

Open Public consultation questionnaire on the proposal for a Cloud and AI Development Act

Fields marked with * are mandatory.

Introduction

This consultation on the Cloud and AI Development Act is structured along three sections:

Section 1: General questions for all respondents

This section includes a set of general questions applicable to all respondents. Your responses here will guide which subsequent questions you receive in Section 2, based on your stakeholder category.

Section 2: Stakeholder-Specific Questions

To tailor the consultation to your area of expertise, please begin by selecting "I am giving my contribution as" to identify your stakeholder category.

To begin, please choose "I am giving my contribution as" to select your specific stakeholder category. You can choose from the following:

- Public Administrations
- Citizens
- NGOs
- Academic/Research Institutions
- Business Associations
- Consumer Organisations
- Environmental Organisations
- Trade Unions
- Company/Business

If you select "Company/Business," please specify further as follows:

- Data Centre Operators
- Cloud / Telco / Edge Providers
- AI Developers and Providers
- Cloud / Edge / AI Users
- Financial Institution, Investor, Fund

Your selection will help us direct you to the relevant questions for your category, ensuring a more focused and effective consultation.

Section 3: EU Policy

In the final section, all participants are asked to share their views on potential policies to be adopted on cloud policy.

About you

* First name

* Surname

* Email (this won't be published)

* Language of my contribution

- Bulgarian
- Croatian
- Czech
- Danish
- Dutch
- English
- Estonian
- Finnish
- French
- German
- Greek
- Hungarian
- Irish
- Italian
- Latvian
- Lithuanian
- Maltese
- Polish
- Portuguese
- Romanian
- Slovak

- Slovenian
- Spanish
- Swedish

* I am giving my contribution as

- Academic/research institution
- Business association
- Company/business
- Consumer organisation
- EU citizen
- Environmental organisation
- Non-EU citizen
- Non-governmental organisation (NGO)
- Public authority
- Trade union
- Other

Please choose the type of stakeholder you represent *[multiple options possible]*

Minimum 1 selection(s)

- a) data centre operator**, including co-location providers (i.e. the entities involved in the building and operation of data centre facilities)
- b) cloud/ Telco / Edge provider**, including cloud service providers offering cloud services, irrespective of whether such services are operated on self-owned or leased data centres
- c) AI developers or AI deployers** irrespective of the delivered AI service (training, fine-tuning, inference) and whether these services are delivered on owned or leased data centres and cloud infrastructure.
- d) cloud/ Edge / AI users**, organisations that use any cloud and edge service offering or use any AI application
- e) Financial institution, investor, fund**, etc., that finance any type respondents described under a. b. c.

* Organisation name

255 character(s) maximum

* Organisation size

- Micro (1 to 9 employees)
- Small (10 to 49 employees)
- Medium (50 to 249 employees)
- Large (250 or more)

Transparency register number

Check if your organisation is on the transparency register. It's a voluntary database for organisations seeking to influence EU decision-making.

* Country of origin

Please add your country of origin, or that of your organisation.

This list does not represent the official position of the European institutions with regard to the legal status or policy of the entities mentioned. It is a harmonisation of often divergent lists and practices.

- | | | | |
|---|--|--|--|
| <input type="radio"/> Afghanistan | <input type="radio"/> Djibouti | <input type="radio"/> Libya | <input type="radio"/> Saint Martin |
| <input type="radio"/> Åland Islands | <input type="radio"/> Dominica | <input type="radio"/> Liechtenstein | <input type="radio"/> Saint Pierre and Miquelon |
| <input type="radio"/> Albania | <input type="radio"/> Dominican Republic | <input type="radio"/> Lithuania | <input type="radio"/> Saint Vincent and the Grenadines |
| <input type="radio"/> Algeria | <input type="radio"/> Ecuador | <input type="radio"/> Luxembourg | <input type="radio"/> Samoa |
| <input type="radio"/> American Samoa | <input type="radio"/> Egypt | <input type="radio"/> Macau | <input type="radio"/> San Marino |
| <input type="radio"/> Andorra | <input type="radio"/> El Salvador | <input type="radio"/> Madagascar | <input type="radio"/> São Tomé and Príncipe |
| <input type="radio"/> Angola | <input type="radio"/> Equatorial Guinea | <input type="radio"/> Malawi | <input type="radio"/> Saudi Arabia |
| <input type="radio"/> Anguilla | <input type="radio"/> Eritrea | <input type="radio"/> Malaysia | <input type="radio"/> Senegal |
| <input type="radio"/> Antarctica | <input type="radio"/> Estonia | <input type="radio"/> Maldives | <input type="radio"/> Serbia |
| <input type="radio"/> Antigua and Barbuda | <input type="radio"/> Eswatini | <input type="radio"/> Mali | <input type="radio"/> Seychelles |
| <input type="radio"/> Argentina | <input type="radio"/> Ethiopia | <input type="radio"/> Malta | <input type="radio"/> Sierra Leone |
| <input type="radio"/> Armenia | <input type="radio"/> Falkland Islands | <input type="radio"/> Marshall Islands | <input type="radio"/> Singapore |
| <input type="radio"/> Aruba | <input type="radio"/> Faroe Islands | <input type="radio"/> Martinique | <input type="radio"/> Sint Maarten |
| <input type="radio"/> Australia | <input type="radio"/> Fiji | <input type="radio"/> Mauritania | <input type="radio"/> Slovakia |
| <input type="radio"/> Austria | <input type="radio"/> Finland | <input type="radio"/> Mauritius | <input type="radio"/> Slovenia |
| <input type="radio"/> Azerbaijan | <input type="radio"/> France | <input type="radio"/> Mayotte | <input type="radio"/> Solomon Islands |

- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize
- Benin
- Bermuda
- Bhutan
- Bolivia
- Bonaire Saint Eustatius and Saba
- Bosnia and Herzegovina
- Botswana
- Bouvet Island
- Brazil
- British Indian Ocean Territory
- British Virgin Islands
- Brunei
- Bulgaria
- Burkina Faso
- Burundi
- Cambodia
- French Guiana
- French Polynesia
- French Southern and Antarctic Lands
- Gabon
- Georgia
- Germany
- Ghana
- Gibraltar
- Greece
- Greenland
- Grenada
- Guadeloupe
- Guam
- Guatemala
- Guernsey
- Guinea
- Guinea-Bissau
- Guyana
- Haiti
- Heard Island and McDonald Islands
- Honduras
- Hong Kong
- Hungary
- Mexico
- Micronesia
- Moldova
- Monaco
- Mongolia
- Montenegro
- Montserrat
- Morocco
- Mozambique
- Myanmar/Burma
- Namibia
- Nauru
- Nepal
- Netherlands
- New Caledonia
- New Zealand
- Nicaragua
- Niger
- Nigeria
- Niue
- Norfolk Island
- Northern Mariana Islands
- North Korea
- Somalia
- South Africa
- South Georgia and the South Sandwich Islands
- South Korea
- South Sudan
- Spain
- Sri Lanka
- Sudan
- Suriname
- Svalbard and Jan Mayen
- Sweden
- Switzerland
- Syria
- Taiwan
- Tajikistan
- Tanzania
- Thailand
- The Gambia
- Timor-Leste
- Togo
- Tokelau
- Tonga
- Trinidad and Tobago

