order 14110: chat interfaces, code generators and debugging tools, and image generators.

FedRAMP will update this document, or publish addendums, to address further ETs identified for prioritization. While this document has an initial focus on AI, FedRAMP anticipates expanding this in the near future. Detailed artifacts related to generative AI are included in <u>Appendix A - Artificial Intelligence</u>.

General information including resources, blogs, templates, and documentation for the ET prioritization process can be found on FedRAMP's <u>website</u>.

Authorizing agencies still play a critical role in prioritizing any technologies for their use and issuing their ATO. While the FedRAMP authorization process will validate a CSO against existing FedRAMP



security and privacy controls, agencies are responsible for their operational maturity and governance processes in deploying any ETs. In the case of generative AI, agencies should consult closely with their Chief AI Officer. Agencies and 3PAOs will need to prioritize their portion of the reviews as well as the CSPs need to prioritize their actions for creation of any documents and remediation of any findings in order to accelerate the complete authorization process.

## 3. Framework Elements

The prioritization framework has been developed to accommodate many different types of technologies and capabilities. The initial focus is to accommodate growing demand for AI-enabled systems across the federal enterprise (an initial set of AI-specific concerns are included in <u>Appendix A - Artificial Intelligence</u> but the ET prioritization framework we propose is broader than just AI):

- 1. This prioritization allows a CSP to move near the front of the authorization process. This prioritization will reduce the waiting time before the authorization process begins. The authorization itself will take a similar amount of time as it would for other similar offerings at the same level and type of authorization.
- 2. Limit access to prioritization based on type of technology and capability. By definition, a prioritization process should exclude more candidates than it includes. As a starting point, FedRAMP will evaluate no more than three capabilities of ET for prioritization at any time. If too many products are prioritized, the process may lose the benefits of prioritization.
- 3. Automatically stop prioritizing CSOs when the product limit has been reached. For each ET capability, when three CSOs whose primary purpose is to offer that capability have achieved FedRAMP authorization, then prioritization for that capability will be paused.
- 4. Accessing the ET track should be fast. FedRAMP will keep any additional steps in the application process simple, and minimize added time or information requests to the process of achieving an authorization.
- 5. Agencies maintain responsibility for evaluating system functionality. As is true for all other FedRAMP authorizations, the authorization process considers the confidentiality, integrity, and availability of system data protected by the CSP. It does not certify the nature or quality of the functionality of CSO, or that it is a best fit for an agency's specific technology needs. Agencies drive their own acquisition and evaluation processes using a far broader set of criteria. FedRAMP may include requirements for additional information relevant to the specific ET (such as technology requirements, performance metrics, or responsible use policies). FedRAMP is committed to giving agencies the tools to protect the confidentiality, integrity, and availability of the data they process in these systems.

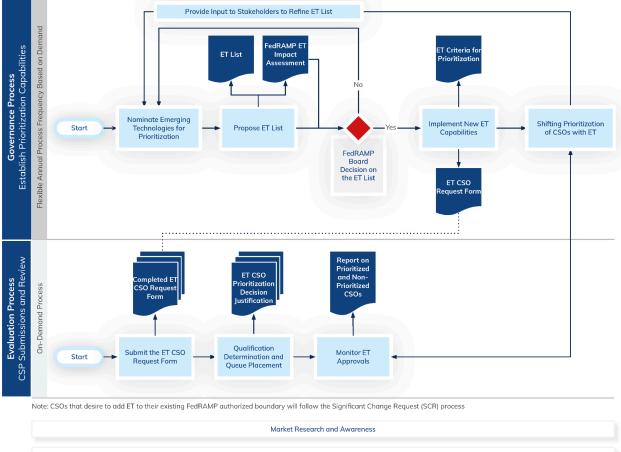


# 4. ET Prioritization Framework

#### 4.1. Overview

The ET Prioritization Framework provides a process that is integrated across all of the program's available authorization paths. There are two primary parts to the ET Prioritization Framework (seen in Figure 1):







The **Governance Process** defines how up to three capabilities will be prioritized for "skip the line" access to FedRAMP at any given time.

