## 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

Michelle

#### \*Surname

Thorne

#### \* Email (this won't be published)

michelle@thegreenwebfoundation.org

#### \*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

#### \*Organisation name

255 character(s) maximum

Green Web Foundation

#### \*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.

576087994849-27

#### \*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.

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							Príncipe
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							Caicos Islands
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0	Chad		Ireland	0	Palestine		Uganda
	Chile	0	Isle of Man	0	Panama	0	Ukraine
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		Papua New	United Arab
		Guinea	Emirates
Christmas Island	Italy	Paraguay	United Kingdom
Clipperton	Jamaica	Peru	United States
Cocos (Keeling)	Japan	Philippines	United States
Islands			Minor Outlying
			Islands
Colombia	Jersey	Pitcairn Islands	Uruguay
Comoros	Jordan	Poland	US Virgin Islands
Congo	Kazakhstan	Portugal	Uzbekistan
Cook Islands	Kenya	Puerto Rico	Vanuatu
Costa Rica	Kiribati	Qatar	Vatican City
Côte d'Ivoire	Kosovo	Réunion	Venezuela
Croatia	Kuwait	Romania	Vietnam
Cuba	Kyrgyzstan	Russia	Wallis and
			Futuna
Curaçao	Laos	Rwanda	Western Sahara
Cyprus	Latvia	Saint Barthélen	ny <sup>©</sup> Yemen
Czechia	Lebanon	Saint Helena	Zambia
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		Tristan da Cunł	าล
Democratic	Lesotho	Saint Kitts and	Zimbabwe
Republic of the		Nevis	
Congo			
Denmark	Liberia	Saint Lucia	

\* Is your organization headquartered in the EU?

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

\* Is your parent company headquartered in the EU?

- Yes
- No

\* 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. Fo r 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

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.

#### 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	0	0	۲	0	0	©
* I am concerned that non-EU tech companies have too much influence over our data and digital infrastructure		0	0	O	۲	O
* I want fair competition and support for EU businesses and start-ups in the digital space	0	0	۲	۲	0	©
* I would like the EU to invest in and prioritise EU cloud infrastructure and services	0		۲	۲		O
<ul> <li>I believe there should be stronger rules and enforcement for how cloud and AI services operate in the EU</li> </ul>	0		۲	۲	۲	O
* I am concerned about the environmental impact of building large-scale data centres and digital technologies	0		۲	۲	۲	©
* 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.)		۲	O	O	0	0
* I want to know how governments and public institutions use cloud services and how they protect our data	0	٢	۲	٢	٢	0

<ul> <li>I work in tech, policy, education or a related field and want to contribute with my perspective</li> </ul>	$\odot$	$\odot$	$\odot$		۲	O
<ul> <li>I believe citizens should have a voice in digital governance aspects</li> </ul>	0	0	0	0	۲	0
* Other	0	0	0	$\odot$	0	۲

#### 2.7.2 Specific needs and challenges

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

#### 4000 character(s) maximum

The Green Web Foundation is a Dutch non-profit supporting technologists and policymakers to accelerate the phase out of fossil fuels in our digital infrastructures in alignment with climate goals. We strongly argue that any AI investment strategy must consider the full cost of cloud infrastructure, including environmental and social costs. Before building new computational resources, the following needs must be met. See attached letter for further details.

1. Conduct full environmental and social impact assessments of data center sites and make them publicly available. Full impact assessments based on the entire lifecycle of a data center must be available to the public with ample time to review, in line with the EIA Directive and the Aarhus Convention.

2. Publicly disclose the projected consumption of water and energy, as well as the material footprint and waste generation. Digital infrastructure providers must be accountable for the lifecycle of their facilities, including public disclosures about the development, resource consumption, and impacts of data centres before they are built. Data center providers must also disclose information on the material footprint and waste generation in line with the European Commission's Circular Economy Monitoring Framework.

3. Uphold climate commitments: All data centres must be fossil-free and bound to commitments to run on 100% renewable energy that is locally produced, additive to the grid, and publicly verifiable. In Europe, data centres are driving an expansion in fossil gas capacity and keeping coal plants open. All new computational resources must be powered by new and additional renewable energy to power new data centres.

