

Cloud Marketplace proposal

Background

Cloud computing is identified as a central piece of Europe's digital future, giving European businesses and public organisations the data processing technology required to support their digital transformation. The Commission thereby stepped up its efforts to support cloud uptake in Europe as part of its strategy, notably with the pledge to facilitate "the set-up of a cloud services marketplace for EU users from the private and public sector by Q4 2022"¹.

Within the first open call of its [Digital Europe Programme](#), the EC has launched a call targeted to the creation of a [Marketplace for federated cloud-to-edge based services \(topic id: DIGITAL-2021-CLOUD-AI-01-DS-MARKETPLACE-CLOUD\)](#). The objective is to deploy and operate an EU online marketplace for cloud and edge services. The marketplace should be the single point of access for trusted services, notably cloud and edge services (see topics 2.1.1 and 2.1.2 of the Digital Europe Programme), building blocks deployed under the Common Services Platform (see topic 5.3.1.1 of the Digital Europe Programme) and more generally any software and data processing services developed under EU programmes such as the Digital Europe Programme, Horizon 2020 or Horizon Europe. It should as well complement the AI-on-demand platform, in providing access to the necessary cloud services.

Very important to consider under this call, is the results of the [European Cloud Marketplace - Conceptualization Study](#) published by the EC. This study brings quite many details about the vision the EC has about the target European Cloud Marketplace, despite the vision can be enhanced to establish a more credible and sustainable path to the market (and this will be a differential characteristic of our proposal).

The EC will fund this project with 20 M€ for 36 months. As the funding schema will be 50% for all partners, proposals are expected to propose a budget of up to 40 M€.

IPCEI-CIS text (to be placed where appropriate)

In the context of the Member States Declaration for European cloud in October 2020, the European Commission with the Member States promoted a coordinated investment effort in cloud and edge. In this declaration, it is stated that innovative data processing capacities are essential for Europe's recovery, long-term competitiveness and climate sustainability.

As part of this joint investment, an Important Project of Common European Interest for Next Generation Cloud Infrastructure and Services (IPCEI-CIS) is launched in December 2020, initially by Germany and France, but now it joins forces of more than 12 European countries. The ultimate goal of the project will be to create a common cloud and edge infrastructure and its associated smart services for the future. As this project will establish synergies with GAIA-X, the European Cloud Marketplace will also have to connect with this distributed multi-provider cloud-edge continuum and the platform of services that will be provided. Thus, the ECM could provide the IPCEI-CIS cloud services and the infrastructure of the IPCEI-CIS project could host the ECM and all the federated marketplaces.

Overall vision

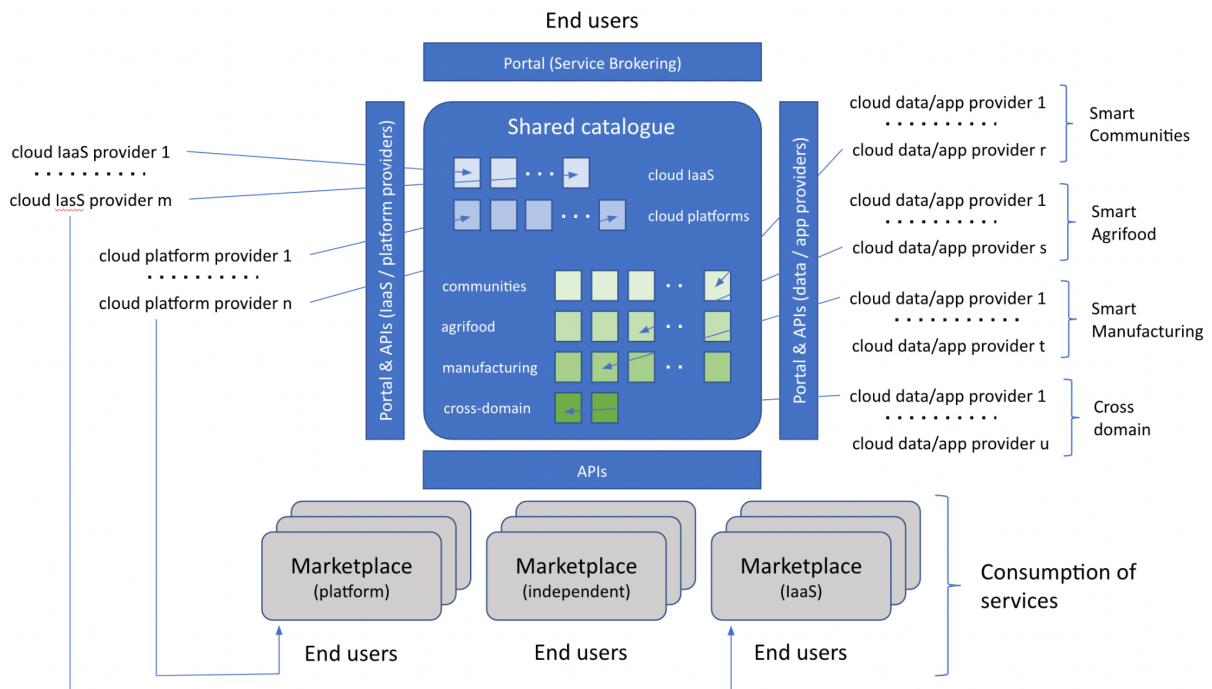
¹ European Commission, *A European strategy for data*, February 2020:
https://eur-lex.europa.eu/legal_content/EN/TXT/PDF/?uri=CELEX:52020DC0066&from=EN