The CSP **Evaluation Process** outlines how cloud service providers will have their CSOs qualified to access an accelerated review.



## 4.2. Governance Process - Establish Prioritization Capabilities

The goal of the governance process is to identify up to three capabilities of ET at a time that the FedRAMP PMO will prioritize for accelerated authorizations.

To maintain the benefit of prioritization, up to three ETs may be identified at any given time. These should be updated annually at minimum – regardless of whether authorizations have been completed – and can also be updated as needed, either at the request of the FedRAMP Board or when FedRAMP has authorized three CSOs for a capability.

#### 4.2.1. Nominate ETs for Prioritization

**Who:** Chief Information Officer (CIO) Council, Federal Chief Information Security Officer (CISO) Council; **Consult:** FSCAC, NIST, 3PAOs

**What:** On an annual basis, at a minimum, the CIO Council or Federal CISO Council, in coordination with other councils or bodies (such as Chief Al Officer Council), will nominate ETs for FedRAMP to consider for prioritization. Nominations will include capabilities that have emerged across the federal enterprise.

**Output:** Recommendation from federal CIOs or CISOs to the FedRAMP PMO regarding their ET needs.

#### 4.2.2. Propose ET List

Who: FedRAMP PMO; Consult: Office of Management and Budget (OMB)

**What:** The FedRAMP PMO will collate and analyze the various nominations submitted to propose an updated list of up to three ET capabilities for prioritization. This will include an analysis of the PMO's ability to process authorizations for these capabilities, including:

- Maturity of global understanding (including understanding of the technology industry, 3PAO community, and current security best practices) for the ET
- Expertise or ability to establish expertise in the ET
- Appropriate staffing to process additional prioritized CSO requests
- Financial impacts to the program, if any exist, as a result of processing these ET requests

The PMO's evaluation will include recommending whether an existing ET should be discontinued from the list of prioritized ETs, even if the threshold for authorizations has not been reached.

Insights from the assessments will be compiled into a briefing that will provide an estimate of FedRAMPs ability to authorize and communicate a given area of ET services, considering maturity across PMO staff, Agencies, 3PAOs, CSPs, and the broader technology and cybersecurity community. The briefing will outline potential activities necessary to support the prioritized authorization of a given ET if approved.

**Input:** Nominations from the Federal CIO and CISO Councils to the FedRAMP PMO, as described above.



Output: Proposed ET List, FedRAMP ET Impact Assessment

Service Level Agreement Target: 1 week Service Level Agreement Threshold: 2 weeks

#### 4.2.3. FedRAMP Board Decision on the ET List

Who: FedRAMP Board; Consult: FedRAMP PMO, OMB

**What:** The FedRAMP PMO will brief the FedRAMP Board on its ET prioritization recommendation. The FedRAMP PMO will send all materials in advance of the Board meeting when the ET is on the agenda. The FedRAMP Board will follow its charter and documented practices to approve a final list of up to three ETs.

As the FedRAMP Board has not yet been assembled as of publication, and EO 14110 specifies the high-level capabilities for the initial list of ETs, the PMO currently plans to adopt these capabilities and to finalize evaluation criteria for these capabilities without presentation to or decision by the FedRAMP Board.

Input: Proposed ET List, FedRAMP ET Impact Assessment

**Outputs:** Approved ET capability list

Service Level Agreement Target: 1 week

Service Level Agreement Threshold: 2 weeks

#### 4.2.4. Implement New ET Capabilities

Who: FedRAMP PMO; Consult: Agency Partners and Liaisons, CSPs

**What:** The FedRAMP PMO will update its process documentation, website, and all necessary systems to align to changes to the approved ET list. Updated criteria and resources will be developed and published on the <u>Documents & Templates</u> page on the FedRAMP website and communicated to stakeholders. Existing CSP and CSO packages will be evaluated to identify new candidates for "skip the line" access when the list changes.