Furthermore, energy justice principles should guide the sourcing of renewable energy, so that it does not come at the cost of affordability, access, or grid stability for local communities. Furthermore, energy emission claims must reduce absolute emissions by aligning renewable energy purchases with their real-time energy use on an hourly basis. All energy claims must be publicly and independently verifiable.

4. Align computational strategy with binding targets to reduce absolute emissions in line with Europe's 2030 climate goals. The EU set the target of reducing greenhouse gas emissions by at least 55% by 2030. The AI Continent Plan must account for reducing absolute emissions of the digital sector, which the International Energy Agency and the ITU both strongly recommended halving by 2030. The EU also has a goal of 'achieving climate-neutral, highly energy-efficient and sustainable data centres by no later than 2030.' The new strategy must remain in line with these commitments.

5. Update the Ecodesign for Sustainable Products Regulation (ESPR) working plan to include data centers as a "priority product". As part of its Circular Economy Action Plan, the Commission committed to decouple growth from resource use and to keep its resource consumption within planetary boundaries. However, the Commission does not include servers and data storage products as priority products in its current working plan. This means ecodesign requirements for data centers only focus on energy efficiency, leaving out the updated requirements of ESPR around its material footprint, which constitutes its main environmental impact at the manufacturing stages.

6. Ensure meaningful participation and cost-effectiveness analysis for communities. Communities impacted by the construction and operation of computational resources must be included in any decision-making, activities and practices that affect them. The requirement of a cost-effectiveness analysis would consider values like health and saved lives without having to put these into monetary value. Participatory impact assessments and other public fora are necessary so that the people affected by AI infrastructures can fully weigh its tradeoffs and participate in decision-making.

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

#### 4000 character(s) maximum

Our access to public-interest oriented, environmentally sustainable, and competitive cloud services are limited due to several factors, which must be addressed in this proposed strategy.

1. Introduce measures to diversify the cloud market, including exploring ways to regulate it as an essential service in the public interest. The proposed strategy does not acknowledge that the cloud market is consolidated, which risks undermining EU digital sovereignty efforts. 75% of cloud services in Europe are run by three U.S.-based companies: Microsoft, Amazon and Google. This market consolidation presents clear barriers to fair competition and severely limits the ability of European SMEs, particularly those offering more sustainable cloud options, to compete. As these incumbent firms stand to benefit most from public funding and infrastructure investment, the EU risks further entrenching foreign market dominance at the expense of its own sovereignty and industrial strategy goals.

Cloud market consolidation also concentrates ecological and social harms. When a handful of hyperscalers dominate the cloud market, decisions about land use, energy allocation, and supply chain sourcing become unaccountable and disconnected from community needs. This follows a clear pattern of how tech monopolies entrench extractivism and undermine democratic control over digital infrastructure.

2. Transparency requirements on environmental performance must be harmonised and enforced. The strategy currently overlooks the environmental impacts of cloud infrastructure. Despite the urgency of the climate crisis, and growing public concern and desire for more climate action, the cloud sector remains opaque when it comes to emissions, energy use, and resource consumption. There currently is no harmonised requirement for cloud providers to report environmental data in a standardised, machine readable format which results in inconsistent, and incomplete information. This lack of transparency limits the ability of public authorities procuring cloud services and individuals in choosing services aligned with sustainability goals, and thus must be remedied. The Energy Efficiency Directive can be a starting point.

3. The EU Cloud and AI Development Act must be grounded in sufficiency principles, notably, we call for legally binding priority systems that ensure private households and essential services, especially health facilities and sustainable agricultural practices, get first access to power and water resources in case of scarcity. This means prioritising essential digital services (e.g. science, public services, healthcare) while discouraging infrastructure expansion for non-essential applications like personalised advertising, cosmetic AI tools, or novelty entertainment. Establishing a legally binding priority line to the detriment of data center providers will unlock their creativity and commitment to ensuring their resource and energy efficiency and to prevent wasteful practices.

4. The strategy must also consider the full cost of cloud investment and access, including environmental and social impacts, commit upholding the EU's climate goals, reduce absolute emissions, operate fossil-free and run on 100% renewable energy that is locally produced, additive to the grid, and publicly verifiable. See answer 1 for more details.