The target European Cloud Marketplace (ECM) should facilitate matchmaking between supply and demand of cloud services on a European scale and in a trusted manner. To succeed, the EU Marketplace will have to meet the following criteria:

- **Liquidity** - attract a critical mass of providers and consumers
- **Matchmaking ability** - demonstrate its effectiveness and efficiency in matching demand with supply
- **Trust** - maintain its reputation for high standards and quality of its cloud service catalogue relative to EU market requirements.
- **Neutrality** - same business opportunities for all players in a win-to-win mode
- **Transparency** - clear criteria in the matchmaking process

In our proposal, and in order to achieve the above criteria at maximum level, the ECM will take the form of a common digital catalogue of cloud services made available through a federated collection of marketplace services, connected or not to the offering of cloud providers which, in turn, may be either cloud infrastructure providers (which provide basic computing infrastructure as a Service, like IONOS or AWS) or cloud platform providers (each of which provide a platform targeted to solve the integration of vertical solutions from a given vertical domain, like smart cities or smart farming, or the integration of certain type of business processes, like ERP processes). This federation will rely on the adoption of common open standards for the description of cloud service offerings and their access through a shared catalogue of cloud service offerings.

The proposed schema is illustrated in the following figure:



As depicted in the figure, the different kinds of cloud providers (cloud IaaS providers, cloud platform providers and cloud application/data providers) will register their offerings in a shared catalogue which becomes a central part of the ECM.

Cloud IaaS and platform providers will register their offerings in the shared catalogue describing all elements that may help end users to assess such offerings and compare among existing offerings. Some of the cloud IaaS and platform providers will bring a marketplace as a complement that enables the extension of the services offered by default with additional services provided by third parties. Thus, for example, a given cloud platform provider focused in the domain of smart cities may enrich their smart city platform offering, which typically will come together with some default application services (e.g., dashboard for

overall visualisation of data), with the incorporation of a marketplace allowing users to pick concrete vertical smart city applications (e.g., smart parking, air quality monitoring, etc) from third parties and integrate them using the proposed smart city platform. Such marketplace services may rely on the catalogue of cloud data/application services.

There may be independent marketplace providers, that are not connected to any specific cloud IaaS or cloud platform provider, that may also be connected to the ECM. However, it is anticipated that they should bring added value on top of the shared catalogue of cloud services, otherwise end users may prefer to consume services relying on the marketplace services connected to their IaaS or platform providers.

Cloud data/application providers, on the other hand, will also register their offerings, describing all elements that may help end users to assess their offerings. Some cloud application providers may establish all the mechanisms for directly rating and billing consumers of their data/application services but will have the chance to identify marketplaces, independent or linked to cloud IaaS/platform providers through which access rights to their application could be acquired. This way, rating and billing processes are delegated to the marketplace providers.