Input: Approved ET List

**Outputs:** ET Criteria for Prioritization, ET CSO Request Form (includes business case demand spreadsheet and questions capturing the CSO response to the ET Criteria)

Service Level Agreement Target: 2 months Service Level Agreement Threshold: 3 months

#### 4.2.5. Shifting Prioritization of CSOs with ET

**Who:** FedRAMP PMO; **Consult:** FedRAMP Board, CIO Council, Federal CISO Council, Agency Partners and Liaisons

**What:** When the PMO authorizes three CSOs in a given capability of ET, the capability will be automatically removed from the prioritization list. The FedRAMP PMO will repeat step <u>4.2.4</u> (Implement



New ET capabilities) to reflect the removal. All CSOs in process at the time of the decision will complete the course of action and activities relative to their current/designated authorization path. The FedRAMP PMO will notify the FedRAMP Board and other relevant stakeholders that the foundational authorization level has been achieved.

**Input:** Metrics Report on # of CSPs Prioritized for ET Capabilities

**Output:** Updated ET List

Service Level Agreement Target: 1 week Service Level Agreement Threshold: 2 weeks

## 4.3. Evaluation Process - CSP Submissions and Review

The Evaluation Process determines if a CSO meets the ET definition and criteria. Once identified and verified, then the CSP will be placed in an accelerated position in the FedRAMP authorization queue. These steps take place during the current Preparation phase of the FedRAMP authorization process.

The evaluation process kicks off after a CSP has (not in any particular order):

- Prepared and submitted their security package and business case for a CSO, following FedRAMP's regular authorization processes;
- Engaged with their 3PAO to develop a Security Assessment Plan (SAP), conduct a Security Assessment, and prepare their Plan of Action and Milestones (POA&M);
- Held an intake meeting with the FedRAMP PMO; and
- Reached an agreement with the FedRAMP PMO on the appropriate authorization path.

CSPs can submit their ET CSO Request Form at any point during this process. As part of the intake process, the FedRAMP PMO will review the ET criteria for prioritization with the CSP.

#### 4.3.1. Submit the ET CSO Request Form

Who: CSP: Consult: None

What: Complete the ET CSO Request Form which includes a business case demand justification and attestation to the ET criteria for FedRAMP PMO review. The form is available on the Documents & Templates page located on the FedRAMP website.

Input: Justification of how CSP meets ET criteria, and a decision to complete the ET prioritization process with FedRAMP PMO

Outputs: Completed ET CSO Request Form submitted to the FedRAMP PMO for consideration

Estimated Duration: Variable depending on type of ET, complexity of CSO, availability of benchmark and demand data



#### 4.3.2. Qualification Determination and Queue Placement

Who: FedRAMP PMO; Consult: Agency Partner and Liaison, CSP

**What:** The FedRAMP PMO reviews the ET CSO request form and determines whether the CSO meets the ET criteria and whether its technical characteristics match a capability that the federal government wants to accelerate.

If the criteria are not met, the CSO will still be placed in queue to be reviewed following the standard process. The FedRAMP PMO will communicate this determination to the CSP and Agency and the anticipated timeline for package review.

If the criteria are met, the FedRAMP PMO will review the business case demand worksheet. They will compare the demand score to other CSPs that have been approved for prioritization, and sequence those CSOs in the FedRAMP PMO's authorization queue. At this point, the ET process is complete and the CSO proceeds through the appropriate authorization pathway.

This prioritization will control how FedRAMP organizes its own work and review processes, and will not address how sponsoring agencies manage their own internal priorities.

Input: ET CSO Request Form

**Outputs:** Approve or deny that the CSO meets the ET criteria, ET CSO Prioritization Decision Justification, Process CSO accordingly

Service Level Agreement Target: 1 week

Service Level Agreement Threshold: 2 weeks

#### 4.3.3. Monitor ET Approvals

Who: FedRAMP PMO; Consult: None

**What:** The FedRAMP PMO will track and monitor the authorizations throughout the lifecycle of the ET prioritization process. During this step, the Security Review Team regularly communicates the status of authorizations, tracks CSOs that have received authorizations, and tracks metadata to report monthly metrics that includes the number of ET CSOs authorized, in process, and not started.

