

Appendix 2: Summary of Questions

- 1) Do you have any comments on the general framework of the future notice?
- 2) Can you see any other regulations that may impact the competitive operation of the cloud industry?
- 3) Do you agree with the above presentation by cloud industry stakeholders?
- 4) Do you think that other stakeholders should be included? If so, which?
- 5) Appendix 1 is based on the main types and categories of cloud services identified on the websites of the major cloud providers. Do you agree with this analysis? From your point of view, are any essential types or categories missing? Explain your answer.
- 6) Do you agree with the workload examples listed above? Can you give us other examples of typical workloads? Explain your answer.
- 7) Based on the methodology defined above, which involves delineating the relevant market starting from the narrowest level of segmentation (i.e. types of cloud services), what do you think is the level at which segments are no longer substitutable? For example, can certain types of cloud services be substituted for others? If so, can certain categories of cloud services be substituted for others? etc., with the relevant level of segmentation reached when the answer is no. Explain your answer.
- 8) Do you consider that cloud products and/or services can be substituted with the same on-premise products and/or services? For what reason(s)? Explain your answer.
- 9) In your opinion, are there any additional relevant markets that would be delimited by:
 - a. deployment mode
 - b. industries
- 10) Do you consider that delineating the cloud market from the perspective of the trusted cloud could be another criterion for cloud segmentation? Explain your answer.
- 11) Do you consider that delineating the cloud market by calls for tender could be another criterion for cloud segmentation? Explain your answer.
- 12) In your opinion, can the consulting and support services offered by integrators be substituted by the consulting and support services offered by cloud providers? Explain your answer.
- 13) Can the services offered on the marketplaces be substituted with the services offered outside the marketplaces? Explain your answer.
- 14) Can the services offered by a data centre operator be substituted with the services offered by cloud providers? Explain your answer.

- 15) At what geographical level (local, national, European or global) is the choice between different cloud providers made? Are there any differences between the product markets you identified above? Explain your answer.
- 16) Do you have any other comments on the "markets" section that you would like to bring to the attention of the *Autorité de la concurrence*?
- 17) Are there any significant barriers to entry or expansion to providing (i) certain types of cloud services, (ii) certain categories of cloud services, (iii) certain workloads, (iv) IaaS services, (v) PaaS services, (vi) different deployment modes (public cloud, private cloud, hybrid, on-premise), (vii) "trusted cloud" offerings, (viii) sector-specific offerings, (ix) a complete service offering, (x) related markets (data centres, intermediation services), as defined in the previous section?
- 18) What investment and time would be required to provide a competitive offer in France on these different segments, depending on the positioning of the stakeholder in question (e.g. new entrant, stakeholder already present in the IaaS or another part of the sector)?
- 19) What would be the time horizon for a new entrant to achieve profitability in the cloud sector? Please distinguish according to the degree to which the new entrant has invested in its own infrastructure. How broad a range of cloud services would be needed to achieve this level of profitability? What would be the market share threshold for achieving such profitability?
- 20) Are there any avenues of differentiation likely to generate competitive advantages in the various segments mentioned? Do you see the provision of PaaS services as a differentiator that could provide a competitive advantage? Is the ability to offer a wide range of services and a significant catalogue an important competitive advantage?
- 21) Do you consider that certain players have advantages that could give them significant market power?
- 22) Are opening up to services provided by third parties and partnerships likely to increase the attractiveness of certain offers?
- 23) Are there certain players that you consider essential partners for the success of certain services?
- 24) Are there any factors (e.g. learning costs, marketing via integrators, reputation, customer base, etc.) that you believe favour certain technologies?
- 25) Do you consider that certain practices related to the cloud but outside the scope of the public cloud, for example concerning the private cloud, raise competition issues?
- 26) In your opinion, are cloud infrastructure services (IaaS) standardised or in the process of being standardised? Specify the services considered.
- 27) Do you consider that certain services (outside of infrastructure) have become market standards? If so, which? Do you think this has pro- or anticompetitive effects?
- 28) What are the main technical barriers to migration for infrastructure services (IaaS)? What about PaaS? Specify your response and the services considered. Do you feel the barriers are greater in either case?