There are multiple advantages of the proposed approach:

- End users will benefit from a personalised experience through each of the federated marketplaces, which may offer different user interfaces, incorporating discovery services better tailored to the kind of users or application domain, or complementing content with focused training material, match making opportunities, etc. For the cases where marketplaces are connected to cloud IaaS or platform services already in use, those end users will also benefit from billing integrated with the billing of IaaS/platform services, potential discounts, etc.
- Cloud application providers, particularly SMEs, can publish their solutions in the common catalogue of the ECM **only once** and make them available through all those federated marketplace services they choose, thus reducing their costs while maximising their exposure through multiple channels in the market. This as opposed to the current situation where they have to adhere to the rules of specific marketplaces, typically run by individual cloud IaaS/platform providers. The low barrier for getting visible through marketplaces that federate with the shared catalogue of cloud services will stimulate competition among marketplace providers in front of end users, which ultimately will turn into better conditions from marketplaces as intermediaries and overall growth in number of end users, that is potential market for the data/application providers.
- Cloud infrastructure and cloud platform providers, specially those from the EU can more easily enrich the portfolio of cloud applications they can integrate, since the common catalogue of the European Cloud Marketplace they will integrate with will more easily reach a critical mass with regards to the number of cloud application services offered.

The ECM will additionally bring common services, relying on a common public permissioned blockchain (EBSI or compatible with EBSI) enabling to audit logs generated through the full lifecycle of cloud application service offerings. This will bring additional trust among participants (end users, cloud service providers and federated marketplace providers).

Note that the envisioned ECM would not take responsibility for service delivery. The integration of provisioning and performance measurement features (emulating the marketplaces run by individual cloud providers) not only presents considerable technical challenges but would also enter into competition with the strategy of cloud infrastructure and cloud platform providers the ECM intends to attract. In this respect, some of the federated marketplaces may incorporate functions for the actual delivery of cloud service offered but

that would be out of the scope of functionalities supported by the ECM.

The information model and APIs supported by the shared catalogue implemented by the ECM will comply with open recognized open standards for development of marketplaces such as those defined by TM Forum. Integration of these standards with early specifications from Gaia-X will be considered and potential results contributed back to the Gaia-X community.

Cloud data access services as well as cloud application services exporting RESTful APIs (e.g., NGSI-LD) could be made visible as near real time data resources through existing data publication platforms compliant with DCAT and DCAT-AP specifications. The project will explore how such integration can be achieved.

Last but not least, the ECM is intending to serve the needs of Data Spaces that will emerge in Europe, some of them also supported under the Digital Europe Programme. In this respect, the ECM will define a distributed Identity and Access Management (IAM) framework that cloud data/application, cloud platform and marketplace service providers can adopt to support plug&play integration of cloud data/application services into platforms serving the needs of end users. Such an IAM framework will solve the integration of standards like OpenId Connect with Verifiable Credentials/Presentations (VC/VP).

Structure of the consortium

Core members of the consortium comprise companies for which development of the proposed ECM aligns well with their business strategy and approach to the market. Concretely:

- Smart platform providers, like Atos, Engineering or EuropeanDynamics, which are interested in creating marketplaces in connection to the cloud platforms they are delivering to their customers, easing the integration of data/applications coming from third parties.
- IaaS cloud providers, like IONOS?, which are interested in creating marketplaces in connection to the cloud platforms they are delivering to their customers, easing the integration of data/applications coming from third parties.
- Companies interested in playing the role of independent marketplace providers directly partnering with data/application providers and/or wish to partner with cloud IaaS/Platform providers to help them to create the marketplaces connected to their offerings. FICodes has developed an open source implementation of marketplace functions based on standard TM Forum APIs and would be interested in playing such a role

Complementing these core partners, there may be partners aimed at contributing to specific areas such as the development of the common Identity and Access Management (IAM) framework enabling the trusted exchange of data between consumers and data/application services visible through the marketplace, this way boosting the population of data spaces. Or the creation of the base public permissioned blockchain infrastructure (or the framework necessary to connect ECM processes to EBSI) to support audit-proof logging of every step in the lifecycle of cloud service offerings. Partners like iSHARE Foundation or Alastria could bring a relevant contribution regarding distributed IAM as well as blockchain, respectively.