5. High quality internet connectivity should be prioritised over further cloud investment. The current plan does not address the digital divide in Europe. Meaningful connectivity and investment in internet infrastructure such as broadband access in rural areas are part of Europe's digital policy goals, yet this need is not addressed in the proposed plan. If this EU Cloud and AI Development Act is to benefit Europe,

including European citizens, residents, and business, ensuring high quality internet connectivity should be prioritised in the region as a prerequisite for further cloud investment.

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

#### 4000 character(s) maximum

Without addressing the full cost of AI infrastructure expansion, the buildout of energy-intensive data centers as proposed in the AI Continent Plan will increase climate instability and environmental insecurity, thereby threatening any "secure" cloud service. In particular:

1. Reliance on fossil fuels, which destabilizes planetary systems. The scientific consensus is clear: fossil fuels must be phased out to reduce the greenhouse gas emissions heating the planet. The EU's climate goals acknowledge this fact and have committed to reducing greenhouse gas emissions by at least 55% by 2030.

However, much of the new energy demand for data centers is being met by burning fossil fuels, significantly contributing to global warming and climate instability. In 2024, the 1.5C global warming limit was surpassed across the entire year, and devastating heat waves, storms, fires and floods remind us of how rising global temperatures from burning fossil fuels impacts all life on this planet.

Al data centers are prolonging and intensifying our dependency on fossil fuels, and they are threatening the decarbonization goals of other sectors as data centers are prioritized over transportation, education, and other social services in terms of access to renewable energy capacity. Furthermore, pollution from burning fossil fuels for Al data centers is linked to public health issues, including lung disease and premature death. Overall, these factors contribute to societal and ecological instability and insecurity – prerequisites for secure cloud services.

2. Diverting drinking water. Local and regional access to drinking water and maintaining a climate suitable for agriculture should be prioritized over any industrial need for AI systems. Claims by tech companies about their environmental footprint such as water consumption must adhere to the Directive on Green Claims to ensure that environmental labels and claims are credible and trustworthy will allow consumers to make better-informed purchasing decisions.

3. Ignoring the AI cloud market concentration. The cloud market presents a significant challenge to digital security. Only three US tech firms (Amazon, Google, and Microsoft) control over <sup>3</sup>/<sub>4</sub> of the European cloud market. The data of European citizens and governments is being processed by American companies. The current US administration has made clear its approach to diplomacy and tech governance is adversarial and isolationist. Meanwhile, the chips required to run these data centers are primarily produced in Asia.

4. Increasing digital dependencies. Essential services are being digitized, and because of the lack of choice, they are being pressured to run on non-sovereign, fossil-fuel reliant cloud services. As the shocks and strains of climate disasters increase, so do the risks of outages. Recent examples include outages in Spain and Portugal, where many essential services were not available as they were centralized and digitalized. Essential services must also function without the cloud and internet connectivity—that is a secure approach. The proposed AI Continent Plan for Europe suggests more dependency on the US and Asia for digital infrastructure and services, which seems antithetical to European digital sovereignty and "security" in cloud services.

In order to remedy these threats to secure cloud services, see our attached letter for concrete recommendations.

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

4000 character(s) maximum

There exist a range of gaps in current EU cloud offerings.

1. Problem of cloud market concentration. Not only does this limit choice and sustainability, but also pushes communities and governments toward high-intensity infrastructures and AI applications they may not need or want. This coerced uptake reinforces extractive energy and material use patterns. AI products become compulsory and thrust on consumers and businesses, which in turn escalates electricity, water use, and carbon emissions. This includes products like Google Gemini when using Google Search, and so on. European authorities should prioritize low-impact technologies over high intensity ones as well as frugality in selecting computing solutions.

2. Need for sufficiency-based public procurement. From a sustainability point of view, it is difficult to select a cloud provider based on their environmental impact. There is a lack of transparency in climate commitments, the carbon intensity of their services, and other key sustainability factors as well as a lack of enforcement to meet European reporting standards. The strategy should support only those services that are socially and ecologically justified, rather than defaulting to hyperscaler solutions.