- 29) If you are a customer of cloud solutions, can you estimate the migration costs (in financial amount and migration time) in relation to the services you use? Do you consider these costs too high to consider migration?
- 30) Are technical barriers the main obstacles to migrating from one cloud provider to another, in your opinion?
- 31) Are you aware of any technical practices implemented by certain stakeholders that may increase the barriers to migration?
- 32) Do you think multi-homing is of particular interest for certain types of cloud services? What would be the relevant instances of use? Are there any specific obstacles to multi-homing?
- 33) What are the main obstacles to using multiple cloud service providers for the same workload?
- 34) Is the integration of services from certain providers a significant barrier to multi-cloud?
- 35) Are you aware of any technical practices implemented by certain stakeholders that may increase the barriers to multi-cloud?
- 36) Do you think that the solutions developed by some cloud providers could gradually remove some of the technical barriers to multi-cloud?
- 37) What are the incentives for developing these types of solutions from the supplier's perspective? Are they greater for stakeholders in a "challenger" position?
- 38) Do you see cloud services moving toward more interoperability?
- 39) Do you consider that certain technical practices lead to the foreclosure of competitors and the concentration of public cloud markets?
- 40) Do you consider that the standardisation of certain solutions could have negative effects on competition and/or innovation?
- 41) Do you think that self-regulation initiatives have removed some of the technical barriers to migration or multi-cloud?
- 42) Do you believe it necessary to impose certain rules to remove the obstacles to migration and allow the development of multi-cloud?
- 43) Do you think the measures proposed in the draft Data Act are likely to facilitate migration between providers?
- 44) As a customer of cloud products and/or services, have you encountered any issues with the standard contractual clauses included in the terms and conditions of the cloud products and/or services you use?
- 45) As a customer of cloud products and/or services, were you able to negotiate the terms of your contract? What clauses were negotiated and what benefits did your cloud provider grant?
- 46) Are you aware of any contractual practices, as listed above, introduced by certain players, that may restrict competition, prevent the use of alternative suppliers, or lead to the purchase of multiple products or cloud services together?
- 47) Do you think there are competition issues with the terms of a supplier's marketplace?

- 48) Do these marketplaces allow access to a customer base that would otherwise be inaccessible?
- 49) Do you consider that other contractual practices also raise competition issues?
- 50) As a customer, do you receive cloud credits? If yes, please specify their nature (supplier, value, duration, etc.). How do these credits factor into your choice between different cloud offerings?
- 51) Do you think the cloud credit programmes presented above (targeted companies, amounts) are justified? Why?
- 52) Do you think that cloud credits (alone or coupled with other practices seen in the market) may represent a barrier to entry/risk of exclusionary conduct or lead to customer lock-in by cloud providers? Why?
- 53) Are there different network architectures between the different cloud providers present in France (fibres, routers and other equipment necessary for the deployment of the bandwidth)? Are there different levels of investment in these networks? Could you describe the main differences between the networks used by the different cloud providers present in France?
- 54) What is the trend in network costs in recent years worldwide and in France? What is the trend in the price of third-party bandwidth access worldwide and in France?
- 55) How do rates vary for customers in France (distance, countries, continents, etc.)? What are the underlying principles of the pricing schedules and, in particular, what are the geographic equalisations? What are the different categories of costs reflected by these egress fees?
- 56) How do you think the ratio of egress fees to network costs has changed in France in recent years? Are there any differences between cloud providers?
- 57) Why do you think some cloud providers are implementing egress-only pricing models? What would be the consequences of this asymmetric traffic pricing for customers and competing providers? To what extent can competition limit the extent of egress fees?
- 58) Can cloud service customers anticipate and accurately estimate the monthly charges they will incur for the use of their provider's bandwidth?
- 59) Do you think that changes in cloud service prices reflect the changes in the costs incurred by providers?
- 60) Can cloud service customers anticipate and easily estimate pricing changes? If not, why not?
- 61) Do you consider that the prices of cloud services are sufficiently clear?
- 62) Are you aware of any problematic pricing practices related to certain SaaS products or software solution licences intended for on-premise use?
- 63) How will the commissions charged on marketplaces change?
- 64) Are you aware of any other pricing practices that are problematic from a competition standpoint?

As a customer of software vendors and cloud service providers:

- 65) Did you have to agree to purchase cloud products and/or services for which you had no identified need when negotiating on-premise software licences? Or were you offered any discounts or benefits during these negotiations related to the purchase of cloud products and/or services?
- 66) Did you encounter any difficulties migrating your on-premise software licences to the cloud and, more specifically, to a cloud other than that of your software provider or its partner?
- 67) Does migrating from on-premise software to the cloud differ in terms of cost from one provider to another?

As a cloud service provider:

- 68) Did you have to forego offering certain cloud products and/or services due to the excessive cost of the software needed to run those cloud products and/or services? Because of the inability of the supplier of this software to provide it to you? If so, what reasons were you given?

In general:

- 69) Are you aware of any other practices by the software providers that are problematic from a competition standpoint?
- 70) Are you aware of any proven problematic practices in these cases?
- 71) Are you aware of any other risks or practices related to the ability of certain stakeholders to leverage and benefit from their ecosystem?
- 72) Do you consider that the cases presented seem to raise risks with regard to antitrust law? Are you aware of any proven problematic practices in these cases?
- 73) Have you found any other potentially problematic practices under antitrust law that are not covered in these developments?
- 74) Have you found a trend toward the concentration of stakeholders in the cloud industry?
- 75) Are you aware of any takeover practices that may entail risks from a competition law perspective?
- 76) How do you view the creation of new entities intended to provide "trusted cloud" offerings?
- 77) What do you think will be the main developments in the market over the next five to ten years?
- 78) Are there any innovations that you believe could change the competitive balance of the market, for example by encouraging the entry or expansion of stakeholders?
- 79) Do you have any recommendations for improving the competitive operation of the cloud industry?
- 80) Do you consider that the points discussed cover all the competitive issues in the cloud industry?
- 81) Is there anything else you would like to bring to the attention of the *Autorité de la concurrence*?