- Cameroon
- Canada
- Cape Verde
- Cayman Islands
- Central African Republic
- Chad
- Chile
- China
- Christmas Island
- Clipperton
- Cocos (Keeling) Islands
- Colombia
- Comoros
- Congo
- Cook Islands
- Costa Rica
- Côte d'Ivoire
- Croatia
- Cuba
- Curaçao
- Cyprus
- Czechia
- Democratic Republic of the Congo
- Denmark
- Iceland
- India
- Indonesia
- Iran
- Iraq
- Ireland
- Isle of Man
- Israel
- Italy
- Jamaica
- Japan
- Jersey
- Jordan
- Kazakhstan
- Kenya
- Kiribati
- Kosovo
- Kuwait
- Kyrgyzstan
- Laos
- Latvia
- Lebanon
- Lesotho
- Liberia
- North Macedonia
- Norway
- Oman
- Pakistan
- Palau
- Palestine
- Panama
- Papua New Guinea
- Paraguay
- Peru
- Philippines
- Pitcairn Islands
- Poland
- Portugal
- Puerto Rico
- Qatar
- Réunion
- Romania
- Russia
- Rwanda
- Saint Barthélemy
- Saint Helena
Ascension and
Tristan da Cunha
- Saint Kitts and Nevis
- Saint Lucia
- Tunisia
- Türkiye
- Turkmenistan
- Turks and Caicos Islands
- Tuvalu
- Uganda
- Ukraine
- United Arab Emirates
- United Kingdom
- United States
- United States
Minor Outlying
Islands
- Uruguay
- US Virgin Islands
- Uzbekistan
- Vanuatu
- Vatican City
- Venezuela
- Vietnam
- Wallis and Futuna
- Western Sahara
- Yemen
- Zambia
- Zimbabwe

* In which sector(s) is your organisation active? Please specify

Text of 1 to 500 characters will be accepted

* Type of organization

- private company (SME)
- private company (start-up)
- private company (other)
- research organization
- other

* Is your organization headquartered in the EU?

- Yes
- No
- Other (e.g. multiple organizations)

* Is your parent company headquartered in the EU?

- Yes
- No

* Do you have an office or other kind of representation in the EU?

- Yes, we have a subsidiary, branch office or similar in the EU
- Yes, other
- No

* Do you have a research and development department?

- Yes
- No

* What is the amount (in EUR) that you invest in R&D on cloud / edge in a yearly basis?

 EUR

* How many employees does your R&D department have?

* Scope

- International

- Local
- National
- Regional

* Level of governance

- Local Authority
- Local Agency

* Level of governance

- Parliament
- Authority
- Agency

* **Availability for a follow-up conversation** - We may wish to contact you for clarification or further discussion if your submission prompts additional interest.

Do you agree to be contacted by the Commission for clarification or discussion further to your submission?

- Yes
- No

The Commission will publish all contributions to this public consultation. You can choose whether you would prefer to have your details published or to remain anonymous when your contribution is published. **For the purpose of transparency, the type of respondent (for example, 'business association, 'consumer association', 'EU citizen') country of origin, organisation name and size, and its transparency register number, are always published. Your e-mail address will never be published.** Opt in to select the privacy option that best suits you. Privacy options default based on the type of respondent selected

* **Contribution publication privacy settings**

The Commission will publish the responses to this public consultation. You can choose whether you would like your details to be made public or to remain anonymous.

Anonymous

The type of respondent that you responded to this consultation as, your country of origin and your contribution will be published as received. Your name will not be published. Please do not include any personal data in the contribution itself.

Public

Your name, the type of respondent that you responded to this consultation as, your country of origin and your contribution will be published.

***Contribution publication privacy settings**

The Commission will publish the responses to this public consultation. You can choose whether you would like your details to be made public or to remain anonymous.

Anonymous

Only organisation details are published: The type of respondent that you responded to this consultation as, the name of the organisation on whose behalf you reply as well as its transparency number, its size, its country of origin and your contribution will be published as received. Your name will not be published. Please do not include any personal data in the contribution itself if you want to remain anonymous.

Public

Organisation details and respondent details are published: The type of respondent that you responded to this consultation as, the name of the organisation on whose behalf you reply as well as its transparency number, its size, its country of origin and your contribution will be published. Your name will also be published.

I agree with the [personal data protection provisions](#)

Section 2: Questions for specific target groups

The EU's digital competitiveness in AI and cloud computing is significantly hindered by the gap between the computing resources available in the EU and the needs to satisfy the growing demand for AI-driven services and applications. Current projections indicate that the EU needs to triple its capacity of AI-optimised data and computing infrastructures designed to accommodate data processing and storage needs across the AI value chain (training, inference, fine-tuning). Your response to this section of the survey will help the Commission to assess the scale of this problem as well as to qualitatively analyse its drivers.

Section 2.1 Questions for data centre operators

2.1.1 Data centre operators: Current situation

***What type of data centre operator is your organisation?**

Minimum 1 selection(s)

Co-location data centre

- Edge data centre
- Enterprise data centre
- Hyperscale data centre
- Other

*** Please specify**

Text of 1 to 1000 characters will be accepted

*** What is the geographic scope of your operations?**

- regional
- national
- EU level
- global

*** How many data centres do you operate and what percentage of your capacity is physically located in the EU?**

4000 character(s) maximum

*** What is your overall data centre capacity?**

- Less than 1 MW
- 1 MW - 30 MW
- 30 MW - 50 MW
- 50 MW - 200 MW
- 200 MW - 1 GW
- More than 1 GW

*** What is the average capacity of the data centres that you operate?**

- Less than 1 MW
- 1 MW - 10 MW
- 11 MW - 30 MW

- 31 MW - 50 MW
- More than 50 MW

*** What is the approximate composition of your total installed compute capacity? Please indicate the distribution which best resembles your installed capacity (CPU: central processing unit. GPU: graphics processing unit).**

- 100% CPUs
- 75% CPUs - 25% GPUs
- 50% CPUs - 50% GPUs
- 25% GPUs - 75% CPUs
- 100% GPUs
- I don't know

Please specify the models of the GPUs that you are using

Text of 1 to 4000 characters will be accepted

*** If a colocation data centre, what percentage of your business is leased to hyperscale cloud providers?**

- Less than 25%
- 26% - 50%
- 51% - 75%
- More than 75%

*** How long do you currently need on average to build a data centre from the moment the real estate is identified to the entry in operation?**

- 1 - 2 years
- 3 - 5 years
- 5 - 7 years
- More than 7 years

2.1.2 Specific needs and challenges

*** Is your organisation planning to build new facilities or expanding existing ones in the EU?**

- Yes
- No
- I don't know

*** Will these facilities be for (you may select more than one option):**

Minimum 1 selection(s)

- general purpose computation
- general purpose edge computation
- Edge AI
- AI computation for training models
- AI computation for the inference of models
- Other

*** Please, specify**

Text of 1 to 1000 characters will be accepted

*** What will be the approximate planned capacity?**

- Amount of MW
- I don't know

*** Amount of MW**

Only values of at least 1 are allowed

When expanding or building your infrastructure in the EU, what are the main problems your organisation has encountered?

Rank each answer on a scale from 1 to 5, where 1 = not very important and 5 = very important

| Problem | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Access to land | <input type="radio"/> |
| * Access to energy resources | <input type="radio"/> |
| | | | | | | |

| | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| * Access to water resources | <input type="radio"/> |
| * Access to state-of-the-art location facilities | <input type="radio"/> |
| * Difficulty navigating applicable planning regulations | <input type="radio"/> |
| * Permitting procedures (too complex or too long) | <input type="radio"/> |
| * Access to capital | <input type="radio"/> |
| * High operational costs | <input type="radio"/> |
| * Access to connectivity | <input type="radio"/> |
| * Access to skilled workforce | <input type="radio"/> |
| * Other | <input type="radio"/> |

*** Please specify**

4000 character(s) maximum

On the selection of the facility's location in the EU: which are the main factors that drive or have driven your decision to select a location?