3. Lack of investment in diverse digital ecosystems. From a European competition perspective, it is difficult to migrate from the major cloud providers due to their uncompetitive practices such as high exit fees, lack of interoperability and vendor lock-in. If no specific action is taken, local providers will continue to be pushed out, communities receive little economic benefit, and the dominant three cloud providers leverage their market position to control the digital experience of individuals, businesses and European governments. For the AI Cloud and Investment strategy to benefit European residents and business, Europe needs to invest in fostering a more diverse ecosystem of local providers, specializing in the needs of communities and businesses in the region, rather than a monoculture of giant US tech companies.

#### Please include any additional information you would like to share

4000 character(s) maximum

Overall, we regret that there is a lack of climate, environmental and public interest considerations in this survey. Critical for any EU strategy to be successful is the measure of the impact on EU residents, citizens, and our democracies. Thus we encourage the Commission to consider the full cost of cloud investment and access, including environmental and social impacts, and ensure further cloud expansion does not reinforce extractive and anti-competitive practices.

We reiterate that before building new computational resources, several specific needs must be met:

#1 Clarify the purpose of AI investment within planetary boundaries

1.1 Conduct full environmental and social impact assessments of data center sites and make them publicly available.

1.2. Publicly disclose the projected consumption of water and energy, as well as the material footprint and waste generation

1.3. Uphold climate commitments: All data centres must be fossil-free and bound to commitments to run on 100% renewable energy that is locally produced, additive to the grid, and publicly verifiable.

1.3.a. Purchased energy emission claims must stop relying on annually matched renewable energy certificates / Guarantees of Origin and move towards more credible location-based accounting that reduces

absolute emissions by aligning renewable energy purchases with their real-time energy use on an hourly basis.

1.3.b. The Commission should ensure that public funds should not support fossil fuel-based or nuclear energy for data centres.

1.4. Align computational strategy with binding targets to reduce absolute emissions in line with Europe's 2030 climate goals.

1.5. Update the Ecodesign for Sustainable Products Regulation (ESPR) working plan to include data centers as a "priority product".

#2 Ground the strategy in sufficiency principles

2.1. Enact legally binding priority systems that ensure private households and essential services get first access to power and water resources in case of scarcity.

2.1.a. Develop a taxonomy of AI and cloud services that differentiates between essential and non-essential uses.

2.1.b. Formulate a prioritisation of digital services, ranging from essential to non-essential.

#3 Take meaningful steps to remedy cloud market concentration

3.1. Designate the cloud offerings of Amazon, Google, and Microsoft as core platform services (CPS) under Digital Markets Act.

3.2. Acknowledge the essential nature of cloud infrastructure and regulate it in the public interest. Regulate it towards ensuring greater accountability including resilience, security and sustainability.

3.3. Secure non-discriminatory access for individuals and businesses.

3.4. Separate ownership and control of cloud ownership from dominant tech companies.

3.5. Support community-owned, energy-efficient, and regionally governed alternatives

#4 Support local and community based decision making

4.1. Ensure meaningful participation and cost-benefit analysis for communities.

4.2 Participatory impact assessments and other public fora are necessary

We are particularly concerned that with the issues we have outlined above – from the lack of evidence outlining the need for more cloud investment, the reality of market concentration, and the myriad environmental and climate risks – it is clear that such a strategy, if not more finely tuned, will serve to benefit the U.S. cloud market, at the expense of EU citizens and member states.

We would also like to draw the Commission's attention to a joint statement, supported by nearly 150 civil society organisations from across the globe on how to bring AI in line with planetary boundaries: https://shorturl.at/Lm2DL.

Lastly, please see our attached narrative submission for a summary of the arguments we have made in this survey. We remain at your disposal for further information and engagement.

#### Please upload your file(s)

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

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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	۲	0		0	0	©
* Creating public-private partnerships for large-scale data centres	۲	0		0	0	O
<ul> <li>Incentives for building computing infrastructure in underserved regions</li> </ul>	۲	0	0	0	O	0
* Other	۲	۲	۲	۲	۲	0

#### \* Please specify

Regulation of the tech and data centre industry should be prioritised, both to address market concentration especially by non-EU entities and to ensure climate and environmental criteria are met. New data centres should have strict rules around use of renewable energy that includes targets for hourly matching of renewables (and moves past the outdated and inadequate GoOs annual matching system). See attached letter for detail.