Input: Authorization Packages

Outputs: Metrics Dashboard and Reports, Report on Prioritized and Non-Prioritized CSOs

Service Level Agreement Target: 2 days Service Level Agreement Threshold: 1 week



# 5. Organizations, Roles, and Responsibilities

FedRAMP is governed by different executive branch entities that work in a collaborative manner to develop, manage, and operate the program.



## 5.1. FedRAMP Program Management Office

The FedRAMP Program Management Office (PMO) owns this process and is a key partner for CSPs researching or seeking a FedRAMP Authorization for their CSO.

The FedRAMP PMO:

- Reviews nominations of ETs from stakeholders, conducts market and program analysis, and submits recommendation for ET list to the FedRAMP Board.
- Consults with NIST and the TAG to help identify definitions and technical characteristics for ET criteria
- Manages the ET Prioritization process, and evaluates packages submitted by CSPs for consideration for prioritization.
- Tracks, monitors, and reports metrics concerning ET prioritization.
- Communicates to agencies, CSPs, and stakeholders about prioritized ETs.
- Integrates the ET framework into its operations.
- Initiates the annual governance process to review FedRAMP ET priorities.



## 5.2. FedRAMP Board

The FedRAMP Board provides input and recommendations to GSA regarding the requirements and guidelines for, and the prioritization of, security assessments of cloud computing products and services.

The FedRAMP Board:

- Approves the ET framework, process, and any proposed updates.
- Approves updates to the ET List.
- Is notified when the threshold of three CSOs for a given capability of ET is reached.
- Directs the PMO to initiate an off-cycle round of the governance process.

## 5.3. CIO and CISO Councils

The Chief Information Officer (CIO) Council coordinates cross-Agency communications and hosts events to disseminate FedRAMP information to agency CIOs and their representatives. The Federal Chief Information Security Officer (CISO) Council is the primary body for inter-agency CISO collaboration and communication. These councils:

- Provide input to the PMO on demand signals and desired ET capabilities.
- Provide consultation to the FedRAMP PMO during the analysis of the marketplace and availability of new ET cloud offerings.
- Are informed of the proposed and approved ET List.
- Are informed when the threshold of three CSOs is reached.

## 5.4. Office of Management and Budget

The White House Office of Management and Budget (OMB) is the governing body that issued the FedRAMP policy memo which defines the key requirements and capabilities of the program, and is responsible for setting government-wide policy and priorities concerning Federal use of cloud services.

OMB:

- Chairs the CIO and CISO Councils, collecting and providing member input to the FedRAMP PMO on demand signals and desired ET capabilities.
- Is informed of the findings from the FedRAMP ET Impact Assessment, specifically the maturity of technology.
- Advises the FedRAMP PMO during the process of defining the ET List and establishing the criteria for prioritization.



#### 5.5. Federal Secure Cloud Advisory Committee

The Federal Secure Cloud Advisory Committee (FSCAC) is a Federal advisory committee, comprised of members from Federal agencies and the private sector, that provides advice and recommendations to the GSA Administrator and the FedRAMP Board on technical, financial, programmatic, and operational matters regarding secure adoption of cloud computing products and services.

The FSCAC:

- Is informed of the proposed ET List recommended to the FedRAMP Board for approval.
- Can make recommendations to the FedRAMP PMO during the process for defining ET criteria for prioritization.

## 5.6. National Institute of Standards and Technology

The National Institute of Standards and Technology (NIST) advises FedRAMP on FISMA requirements and assists in developing guidance for the accreditation of independent 3PAOs. NIST can provide input to the FedRAMP PMO during the process for defining ET criteria for prioritization.