Rank each answer on a scale from 1 to 5, where 1 = not very important and 5 = very important.

| Factor | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Saturation of the market | <input type="radio"/> |
| * Access to transport networks (e.g. airport, or, high-speed railway) | <input type="radio"/> |
| * Availability of a utility provider's infrastructure nearby | <input type="radio"/> |
| * Distance from an electrical substation | <input type="radio"/> |
| * Availability and affordability of energy | <input type="radio"/> |
| * Availability and affordability of low carbon energy | <input type="radio"/> |
| * Possibility to conclude long term energy contracts | <input type="radio"/> |
| * Access to long term guaranteed water supply and/or fixed water rates | <input type="radio"/> |
| | | | | | | |

| | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| * Possibility for waste heat re-use | <input type="radio"/> |
| * Environmental regulations (e.g. air quality or noise levels) | <input type="radio"/> |
| * Local climate conditions | <input type="radio"/> |
| * Network connectivity and capacity | <input type="radio"/> |
| * Availability of incentives (e.g. tax incentives) | <input type="radio"/> |
| * Geopolitical stability | <input type="radio"/> |
| * Other | <input type="radio"/> |

*** Please specify**

4000 character(s) maximum

How relevant were the following factors for your organisation for the buildout of a new data centre or expansion of existing infrastructure in the EU? This question covers all the steps from the inception of the project until the data centre comes into operation.

(Rank each answer on a scale from 1 to 5, where 1 = not very relevant and 5 = very relevant)

| Bottleneck | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Land use / availability | <input type="radio"/> |
| * Compliance with environmental or zoning requirements | <input type="radio"/> |
| * Energy availability | <input type="radio"/> |
| * Energy cost | <input type="radio"/> |
| * Water-stress and poor water governance in the areas of operations | <input type="radio"/> |
| * Construction | <input type="radio"/> |
| * Long approval times | <input type="radio"/> |
| * Complexity of regulation | <input type="radio"/> |
| * Permitting / Approval procedures | <input type="radio"/> |

| | | | | | | |
|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| * Access to finance | <input type="radio"/> |
| * Digital skills | <input type="radio"/> |
| * Other | <input type="radio"/> |

*** Please specify**

4000 character(s) maximum

On access to finance/incentives: what are the most significant factors that your organisation is encountering from the financial point of view when expanding capacity or building new capacity in the EU?

Rank each answer on a scale from 1 to 5, where 1 = not very important and 5 = very important.

| Factor | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * High interest rates charged by banks and other financial institutions | <input type="radio"/> |
| * Financial institutions are low risk averse to fund long term data centre projects | <input type="radio"/> |
| * Limited upside (e.g. due to high upfront costs and long payback periods, market uncertainty, high operating costs, etc) | <input type="radio"/> |
| * High taxes | <input type="radio"/> |
| * Other | <input type="radio"/> |

*** Please specify**

4000 character(s) maximum

*** How significant is energy efficiency in your expansion plans in the EU?**

- Critical
- Important, but not a priority

- Important, but energy efficiency is already a mature design feature
- Not significant
- I don't know

*** What are the main problems that you face in becoming more energy efficient?**

4000 character(s) maximum

What are your main energy efficiency challenges?

(Rank each answer on a scale from 1 to 5, where 1 = not very important and 5 = very important)

| Challenge | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Cooling efficiency | <input type="radio"/> |
| * Server utilisation | <input type="radio"/> |
| * Inefficient hardware | <input type="radio"/> |
| * Energy losses | <input type="radio"/> |
| * Integration of renewable energy | <input type="radio"/> |
| * Compliance with existing regulation | <input type="radio"/> |
| * Lack of real time monitoring tools for energy usage | <input type="radio"/> |
| * Other | <input type="radio"/> |

*** Please specify**

4000 character(s) maximum

What are the main factors preventing you from building new facilities or expanding existing facilities?

(Rank each answer on a scale from 1 to 5, where 1 = not very relevant and 5 = very relevant)

| | | | | | |
|--|--|--|--|--|--|
| | | | | | |
|--|--|--|--|--|--|

| Factor | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Not a business priority | <input type="radio"/> |
| * Land use / availability | <input type="radio"/> |
| * Compliance with environmental or zoning requirement | <input type="radio"/> |
| * Energy availability | <input type="radio"/> |
| * Energy cost | <input type="radio"/> |
| * Water-stress and poor water governance in the areas of operations | <input type="radio"/> |
| * Construction | <input type="radio"/> |
| * Long approval times | <input type="radio"/> |
| * Complexity of regulation | <input type="radio"/> |
| * Permitting / approval procedures | <input type="radio"/> |
| * Access to finance | <input type="radio"/> |
| * Digital skills | <input type="radio"/> |
| * Other | <input type="radio"/> |

*** Please specify**

4000 character(s) maximum

Please upload your file(s), if you would like to provide additional information

Only files of the type pdf,txt,doc,docx,odt,rtf are allowed

2.2 Questions for cloud / Telco / Edge providers

2.2.1 Current situation in the provisioning of cloud / Telco / Edge services for general purpose and AI services

*** What are your customers using your service offer for? (multiple choice)**

Minimum 1 selection(s)

- general purpose computation
- storage
-

general purpose edge computation

- Edge AI
- AI computation for training models
- AI computation for the inference of models
- AI Computation for fine tuning
- Other

*** Please specify**

1000 character(s) maximum

*** What percentage of your compute capacity is currently dedicated to AI workloads (including AI model training, AI model inference and AI fine tuning)?**

- Less than 10%
- 10 - 25%
- 26 - 50%
- 51 - 75%
- 76 - 100%
- I don't know

*** What is the approximate composition of your total installed compute capacity? (please indicate the distribution which best resembles your installed capacity)**

- 100% CPUs
- 75% CPUs and 25% GPUs
- 50% CPUs and 50% GPUs
- 25% CPUs and 75% GPUs
- 100% GPUs
- I don't know

Please specify the models of the GPUs that you are using

4000 character(s) maximum

*** Do you have difficulties in getting funding to develop your capacities?**

- Yes
- No

*** Please give details**

4000 character(s) maximum

*** Do you have problems in accessing non-hardware technologies to develop your capacities and propose new services to your customers?**

- Yes
- No

*** Please give details**

4000 character(s) maximum

*** Do you have difficulties in hiring/attracting talents to develop your capacities?**

- Yes
- No

*** Which talents' profiles?**

4000 character(s) maximum

*** Do you have difficulties in developing your activities within other EU Member States?**

- Yes

No

*** Which main barriers are you facing?**

4000 character(s) maximum

*** What progress have you made in expanding to markets beyond the European Union?**

4000 character(s) maximum

2.2.2 Specific needs and challenges in the provisioning of cloud / Telco / Edge services for general purpose and AI services

*** Have you experienced any limitation to the access to GPUs that is slowing down your expansion in computation capacity?**

- Yes
- No
- I don't know

Is this limitation due to (rank each answer on a scale from 1 to 5, where 1 = not very important and 5 = very important)

| Factor | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Restrictive market practices applied by GPUs providers when selling to customers in specific countries or relating to the volume of purchases | <input type="radio"/> |
| * bargaining power of GPU providers (e.g. setting prices based on their dominant position, exclusive deals, etc.) | <input type="radio"/> |
| * access to finance and/or high interest rates when procuring next generation GPUs | <input type="radio"/> |
| * scarcity of supply of GPUs | <input type="radio"/> |
| | | | | | | |

| | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| * supply chain disruptions | <input type="radio"/> |
| * export control restrictions applied by third countries that prohibit you from purchasing GPUs | <input type="radio"/> |
| * export control procedures applied by third countries that slow down your access to GPUs, due to the procedures' complexity | <input type="radio"/> |
| * Other | <input type="radio"/> |