#### Simplification of infrastructure permitting procedures

Policy action	1	2	3	4	5	Not applicable / I don't know
<ul> <li>Have a one stop shop service or a similar mechanism where the different permits at the different administrative levels can be requested and managed</li> </ul>	۲	0	0	0	0	0
<ul> <li>Reduce the amount of time needed to obtain the different permits and environmental authorisations</li> </ul>	۲	0	0	0	0	0
* Create expedited approval mechanisms and clear conditions for critical / strategic projects	۲	0	0	0	0	0
* Other	0	0			۲	0

#### \*Other, please specify

4000 character(s) maximum

Simplification must not mean weaker standards. Environmental authorisations are a critical step in any permitting process in ensuring that data centres do not cause harm to the climate or the environment. These must be strengthened to include clear projections on energy and emissions impacts of the operation of data centres, they must not be expedited or weakened.

## 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	۲	0	0		0	0
* Unified guidelines at EU level	۲	۲	۲	۲	0	0
* Other	۲	0	۲	۲	۲	0

#### \* Please specify

Simplification must not mean weaker standards. Unified guidelines must aim at being the highest possible standard and not the lowest common denominator, otherwise dispersed standards should remain. Energy efficiency targets are important but they cannot alone address the climate and environmental issues arising from the anticipated increased power demand from data centres and AI - regulations on transparency on resource use, on elimination of fossil fuels, on promoting 24/7 renewable energy, on regulating water usage and on other environmental factors throughout the lifycycle of AI and data centres are essential.

#### **Environmental aspects**

Policy action	1	2	3	4	5	Not applicable / I don't know
<ul> <li>Clear environmental compliance requirements</li> </ul>	0	0			۲	0
<ul> <li>Addressing energy availability for data centres</li> </ul>	0	0		0	۲	0
* Addressing land availability for data centres	$\bigcirc$	$\bigcirc$	0	0	۲	0
* Other	$\bigcirc$	$\bigcirc$	$\bigcirc$	0	۲	0

#### \* Please specify

Addressing energy availability for data centres must mean a policy of prioritisation of energy that ensures a sufficient availability of renewable energy for critical sectors that are decarbonising, such as steel, transport etc, before data centres, as well as other social needs like housing and healthcare.

Data centres are a form of additional power demand that is not directly decarbonising the economy, unlike other sectors which are electrifying and shifting to renewable energy. Digitalisation does not automatically drive decarbonisation and should not take priority over other critical energy, electricity and renewable energy consumers.

Environmental standards on energy, water, land etc. are essential and must be of the highest standards ensuring that AI and data centre growth is in line with planetary boundaries and sustainable limits. Transparency and public participation are also essential to ensure standards are strong and enforced.

Policy action	1	2	3	4	5	Not applicable / I don't know
<ul> <li>Tax incentives for using sustainable technologies</li> </ul>	۲	0	۲	0	0	0
<ul> <li>Funding for research and development of energy- efficient technologies.</li> </ul>	0	0	۲	0	0	0
<ul> <li>Standardised energy efficiency benchmarks</li> </ul>	۲	۲	۲	۲	۲	0
<ul> <li>Investments in the development of more efficient software to manage and monitor the energy efficiency and metrics of the data centre</li> </ul>	0	۲	0	0	0	0
* Other					۲	0

#### **Energy efficiency**

#### \*Other, please specify

4000 character(s) maximum

Policies must focus on the reduction of absolute emissions and account for rebound effects, a welldocumented phenomenon of the last 150 years demonstrating the limits of optimizing for energy efficiency alone. Nevertheless, energy efficiency can help to manage the energy use of specific tasks and work runs in data centres, but it cannot alone address the emissions and energy impacts of the ever-increasing new power demand coming from AI and data centre growth.

Experts agree that efficiency is unlikely to mitigate the impacts of this overall growth in power consumption up until 2030, therefore policies must focus first on enforcing environmental standards that regulate the use of fossil fuels and renewable energy, land, water etc. in data centres and AI.