## 5.7. Agency Partners and Liaisons

Agencies define their specific policies and procedures in addition to FedRAMP. Ultimately, an agency's Authorizing Official (AO) must review CSP-developed security packages and accept the risk associated with the use of a cloud system through the issuance of an ATO for their agency. As with all FedRAMP authorizations, sponsoring agencies must conduct Continuous Monitoring of each authorized system in use, reviewing monthly and annual deliverables provided by CSPs.

Each agency that has partnered with a CSP should identify an Agency Liaison as the "go-to" person for the FedRAMP PMO or the CSP. The identified liaison should be able to answer general questions about FedRAMP, the FedRAMP reuse process, the Initial Authorization process, and continuous monitoring. All Liaisons are trained to provide seminars and training sessions on these topics within their agencies. In addition, Liaisons can provide information about upcoming training sessions hosted by the FedRAMP PMO. They can also provide clarification on the status of cloud vendors within their own agencies, and can help answer questions about how to secure partnership for initial FedRAMP Authorization at their agencies.

Agency partners:

- Are informed by the FedRAMP PMO of the outcomes of the marketplace analysis and availability of new ET cloud offerings
- Are informed about partner CSPs that have submitted an ET CSO Request Form to be considered for prioritization
- Provide consultation to the partner CSP and the FedRAMP PMO throughout the ET prioritization lifecycle



• Assign an Agency Liaison to consult on new ET cloud offerings, consult during the FedRAMP ET Impact Assessments, and stay informed on which ETs are currently being prioritized.

## 5.8. Cloud Service Providers

Cloud Service Providers (CSPs) offer agencies innovative products that help them save time and resources while meeting their critical mission needs.

CSPs that provide a CSO that is on the approved ET list can be considered for prioritization by:

- Engaging with the FedRAMP PMO to initiate the regular FedRAMP authorization process.
- Submitting a CSO ET Request Form.

CSPs that meet the ET criteria are approved to be prioritized and placed near the front of the queue for their packages to be processed by the FedRAMP review team for their designated authorization path.

## 5.9. Third Party Assessment Organizations

Third Party Assessment Organizations (3PAOs) play a critical role in the authorization process by assessing the security of a Cloud Service Offering. As independent third parties, they perform initial and periodic assessments of cloud systems based on federal security requirements. The federal government uses 3PAO assessments as the basis for making informed, risk-based authorization decisions for the use of cloud products and services.

3PAOs can provide input to the FedRAMP PMO during the process of completing the ET Impact Assessment, specifically on the security assessors' (3PAO) confidence and security controls (assessment guidance or new controls). CSPs may, but are not required to, provide an attestation from a 3PAO in lieu of a self-attestation to support their prioritization application.



#### 5.10. Summarized RACI Matrix

To assist in clarifying roles and responsibilities, this RACI Matrix is provided as an alternate view of what each member in the ecosystem is performing.

R Responsible Accoun	table	C Con	sulted	0	Informed				
	FedRAMP PMO	FedRAMP Board	CIO & Federal CISO Councils	ОМВ	FSCAC	NIST	Agency Partners & Liaisons	CSPs	3PAOs
Governance Process									
Nominate ETs for Prioritization	A	0	R		G	C	0		G
Propose ET List	RA		0	C	0				
FedRAMP Board Decision on the ET List	C	RA	0	C					
Implement New ET Capabilities	RA						C	С	
Shifting Prioritization of CSOs with ET	RA	C	C				C		
Evaluation Process									
Submit the ET CSO Request Form							0	RA	
Qualification Determination and Queue Placement	RA						G	С	
Monitor ET Approvals	R	A							



## 6. Supporting Documents

All documents and forms below are authored by the FedRAMP PMO, and will be published on the FedRAMP.gov website, as PDFs or web pages.

#### 6.1. ET List

The 1-2 page list of ETs will be updated annually at a minimum and on-demand based on stakeholder feedback. This list is further refined by the FedRAMP PMO after inputs from the CIO Council, the Federal CISO Council, and other industry inputs as described by the process in <u>Section 4.2</u> on the governance process.