*** Please specify**

4000 character(s) maximum

*** How are you solving the issues that affect you?**

4000 character(s) maximum

*** Is your organisation planning to expand its computing capacity?**

- Yes
- No
- I don't know

*** Will this capacity be for (you may select more than one option):**

- general purpose computation
- storage
- general purpose edge computation
- Edge AI
- AI computation for training models
- AI computation for the inference of models
- AI computation for fine tuning
- Other

*** To what extent do you rely on colocation data centres?**

- To a large extent

- To some extent
- To a small extent
- To no extent

*** Are you planning to expand the space that you rent in colocation data centres?**

- Yes
- No
- I don't know

*** What is the decisive factor when choosing a colocation facility in the EU?**

Minimum 1 selection(s)

- cost of the co-location facility
- location
- accessibility of connected services downstream and upstream (connectivity)
- cybersecurity measures in place
- physical infrastructure security
- latency
- innovation of the facility
- technical support of the facility
- sustainability of the facility
- geopolitical stability of the location of the facility
- Other

*** Please specify**

4000 character(s) maximum

What are your main energy-efficiency challenges? Rank each answer on a scale from 1 to 5 where 1 = not very important and 5 = very important.

| Challenge | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Cooling efficiency | <input type="radio"/> |
| * Server utilisation | <input type="radio"/> |
| | | | | | | |

| | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| * Inefficient hardware | <input type="radio"/> |
| * Energy losses | <input type="radio"/> |
| * Integration of renewable energy | <input type="radio"/> |
| * Compliance with existing regulations | <input type="radio"/> |
| * Lack of real time monitoring tools for energy usage | <input type="radio"/> |
| * Other | <input type="radio"/> |

*** Please specify**

4000 character(s) maximum

On access to finance/incentives: what are the main challenges that your organisation is encountering from the financial point of view when expanding operations?

Rank each answer on a scale from 1 to 5 where 1 = not very important and 5 = very important.

| Factor | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * High interest rates by the banks and other financial institutions | <input type="radio"/> |
| * Financial institutions are too risk averse to fund long term data centre projects | <input type="radio"/> |
| * Limited upside (e.g. due to high upfront costs and long payback periods, market uncertainty, high operating costs, ...) | <input type="radio"/> |
| * High taxes | <input type="radio"/> |
| * Difficulty in accessing capital, such as loans or equity | <input type="radio"/> |
| * Other | <input type="radio"/> |

*** Please specify**

4000 character(s) maximum

Please include any additional information you would like to share

Only files of the type pdf,txt,doc,docx,odt,rtf are allowed

2.3 Questions for AI developers and providers

2.3.1 Current situation

*** As an AI deployer, on which type of infrastructure is your organisation deploying your AI systems?**

- on-premise
- on the cloud
- hybrid model combining local and cloud-based solutions
- multi-cloud, combining the services from multiple vendors
- Edge AI
- not applicable

*** If chosen on the cloud, select:**

- Using a hyperscaler cloud provider
- Using a non-hyperscale cloud provider

What main factors have impacted your organisation's choice at the moment of deploying your AI services?

Rank each answer on a scale from 1 to 5 where 1 = not very important and 5 = very important.

| Factor | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Price of computational resources (e.g. virtual machines, infrastructure, storage) | <input type="radio"/> |
| * Clarity of price structure depending on the activity (e.g. inference/fine tuning/training) | <input type="radio"/> |
| * Sufficient capacity during peak times | <input type="radio"/> |
| * Access to specialised hardware on Edge devices | <input type="radio"/> |
| * Location of the computational resource (EU, non-EU) | <input type="radio"/> |
| * Cloud credits (i.e. an offer of free compute capacity) | <input type="radio"/> |

| | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| * Cybersecurity measures in place | <input type="radio"/> |
| * High capacity, reliable and affordable connectivity | <input type="radio"/> |
| * Managing latency and performance requirements | <input type="radio"/> |
| * Integration with other (cloud) services from the same provider | <input type="radio"/> |
| * Integration with other services from other providers | <input type="radio"/> |
| * Availability of software tools to assist the deployment of your AI service in the cloud | <input type="radio"/> |
| * Other | <input type="radio"/> |

* Please specify

4000 character(s) maximum

*** When selecting cloud providers, how concerned are you that your organisation's [sensitive] data are being accessed by authorities [of a third country] in circumvention of applicable EU laws and regulations (e.g. the GDPR and the Data Act)?**

- Very concerned
- Somewhat concerned
- Neutral
- Not very concerned
- Not concerned at all
- I don't know
- Not applicable

*** When selecting cloud providers, are you concerned that the cloud provider is headquartered in a third country that poses specific cybersecurity threats to the EU?**

- Very concerned
- Somewhat concerned
- Neutral
- Not very concerned
- Not concerned at all

Not applicable

*** When selecting cloud providers, how concerned are you by risks such as undue influence by a third country on suppliers and service providers (particularly in the case of alternative models of governance); concealed vulnerabilities or backdoors; and potential systemic supply disruptions (particularly in the case of technological lock-in or provider dependency)?**

- Very concerned
- Somewhat concerned
- Neutral
- Not very concerned
- Not concerned at all
- Not applicable

What performance challenges do you face in the inferencing of AI models on cloud and edge platforms?

(Rank each answer on a scale from 1 to 5, where 1 = not very important and 5 = very important)

| | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * High latency for real time applications | <input type="radio"/> |
| * Inconsistent performance across cloud regions | <input type="radio"/> |
| * Limited processing power on edge devices | <input type="radio"/> |
| * Other | <input type="radio"/> |

*** Please specify**

4000 character(s) maximum

*** Do bundling practices (e.g. infrastructure service offerings, such as computation or storage offered with AI / machine learning (ML) tools) by cloud providers impact your AI workload (ability to deploy and manage AI applications)?** Bundling is a commercial strategy where several software packages are sold together for distribution, deployment or use.

- Significantly
- To a certain extent
- No
- I don't know

* Please specify

4000 character(s) maximum

2.3.2 Specific needs and challenges

What is the most significant challenge from the infrastructure and infrastructure provider point of view that your organisation is facing when deploying and managing your AI services?

Rank each answer on a scale from 1 to 5 where 1 = not very important and 5 = very important.

| Challenge | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Limited access to computational capacity in general | <input type="radio"/> |
| * Limited access to computational capacity in the EU | <input type="radio"/> |
| * Insufficient features of the current capacity offerings (pricing, sustainability, security) | <input type="radio"/> |
| * Fear of vendor lock in | <input type="radio"/> |
| * Cybersecurity concerns | <input type="radio"/> |
| * Limited availability of high capacity, reliable and affordable connectivity | <input type="radio"/> |
| * Limited availability of software tools covering the whole development and operations lifecycle, including open source software | <input type="radio"/> |
| * Other | <input type="radio"/> |

* Please specify

4000 character(s) maximum

For which part of the AI service development lifecycle is the problem of limited capacity most acute?