#### **Cross-cutting issues**

Policy action	1	2	3	4	5	Not applicable / I don't know
* Supporting an open source software ecosystem					۲	0
* Collaborative programmes for R&D and innovation					۲	0
* Other	0	0	0	0	۲	0

#### \* Please specify

R&D and Innovation should be expanded to not only focus on "technical innovation" but also social and organization forms of innovation. Open source ecosystems must be invested in to counter existing ownership structures of digital products and services which are highly concentrated and non-competitive.

## \* 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

#### 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

Need for sufficiency-based public procurement. From a sustainability point of view, it is difficult to select a cloud provider based on their environmental impact. There is a lack of transparency in climate commitments, the carbon intensity of their services, and other key sustainability factors as well as a lack of enforcement to meet European reporting standards. The strategy should support only those services that are socially and ecologically justified, rather than defaulting to hyperscaler solutions.

Europe needs to invest in fostering a more diverse ecosystem of local providers, specializing in the needs of communities and businesses in the region, rather than a monoculture of giant US. It is difficult to migrate from the major cloud providers due to their uncompetitive practices (high exit fees, lack of interoperability and vendor lock-in.) yet public-interest alternatives are needed.

## \* 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

Cloud market concentration not only limits choice and sustainability, but also pushes governments toward high-intensity infrastructures and AI applications they may not need or want. This coerced uptake reinforces extractive energy and material use patterns. AI products become compulsory and thrust on consumers and businesses, which in turn escalates electricity, water use, and carbon emissions. European authorities should prioritize low-impact technologies over high intensity ones as well as frugality in selecting computing solutions.

Furthermore, the EU should: Designate the cloud offerings of Amazon, Google, and Microsoft as core platform services (CPS) under Digital Markets Act. Acknowledge the essential nature of cloud infrastructure and regulate it in the public interest. Regulate it towards ensuring greater accountability including resilience, security and sustainability. Secure non-discriminatory access for individuals and businesses. Separate

ownership and control of cloud ownership from dominant tech companies. Support community-owned, energy-efficient, and regionally governed alternatives.

#### 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

Publicly funded code should be publicly available under open source licenses. To support this, the EU should introduce measures to diversify the cloud market, including exploring ways to regulate it as an essential service in the public interest. The proposed strategy does not acknowledge that the cloud market is consolidated, which risks undermining EU digital sovereignty efforts. 75% of cloud services in Europe are run by three U.S.-based companies: Microsoft, Amazon and Google. This market consolidation presents clear barriers to fair competition and severely limits the ability of European SMEs, particularly those offering more sustainable cloud options, to compete. As these incumbent firms stand to benefit most from public funding and infrastructure investment, the EU risks further entrenching foreign market dominance at the expense of its own sovereignty and industrial strategy goals.

Cloud market consolidation also concentrates ecological and social harms. When a handful of hyperscalers dominate the cloud market, decisions about land use, energy allocation, and supply chain sourcing become unaccountable and disconnected from community needs. This follows a clear pattern of how tech monopolies entrench extractivism and undermine democratic control over digital infrastructure.

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 distributon, 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

Transparency requirements on environmental performance for cloud must be harmonised and enforced. The strategy currently overlooks the environmental impacts of cloud infrastructure. Despite the urgency of the climate crisis, and growing public concern and desire for more climate action, the cloud sector remains opaque when it comes to emissions, energy use, and resource consumption. There currently is no harmonised requirement for cloud providers to report environmental data in a standardised, machine readable format which results in inconsistent, and incomplete information. This lack of transparency limits the ability of public authorities procuring cloud services and individuals in choosing services aligned with sustainability goals, and thus must be remedied. The Energy Efficiency Directive can be a starting point.

# \* 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

\*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. Al 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

It is vitally important that the EU ensures data centres run on 24/7 or hourly matched renewable electricity that also interates battery and storage technology. Up to 80-90% hourly matching of renewables is cost competitive today for companies - see the IEA report on AI & Energy section on energy sourcing for data centres: https://www.iea.org/reports/energy-and-ai Only 2% of PPAs in Europe today include storage - EU policies must direct investment away from fossil fuels and towards renewables + storage investments.

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

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#### Contact

Leire.ORUE-ECHEVARRIA@ec.europa.eu