#### 6.2. ET Criteria for Prioritization

A guidance document that explains the criteria that CSP/CSOs are required to demonstrate to determine their eligibility for the prioritization process.

#### 6.3. ET CSO Request Form

An electronic form available on the FedRAMP website. The form serves to identify whether the CSP or CSO meets the ET criteria for prioritization, and collects information about CSO demand.



# Appendix A: Artificial Intelligence

FedRAMP is prioritizing Generative AI, specifically when used for **chat interfaces and code generation and debugging tools** that use Large Language Models (LLMs), and **prompt-based image generation**. This applies both to use cases where a human is directly interfacing with the service, and when the service is accessed using associated application programming interfaces (APIs).

To ensure that FedRAMP is appropriately focused on CSOs that offer these services, FedRAMP will request that CSPs include measurement of its technical performance against a relevant benchmark.

This performance benchmarking is designed to measure **the eligibility of a service for prioritization**, and is **not a quality assessment** of the overall performance of a CSO. Agencies are responsible for assessing the performance of a CSO and whether it meets their needs.

The benchmarks in the tables below are prominent industry benchmarks designed to measure the prioritized capabilities. They were selected based on published research and active leaderboards, to assist in an unbiased and comprehensive evaluation of AI capabilities across various domains of knowledge and reasoning.

The final version of this document will set specific thresholds that would establish the CSO as being in the top quartile of performance of that benchmark's leaderboard, at the time of final publication of this document. The table below will be updated with those specific thresholds at that time. These thresholds may be updated in the future as needed to remain current. In this draft for public comment, the table below references the leaderboards that will be consulted for that process for each benchmark.

As part of the prioritization request, the CSP will identify the benchmark, how their score on the benchmark compares to a threshold identified, and justify why the benchmark is relevant to the product's use.

CSPs should generally select benchmarks with which they are not themselves affiliated. If the CSP is affiliated with the development or design of a benchmark they have chosen, the CSP must disclose this affiliation as part of the application and why they chose that benchmark.

## Definitions

**Artificial intelligence (AI)** (as defined in 15 U.S.C. 9401(3)): A machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments. Artificial intelligence systems use machine- and human-based inputs to perceive real and virtual environments; abstract such perceptions into models through analysis in an automated manner; and use model inference to formulate options for information or action.

**AI model:** A component of an information system that implements AI technology and uses computational, statistical, or machine-learning techniques to produce outputs from a given set of inputs.



**Foundation model:** An AI model that is trained on broad data, generally uses self-supervision, contains at least tens of billions of parameters, and is applicable across a wide range of contexts.

**Generative AI:** The class of AI models that emulate the structure and characteristics of input data in order to generate derived synthetic content. This can include images, videos, audio, text, and other digital content.

## Criteria for All Capabilities

**Primary Purpose:** The core features of the CSP's offering are to allow end-users or developers to interact with generative AI capabilities. CSPs with generative AI capabilities embedded within a broader product may not receive prioritization.

**Use of Algorithms:** The offering utilizes a foundation model as an underlying technology for its generative AI capabilities. These models will generally have been publicly released after September 2022. Use of a particular algorithm or technical approach is not as important as the performance of the generative AI to produce accurate outputs.

**Features align to capabilities:** The CSO meets one or more of the following capabilities: 1) large language model-based chat interfaces, 2) code-generation and debugging tools, and 3) prompt-based image generators. Specifically, as stated in Executive Order 14110, "...generative AI offerings that have the primary purpose of providing large language model-based chat interfaces, code-generation and debugging tools, and associated application programming interfaces, as well as prompt-based image generators...". We do anticipate that these criteria and performance characteristics will change over time and thus at periodic intervals, revised criteria will be issued.

## A.1. ET Criteria for Prioritization-Artificial Intelligence

#### A.1.1. Chat interfaces

**Description:** Products that deliver conversational chat interfaces to provide text prompts to the user and then use information consumed by the large language model (LLM) to produce aggregate text-based content on behalf of the user.

**Technical Characteristics:** The offering should be capable of discerning meaning from open-ended user inputs and provide an appropriate response.