Rank each answer on a scale from 1 to 5 where 1 = not very acute and 5 = very acute.

| | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Training | <input type="radio"/> |
| * Fine-Tuning | <input type="radio"/> |
| * Inference | <input type="radio"/> |
| * All of the above | <input type="radio"/> |
| * Other | <input type="radio"/> |

*** Please specify**

4000 character(s) maximum

Please include any additional information you would like to share

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2.4 Questions for cloud / Telco / Edge / AI users

2.4.1 Current situation

*** What type of infrastructure is your organisation using to fulfil your cloud /Telco/Edge/AI needs?**

- On-premise
- On the cloud
- Hybrid model combining local and cloud-based solutions
- Multi-cloud, combining the services from multiple vendors
- Edge AI

What are the main factors that impact your organisation's choice of Cloud /Edge/AI provider to service your needs?

(Rank each answer on a scale from 1 to 5, where 1 = not very important and 5 = very important)

| | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Price of the service offers | <input type="radio"/> |
| * Location of the data | <input type="radio"/> |
| * Cybersecurity measures in place | <input type="radio"/> |
| * High capacity, reliable and affordable connectivity | <input type="radio"/> |
| * Latency | <input type="radio"/> |
| * Innovation of the solution | <input type="radio"/> |
| * Breadth of service offer / Possibility of integration with other services from the same provider (e.g. software tools) | <input type="radio"/> |
| * Integration with other services from other providers | <input type="radio"/> |
| * Interoperability with other providers | <input type="radio"/> |
| * Availability of additional software tools | <input type="radio"/> |
| * Integrated offering (bundle) | <input type="radio"/> |
| * Availability of additional software tools | <input type="radio"/> |
| * Cloud credits | <input type="radio"/> |
| * Other | <input type="radio"/> |

* Please specify

4000 character(s) maximum

* What type of AI offers do you usually need?

- Training on the cloud
- Training on high performance computing
- Training on premise
- Fine-tuning on the cloud
- Inference on the edge
-

Inference on the cloud

- I don't know
- Other please specify

*** Please specify**

4000 character(s) maximum

*** Who is currently capable of offering these services to you?**

- Hyperscale cloud providers
- Providers of High-Performance Computing (EuroHPC or national HPC)
- EU cloud service providers
- Smaller non-EU cloud service providers
- Other

*** Please specify**

4000 character(s) maximum

2.4.2 Specific needs and challenges

*** When selecting a cloud service, what are the most significant factors that affect your decision?**

- Pricing
- Data location
- Limited choice of infrastructure provider (through bundling, restrictive licensing)
- Financial incentives (cloud credits, committed spend discounts)
- Data protection, privacy and security vulnerabilities
- Not enough processing power for training either in the EU or offered by an EU provider
- Not enough processing power for inference either in the EU or offered by an EU provider

- Fear of vendor lock-in
- Cybersecurity protection
- High-capacity, reliable and affordable connectivity infrastructure
- Limited open-source software and / or AI models
- Other

* Please specify

4000 character(s) maximum

*** Are there any gaps in the current service offers of cloud computing providers that impact your operations?**

4000 character(s) maximum

*** Are there any gaps in the current offers of AI providers that impact your operations?**

4000 character(s) maximum

Please include any additional information you would like to share.

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2.5 Questions of Public Administrations

*** On behalf of what type of public administration are you answering?**

- Local
- Regional
- National/Federal
- European

2.5.1 Current situation

*** Does your public administration currently use cloud computing and AI services?**

- Yes
- No
- I don't know

*** What types of cloud services do you use?**

- Infrastructure as a Service - IaaS (e.g. virtual machines, storage, infrastructure)
- Platform as a Service - PaaS
- Software as a Service - SaaS
- Other
- I don't know

*** Please specify**

1000 character(s) maximum

*** Do you store data on the cloud?**

- Yes
- No, only on-premises
- I don't know

*** What type of data do you store in the cloud?**

- Sensitive information, such as data related to public security or public safety
- Special categories of sensitive data such as health records or financial data
- Other data that my organisation considers sensitive (if so, please specify)
- Commercially sensitive data, including data subject to intellectual property rights as well as trade secrets
- Operational data related to functioning of digital public services
- Public data
- Open data
- Trained AI models
-

Other

*** Please specify**

1000 character(s) maximum

*** How do you store this data on the cloud?**

- All encrypted
- All non-encrypted
- It depends on the data classification and sensitivity
- I do not know

*** Please specify the data classification and sensitivity**

4000 character(s) maximum

When selecting cloud providers for your organisation how concerned are you with respect to the following:

(Rank each answer on a scale from 1 to 5, where 1 = not concerned at all and 5 = very concerned)

| | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Sensitive data of your organisation is accessed by authorities of a third country in circumvention of applicable EU laws and regulations (e.g. GDPR, Data Act) | <input type="radio"/> |
| * Cloud provider is headquartered in a third country that poses specific cyber-security threats to the Union | <input type="radio"/> |
| * Risks such as undue influence by a third country on suppliers and service providers, in particular in the case of alternative models of governance; concealed vulnerabilities or backdoors; and potential systemic supply disruptions, in particular in the case of technological lock-in or provider dependency | <input type="radio"/> |

| | | | | | | |
|---------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| * Other | <input type="radio"/> |
|---------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

*** Please specify**

4000 character(s) maximum

*** Which cloud deployment model(s) does your public administration rely on?**

- Government private cloud
- Public cloud
- Hybrid cloud
- Other
- I don't know

*** Please specify**

1000 character(s) maximum

*** Are any of your procured providers subject to non-EU jurisdictions including laws with extraterritorial effect (e.g. US or Chinese providers)?**

- Yes
- No
- I don't know

What are the main factors driving the decision of which cloud service will be procured in your administration?

Rank each answer on a scale from 1 to 5 where 1 = not very important and 5 = very important.

| Factor | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Level of assurance and protection (i.e. the security mechanisms put in place depending on the sensitivity of the data) | <input type="radio"/> |

| | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| * Price | <input type="radio"/> |
| * Made in the EU | <input type="radio"/> |
| * Provenance of the provider | <input type="radio"/> |
| * Integration with other services from the same provider (e.g. software tools) | <input type="radio"/> |
| * Integration with other services from other providers | <input type="radio"/> |
| * Interoperability with other providers | <input type="radio"/> |
| * Integrated offerings (bundle) | <input type="radio"/> |
| * Sustainability | <input type="radio"/> |
| * Latency | <input type="radio"/> |
| * Reliability | <input type="radio"/> |
| * Scalability | <input type="radio"/> |
| * Other | <input type="radio"/> |

*** Please specify**

4000 character(s) maximum

What are the main reasons for your administration not using cloud computing?

Rank each answer on a scale from 1 to 5 where 1 = not very important and 5 = very important.

| Reason | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Total Cost of Ownership | <input type="radio"/> |
| * Not enough knowledge to select the most appropriate service for different data sensitivities | <input type="radio"/> |
| * Cybersecurity | <input type="radio"/> |
| * Data protection concerns | <input type="radio"/> |
| * Limited knowledge or lack of expertise in operation and management of cloud services (e.g. in terms of technical and administrative capabilities) | <input type="radio"/> |

| | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| * Limited offering from EU providers | <input type="radio"/> |
| * Compliance with EU regulations (e.g. the GDPR and Data Act) | <input type="radio"/> |
| * Risk of unlawful access to data from third countries legislation with extra territorial reach | <input type="radio"/> |
| * Fear of vendor lock in | <input type="radio"/> |
| * Fear of interoperability issues | <input type="radio"/> |
| * High operational cost of migration from on-premise solutions | <input type="radio"/> |
| * Sustainability concerns | <input type="radio"/> |
| * Preference/ no need | <input type="radio"/> |
| * Other | <input type="radio"/> |

*** Please specify**

4000 character(s) maximum

*** Is the software developed in your public administrations released as open source software?**

- Yes
- No
- I don't know

*** Is there an established public repository where the code can be accessed and contributed to?**

- Yes
- No
- I don't know

*** Is there a community governance mechanism put in place for the code released as open source?**

- Yes
- No
- I don't know

2.5.2 Specific needs and challenges

What are your administration's top priorities when using cloud computing?