Benchmark	Leaderboard	Benchmark Goal	Source/Creator
WinoGrande	<u>Leaderboard</u> Paper	Common sense reasoning	Allen Institute for Al
ARC challenge	Leaderboard	Common sense reasoning and scientific	Allen Institute for Al



	Paper	reasoning and knowledge-based question answering	
HellaSwag	<u>Leaderboard</u> <u>Paper</u>	Sentence completion	Allen Institute for Al
OpenBookQA	<u>Leaderboard</u> <u>Paper</u>	Reading comprehension and question and answering	Allen Institute for Al
MMLU (5-shot)	<u>Leaderboard</u> <u>Paper</u>	Reading comprehension and question and answering	Allen Institute for Al
HumanEval	<u>Leaderboard</u> Paper	Scientific reasoning and knowledge-based question answering	OpenAl
MBPP (3-shot)	<u>Leaderboard</u> <u>Paper</u>	Programming language understanding and code generation	Google Research

#### A.1.2. Code generation and debugging tools

**Description:** A tool used by software developers to help them with creating and debugging software.

**Technical Characteristics:** The offering should be capable of auto-detecting relevant programming language based off of submitted code snippets or direct prompts. The offering should be able to generate complete methods, subroutines or functions based on input prompts. The offering can refine responses if requested by the user and can debug code inputs. The offering may be able to provide links to additional documentation or directly explain output with appropriate attribution or citation. The offering may be able to translate code into a newer version or into another programming language. The offering may be able to generate code off of describing a potential problem or use-case and generate suggested code.

Benchmark	Leaderboard	Benchmark Goal	Source/Creator
HumanEval	<u>Leaderboard</u> Paper	Scientific reasoning and knowledge-based question answering	OpenAl
MBPP (3-shot)	<u>Leaderboard</u> <u>Paper</u>	Programming language understanding and code generation	Google Research



#### A.1.3. Prompt-based image generators

**Description:** A product that takes text or photographic input and generates new images or videos based on those inputs.

**Technical Characteristics:** The offering should use neural networks to generate new visual content by recapitulating pixels based on patterns in the training data. The offering may be able to modify an input image based on accompanying text. The offering may be able to generate the output's subject in multiple graphical or artistic styles.

Benchmark	References	Benchmark Goal	Source/Creator
CLIPScore	<u>Leaderboard</u> Paper	Evaluating the alignment of text and images in multimodal models	Allen Institute for Al
X-IQE-Overall	<u>Leaderboard</u> <u>Paper</u>	Assessing the quality of image quality enhancers through a comprehensive evaluation framework	University of Waterloo



## A.2. ET CSO Request Form - Artificial Intelligence

As of October 30, EO on Artificial Intelligence (AI), the group has prioritized generative AI capabilities. Therefore, FedRAMP requests the below information to support the CSPs request for prioritization:

## FedRAMP<sup>®</sup> ET CSO Request Form

**CSP:** Enter Cloud Service Provider Name

CSO: Enter Cloud Service Offering Name

Package ID: Enter Package ID (if the CSO has one)

Submission Date: MM/DD/YY

#### Type of Generative AI

FedRAMP offers a pathway for accelerated access to the authorization process to some ETs that are of particular interest to the federal enterprise.

To be considered for prioritization, indicate which ET criteria your CSO meets.

Chat	t interfa	ces
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Code generators and debugging tools

Prompt-based image generators

Please include a description (not to exceed 1 page) of how your CSO employs generative artificial intelligence in your offering, including:

- How your product meets or exceeds the criteria for selected generative Al.
- Identifying at least one third-party benchmark and associated ratings of your utilized algorithm(s) for relevant generative AI capabilities.

Current product demand for the CSO. Please provide information consistent with the CSP JAB Prioritization Criteria and Guidance and the <u>Demand Worksheet</u> referenced on page 5 in the <u>JAB</u> <u>Prioritization Criteria and FedRAMP Connect Guidance</u>.