(Rank each answer on a scale from 1 to 5 where 1 = not very important and 5 = very important)

| Priority | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Scalability | <input type="radio"/> |
| * Cost efficiency | <input type="radio"/> |
| * Risk of unlawful access to data from actors subject to non-EU legislation with extraterritorial reach | <input type="radio"/> |
| * Security mechanisms in place | <input type="radio"/> |
| * Data protection measures | <input type="radio"/> |
| * Availability / uptime | <input type="radio"/> |
| * Performance | <input type="radio"/> |
| * Integration with other services from the same provider, for instance, software tools | <input type="radio"/> |
| * Integration with other services from other providers | <input type="radio"/> |
| * Interoperability with other providers | <input type="radio"/> |
| * Integrated offering (bundle) | <input type="radio"/> |
| * Made in Europe | <input type="radio"/> |
| * Environmental sustainability | <input type="radio"/> |
| * Protection from cybersecurity risks posed by certain countries | <input type="radio"/> |
| * Other | <input type="radio"/> |

* Please specify

What challenges have you encountered with the adoption of cloud by your administration?

(Rank each answer on a scale from 1 to 5, where 1 = not very important and 5 = very important)

| Challenge | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Limited knowledge on how to technically evaluate, assess and procure the existing cloud service offerings | <input type="radio"/> |
| * Security risks | <input type="radio"/> |
| * Vendor lock in | <input type="radio"/> |
| * Limited technical expertise | <input type="radio"/> |
| * Limited or lack of interoperability | <input type="radio"/> |
| * Regulatory, including public procurement requirements | <input type="radio"/> |
| * Other | <input type="radio"/> |

*** Please specify**

4000 character(s) maximum

*** Are there any gaps in the current offerings of cloud computing providers that impact your operations?**

4000 character(s) maximum

How can the EU support public administrations in increasing their use of cloud computing?

(Rank each answer on a scale from 1 to 5, where 1 = not very important and 5 = very important)

| | | | | | | | |
|--|--|--|--|--|--|--|--|
| | | | | | | | |
|--|--|--|--|--|--|--|--|

| Factor | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Funding | <input type="radio"/> |
| * EU-wide uniform guidance on how to procure | <input type="radio"/> |
| * Mechanisms to allow federation of cloud services across public administrations within and across Member States | <input type="radio"/> |
| * Standards, open specifications and mechanisms to ensure interoperability of cloud solutions | <input type="radio"/> |
| * Cybersecurity guidelines | <input type="radio"/> |
| * Technical support, training and capacity building support | <input type="radio"/> |
| * Other | <input type="radio"/> |

*** Please specify**

4000 character(s) maximum

*** Does your administration release the code procured for the delivery of digital services as open source?**

- Always
- In some cases
- Never
- I don't know
- Not applicable

*** Is any licensing schema preferred?**

4000 character(s) maximum

*** What is preventing you from this?**

- Licenses
- Cybersecurity vulnerabilities

- Maintenance
- Sustainability
- Accountability
- Other

* Please specify

1000 character(s) maximum

*** Are there any specific policy measures you would recommend to improve public administrations' access to and use of cloud services?**

4000 character(s) maximum

*** Are there any specific policy measures you would recommend for the provision of the security of cloud services for public administrations?**

4000 character(s) maximum

Please include any additional information you would like to share

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2.6. Questions for financial institutions

2.6.1 Current situation

*** What are the main activities that your financing institution is investing in related to AI / cloud computation?**

- Computing infrastructure development, mainly real estate (e.g. data centres)
- Computation processors such as GPUs (Graphic Processing Unit)
- AI services
-

Other

I don't know

* Please specify

4000 character(s) maximum

* How would you describe your current level of investment in computing infrastructure development?

- significant – computing infrastructures are a key part of our portfolio
- moderate – we have some investments in the sector
- minimal – we are still exploring opportunities
- none – we currently have no investments in this area

If any, what are the main reasons for your interest in investing in computing infrastructures?

(Rank each answer on a scale from 1 to 5, where 1 = not very important and 5 = very important)

| Reason | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * the sector's high growth potential (return on investment) | <input type="radio"/> |
| * Diversification of the investment portfolio | <input type="radio"/> |
| * Alignment with existing policies | <input type="radio"/> |
| * Strategic interest (resilient infrastructure for critical services) | <input type="radio"/> |
| * Other | <input type="radio"/> |

* Please specify

4000 character(s) maximum

Which are the main factors preventing your organisation from investing in new computing infrastructures capacity?

(Rank each answer on a scale from 1 to 5, where 1 = not very important and 5 = very important)

| Factor | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * High upfront capital requirements | <input type="radio"/> |
| * High risk aversion to funding long-term computing infrastructure projects | <input type="radio"/> |
| * Lack of access to tax incentives | <input type="radio"/> |
| * Lack of access to tax breaks | <input type="radio"/> |
| * Lack of access to additional funds | <input type="radio"/> |
| * Uncertainty about long term demand | <input type="radio"/> |
| * Lack of technical expertise to evaluate projects | <input type="radio"/> |
| * Insufficient market data or performance benchmarks | <input type="radio"/> |
| * Low liquidity or exit options for data centre investments | <input type="radio"/> |
| * Competing resources | <input type="radio"/> |
| * Regulatory obstacles | <input type="radio"/> |
| * Environmental or social impact concerns | <input type="radio"/> |
| * Other | <input type="radio"/> |

*** Please specify**

4000 character(s) maximum

*** What expectations do you have for computing infrastructure projects in terms of return on investment (ROI)?**

- Above 15% annually
- Between 10% and 15% annually
- Below 10% annually but stable
- Other

*** Please specify**

4000 character(s) maximum

What factors limit the ROI of your computing infrastructure investments?

(Rank each answer on a scale from 1 to 5, where 1 = not very important and 5 = very important)

| Factor | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * High initial capital expenditure delaying the return | <input type="radio"/> |
| * High operational costs (e.g. energy and maintenance) | <input type="radio"/> |
| * Limited scalability | <input type="radio"/> |
| * Future proofing of the technology and the facility | <input type="radio"/> |
| * Competition driving down margins | <input type="radio"/> |
| * Cybersecurity risks | <input type="radio"/> |
| * Other | <input type="radio"/> |

*** Please specify**

4000 character(s) maximum

*** When you expect to break even the investment realized in computing infrastructure projects?**

- 1-3 years
- 4 -7 years
- 8 – 10 years
- More than 10 years
- I don't know

2.6.2 Specific needs and challenges

What is the biggest challenge for investors in the computing infrastructures market?

(Rank each answer on a scale from 1 to 5, where 1 = not very important and 5 = very important)

| Challenge | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Lack of market transparency or data | <input type="radio"/> |
| * Insufficient policy support or incentives | <input type="radio"/> |
| * Only a few available firms able to build facilities | <input type="radio"/> |
| * Other | <input type="radio"/> |

* Please specify

4000 character(s) maximum

What policy measures could help mitigate investment risks in this sector?

Rank each answer on a scale from 1 to 5 where 1 = not very important and 5 = very important.

| Policy measure | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * EU- or Member-State-backed guarantees or risk sharing mechanisms | <input type="radio"/> |
| * Clearer regulatory frameworks | <input type="radio"/> |
| * Tax incentives for computing infrastructures investments | <input type="radio"/> |
| * Establish standardised metrics and benchmarks for computing infrastructures performance | <input type="radio"/> |
| * Simplify regulatory procedures (e.g. for permitting) | <input type="radio"/> |
| * Create liquidity mechanisms for long term investors | <input type="radio"/> |
| * Reduced energy costs for data centres through subsidies | <input type="radio"/> |
| * Streamlined regulatory approval processes | <input type="radio"/> |
| * Other, please specify | <input type="radio"/> |

*** Please specify**

4000 character(s) maximum

What policy measures could make computing infrastructures investments more attractive for investment?

Rank each answer on a scale from 1 to 5 where 1 = not very important and 5 = very important.

| Policy measure | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Co-investment opportunities with public or private partners | <input type="radio"/> |
| * Development of specialized funds or instruments for data centres | <input type="radio"/> |
| * Enhanced transparency on sector performance metrics. | <input type="radio"/> |
| * Other | <input type="radio"/> |

*** Please specify**

4000 character(s) maximum

Please include any additional information you would like to share

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2.7 Questions for organisations other than the ones above

2.7.1 Current situation

*** What is your profile?**

- Business organization
- Consumers organization
- NGO
-

Academia

Other

What is your main reason for participating in this survey?

Rank each answer on a scale from 1 to 5 where 1 = not very important and 5 = very important.

| Interest | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * I am concerned about how secure my personal or professional data are when stored in the cloud | <input type="radio"/> |
| * I am concerned that non-EU tech companies have too much influence over our data and digital infrastructure | <input type="radio"/> |
| * I want fair competition and support for EU businesses and start-ups in the digital space | <input type="radio"/> |
| * I would like the EU to invest in and prioritise EU cloud infrastructure and services | <input type="radio"/> |
| * I believe there should be stronger rules and enforcement for how cloud and AI services operate in the EU | <input type="radio"/> |
| * I am concerned about the environmental impact of building large-scale data centres and digital technologies | <input type="radio"/> |
| * I am concerned that some people or communities may be left behind in the shift to digital and cloud-based services (e.g. due to the lack of access to digital tools, poor internet, lack of training, etc.) | <input type="radio"/> |
| * I want to know how governments and public institutions use cloud services and how they protect our data | <input type="radio"/> |
| * I work in tech, policy, education or a related field and want to contribute with my perspective | <input type="radio"/> |
| * I believe citizens should have a voice in digital governance aspects | <input type="radio"/> |
| * Other | <input type="radio"/> |

* Please specify

4000 character(s) maximum

2.7.2 Specific needs and challenges

*** Are there any specific needs to be addressed for building new computational resources?**

4000 character(s) maximum

*** Are there any specific factors affecting your access to cloud services?**

4000 character(s) maximum

*** Are there any specific obstacles to the consumption of secure cloud services?**

4000 character(s) maximum

*** Have you identified any gaps in the current offerings of cloud computing providers that impact your day-to-day activities?**

4000 character(s) maximum

Please include any additional information you would like to share

4000 character(s) maximum

Please upload your file(s)

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2.8 Questions for individual citizens

2.8.1 Specific interests and concerns

What are your main reasons for participating in this consultation?

Rank each answer on a scale from 1 to 5 where 1 = not very important and 5 = very important.

| Interest | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * I am concerned that my personal or professional data may not be secure when stored in the cloud | <input type="radio"/> |
| * I am concerned that non-EU tech companies have too much influence over our data and digital infrastructure | <input type="radio"/> |
| * I want fair competition and support for EU businesses and start-ups in the digital space | <input type="radio"/> |
| * I would like the EU to invest in and prioritise EU cloud infrastructure and services | <input type="radio"/> |
| * I believe there should be stronger rules and enforcement for how cloud and AI services operate in the EU | <input type="radio"/> |
| * I am concerned by the environmental impact of building large-scale data centres and digital technologies | <input type="radio"/> |
| * I am worried that some people or communities may be left behind in the shift to digital and cloud-based services (e.g. due to the lack of access to digital tools, poor internet, lack of training) | <input type="radio"/> |
| * I want to know how governments and public institutions use cloud services and how they protect our data | <input type="radio"/> |
| * I work in tech, policy, education or a related field and want to contribute with my perspective | <input type="radio"/> |
| * I believe citizens should have a voice in digital governance aspects | <input type="radio"/> |
| * Other | <input type="radio"/> |

* Please specify

4000 character(s) maximum

*** How familiar are you with the current state of cloud computing services available in the EU?**

- Very familiar
- Somewhat familiar
- Not very familiar
- Not familiar at all

How much do you trust the following types of cloud providers to keep your personal or business data private and protected — even when it is stored in the EU?

(Note: some non-EU providers may still be required to share data with their home country's government under foreign laws, even if the data are stored in the EU)

| Provider | Very low trust | Low trust | Moderate trust | High trust | Very high trust |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| * EU-based providers | <input type="radio"/> |
| * US-based providers (e.g. AWS and Microsoft) | <input type="radio"/> |
| * Providers based outside the EU and US | <input type="radio"/> |

*** If possible, please explain your answer above and provide examples**

4000 character(s) maximum

*** How well do you think the EU is equipped in terms of cloud computing resources for both basic and AI-related services?**

- Very well equipped (i.e. the EU is fully prepared and competitive on a global level)
- Well equipped (i.e. the EU is mostly keeping up with cloud and AI infrastructure demands)
- Moderately equipped (i.e. the EU has some capacity but there is room for improvement)
- Poorly equipped (i.e. some infrastructure exists, but it is not enough to meet current needs)

- Very poorly equipped (i.e. the EU lacks sufficient infrastructure and is falling behind)
- I don't know

*** Do you believe cloud service providers based in the EU can compete fairly with global tech giants?**

- Yes, definitely
- Yes, but only with strong EU support
- Not really
- No, the market is already dominated and hard to disrupt
- I don't know
- Other

*** Please specify**

4000 character(s) maximum

*** How important is it for you for the EU to reduce its dependency on non-EU cloud providers?**

- Very important
- Somewhat important
- Not important
- I don't know

Do you believe citizens should have the right to know which cloud services are used by public institutions (e.g. governments, hospitals and schools)?

- Yes, always
- Yes, but only for highly critical services
- No, this information does not need to be public
- I don't know
- Other

*** Please specify**

4000 character(s) maximum

*** If possible, please explain your answer above and provide examples**

4000 character(s) maximum

*** Do you think public services in the EU (e.g. healthcare or education) should be allowed to store citizen data with non-EU cloud providers (e.g. US-based companies)?**

- Yes, without restrictions
- Yes, but only if strong safeguards are in place
- No, citizen data from public services should only be stored with EU-based providers
- It depends on the type of data or service
- I don't know
- Other

*** Please specify**

4000 character(s) maximum

*** If possible, please explain your answer above and provide examples**

4000 character(s) maximum

*** Who do you think are most at risk of being excluded from the cloud and AI transition?**

- People in rural or remote areas
- Older adults
-

Low-income individuals

- Small businesses
- Students without digital access
- No one – I believe access is fair
- I don't know

*** Do you believe investing in EU cloud infrastructure could help create jobs and economic opportunities in the EU?**

- Yes, definitely
- Possibly, especially in digital or tech sectors
- Not really
- No I don't know

*** What benefits do you expect from stronger EU cloud infrastructure?**

- Better protection of personal data and privacy
- More reliable and secure public digital services
- Job creation in tech, infrastructure or support roles
- Increased trust in public institutions
- More fairness and transparency in cloud and AI use
- I don't know
- Other

*** Please specify**

4000 character(s) maximum

*** What role should the EU play in shaping the future of cloud services?**

4000 character(s) maximum

Please include any additional information you would like to share

4000 character(s) maximum

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3. EU Policies

Faced with the current gap in the EU's cloud and AI computing capacity, preliminary policy levers and possible areas of action have been identified to drive the development and deployment of the required computing resources and to stimulate their uptake in line with the EU's rules and broader policy objectives. Your response to this section of the consultation will help the Commission to design the most impactful and efficient policy options as well as identify possible missing elements.

3.1 Computing Capacities

This section collects input on the prioritisation of the activities in order to foster different types of computation facilities in the EU, while taking environmental aspects into consideration.

What type of EU action should be prioritised for boosting the availability of sufficient and adequate cloud capacity for AI workloads?

(Rank each answer on a scale from 1 to 5, where 1 = not very relevant and 5 = very relevant).

Facilitation of investment

| Policy action | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Increasing public investment in private-public infrastructures | <input type="radio"/> |
| * Creating public-private partnerships for large-scale data centres | <input type="radio"/> |
| * Incentives for building computing infrastructure in underserved regions | <input type="radio"/> |
| * Other | <input type="radio"/> |

* Please specify

Simplification of infrastructure permitting procedures

| Policy action | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Have a one stop shop service or a similar mechanism where the different permits at the different administrative levels can be requested and managed | <input type="radio"/> |
| * Reduce the amount of time needed to obtain the different permits and environmental authorisations | <input type="radio"/> |
| * Create expedited approval mechanisms and clear conditions for critical / strategic projects | <input type="radio"/> |
| * Other | <input type="radio"/> |

* Other, please specify

4000 character(s) maximum

Simplification of regulations for the building of computing infrastructure with energy efficiency

| Policy action | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Unified guidelines at national level for all aspects including energy efficiency | <input type="radio"/> |
| * Unified guidelines at EU level | <input type="radio"/> |
| * Other | <input type="radio"/> |

* Please specify

Environmental aspects

| Policy action | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Clear environmental compliance requirements | <input type="radio"/> |
| * Addressing energy availability for data centres | <input type="radio"/> |
| * Addressing land availability for data centres | <input type="radio"/> |
| * Other | <input type="radio"/> |

* Please specify

Energy efficiency

| Policy action | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| * Tax incentives for using sustainable technologies | <input type="radio"/> |
| * Funding for research and development of energy-efficient technologies. | <input type="radio"/> |
| * Standardised energy efficiency benchmarks | <input type="radio"/> |
| * Investments in the development of more efficient software to manage and monitor the energy efficiency and metrics of the data centre | <input type="radio"/> |
| * Other | <input type="radio"/> |

* Other, please specify

4000 character(s) maximum

Cross-cutting issues

| Policy action | 1 | 2 | 3 | 4 | 5 | Not applicable / I don't know |
|---------------|---|---|---|---|---|-------------------------------|
| * | | | | | | |

| | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Supporting an open source software ecosystem | <input type="radio"/> |
| * Collaborative programmes for R&D and innovation | <input type="radio"/> |
| * Other | <input type="radio"/> |

* Please specify

*** At EU policy level, is it appropriate to distinguish between capacity for training, for fine-tuning, and for inference of AI models and solutions?**

- Yes
- No
- I don't know

* Why not?

3.2 Public Sector actions

The following set of questions aim at gathering information mainly on the procurement rules of public administrations, and on policy actions to address the challenges faced by the public sector on procuring cloud services.

*** Which EU policy actions would best address the current issues faced by public administrations when procuring cloud and AI services?** (multiple options possible)

- Guidelines with standard criteria to procure cloud services
- Guidelines with standard award criteria
- Standardized tender vocabulary and requirements
- I don't know
- Other

* Please specify

1000 character(s) maximum

*** Which EU policy actions would address the issues currently faced by public administrations as regards cloud and AI services?** (multiple options possible)

- Include a criterion ensuring sovereignty, autonomy, resilience and availability in the procurement of narrowly defined highly critical and strategic use cases
- Include a criterion for highly innovative solutions
- Include a criterion for solutions with added value and innovation
- Improvement of skills and capabilities, including training and certifications
- Marketplace of cloud services, AI services, and other software applications for the Public sector.
- Other
- I don't know

*** Please specify**

4000 character(s) maximum

3.3. Open source in the public sector

The following set of questions are intended to gain input to help address policy options on the release of code developed with public money as open-source code.

*** What EU policies would alleviate the challenges of releasing the code funded by public money as open-source* code?**

(*released under a license in which the copyright holder grants users the rights to use, study, change, and distribute the software and its source code to anyone and for any purpose)

- A common open-source licensing schema across the EU
- Guidelines to set up the governance mechanisms of the open-source community
-

Guidelines to select relevant open-source communities/foundations where the code can be released

- The setting up of a public-private foundation dedicated to such communities
- An obligation to release the source code developed with public money onto open-source repositories, except in duly justified cases
- Other
- I don't know

* Other, please specify

4000 character(s) maximum

3.4 Cross – cutting topics

The following questions are intended to provide the Commission with your input on cross-cutting topics such as market practices, security and research.

* **What EU policy actions would address bundling?** Bundling is a commercial strategy where several software packages are sold together for distribution, deployment or use.

- Regulation of bundling practices to ensure fair competition
- Promoting open licensing models for AI tools and platforms
- Transparency requirements for cloud provider pricing and licensing
- I don't know
- Other

* Other, please specify

4000 character(s) maximum

* **What EU policy actions would best protect against unlawful access to [sensitive] data [by third-country legislation with extraterritorial reach] and risks associated with supply chain dependencies (and possible disruptions) of cloud and AI services?**

- Pursue international cooperation (including international agreement) with third countries that address such risks
- Develop criteria that could be used to differentiate between third countries depending on whether they pose specific threats to the Union.
- Develop criteria to narrowly identify highly critical use cases for cloud and AI services
- Define criteria to narrowly identify highly critical use cases for which public procurers could address specific risks related to third countries' legislation with extraterritorial reach, aligned with international agreements.
- Other
- I don't know

* Other, please specify

4000 character(s) maximum

* The EU pursues and has concluded with third countries agreements that facilitate trusted cross-border data flows and prohibit unjustified data localisation restrictions (including with Japan, Korea, Singapore and the UK). **How important is it in your view that the EU promotes such partnerships with like-minded countries?**

- Very important
- Somewhat important
- Neutral
- Not very important
- Not important at all

In order to meet the future demand for AI services and applications while catering for the EU's environmental policy objectives and technological autonomy, the EU needs to advance its research and innovation in the area of sustainable and resource-efficient AI computing continuum technologies (IoT, Telco, Edge, the cloud and HPC). Your response to this section of the survey will complement a targeted consultation addressing stakeholders involved in research and innovation projects in these fields and will help the Commission to identify priority fields for future support.

If you are a researcher, are there any specific research priorities that you would like to recommend on:

Data centre components (e.g. highly efficient chips, graphene battery walls)?

4000 character(s) maximum

Optimal data centre operation and use of resources (e.g. AI solutions, optimisation of computing architecture and virtualisation, improved adaptation to user demand)?

4000 character(s) maximum

Cooling innovations (e.g. direct on-chip, liquid & immersive)?

4000 character(s) maximum

Integration of data centres into energy systems?

4000 character(s) maximum

Advanced pilot lines to demonstrate the green data centres of the future?

4000 character(s) maximum

Any other ideas?

4000 character(s) maximum

Please upload your file(s), if you have any additional information

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