All these partners would agree to adopt a “coopetitive approach” so that they will collaborate to develop common modules of the envisioned ECM as open source while at the same time plan to compete with each other relying on their different platforms and marketplace services.

In addition, to the mentioned partners, partners who may take the role of coordinating

certification activities in collaboration with relevant certification agencies have to be considered. Companies like DEKRA may meet the necessary profile.

Last but not least, the participation of FIWARE Foundation is relevant, since open source components jointly developed by the partners will be made available through the open source FIWARE platform (some of them are already part). Other members of the Data Spaces Business Alliance would be also welcome.

Further discussion/development of some concepts

Detailed scope of features and services to be provided by the marketplace (from conceptualization analysis)

Mandatory features

- **Service listing function:** at the heart of the marketplace lies the service. It takes the form of a standardised, ordered and detailed list of services made available by providers to customers. Via a dedicated portal, providers can create and manage their service listings and describe them using predefined description fields. This detailed information is accessed by customers via their own dedicated portal or a standardized landing page. A sector-specific user interface might be envisaged to improve the user experience and adoption.
- **Search & browsing function:** this feature lets customers find the specific service they are looking for. In its most basic format, the marketplace and its service catalogue should allow customers to launch product searches on the marketplace portal, leveraging category filters and easily accessible product pages.
- **Certification system:** a key demand from public and private customers of cloud services in Europe is the need to access a reliable source of information on the sovereignty and trust of potential cloud services. As a result, a basic service certification system must be included even in the most basic EU Cloud Marketplace scenarios. A basic certification system could for example involve formal verification by the marketplace operator of a select list of official certifications (e.g. official cloud security certifications like SecNumCloud or BSI C5) but rely on a declarative approach for private sector led labels, which would be verified only once the first transaction takes place for the given service to minimize the administrative burden. The involvement of external audit & certification agencies to carry out these tasks is explored in section 5.2 of this document.
 - Expressions of Interest: integration with ENG's platform
- **IAM system:** a robust identity and access management system will be required to ensure trust in the information listed on the platform by providers, as well as to enable customers to order services, manage their profile and benefit from a tailored experience. A basic IAM could be implemented by integrating a third party IAM solution. The marketplace could then build or connect to a federated IAM such as the service due to be provided by GAIA-X.
 - Expressions of Interest: ATOS (TBC)
- **Reporting and analytics system:** customers, providers, and the operator will require metrics to monitor activity and adoption, identify sources of improvement and detect and correct issues. This function should first be developed to meet the needs of providers and the operator, and then evolve to meet needs of customers (particularly to support the first and last stages of their journey).
- **Customer service:** customer service is an essential component of improved customer experience within the context of (online) cloud marketplaces. Even a basic format of customer service can drive customer loyalty and adoption. Under its most basic format, customer service may take the form of a 'Help' search function, FAQ page and contact forms when customers encounter an issue.

Optional features

- **Advanced search/browsing algorithms:** building upon the basic search functions

illustrated previously, it is possible to design and implement more advanced features with the goal of connecting shoppers with relevant products as quickly as possible. Notably, it is possible to implement a search algorithm which would match customer search queries with keywords from relevant product listings. Even more advanced search functions may leverage additional information (such as product ratings or click-through rates) to prioritize/rank the results of search queries and improve the customer experience. Finally, search algorithms could also be specific to the customer's sector to provide results that take into account the customer's particularities. This feature could be developed in conjunction with a sector-wise user interface.

- **Brokerage features:** within the context of a European Cloud Marketplace addressing public and private customers (probably, with limited maturity in terms of the adoption of cloud services), different brokerage services could improve the customer experience significantly. Notably, automated or procedural services could be implemented to facilitate transactions between customers and providers. For example, a broker could help customers find the most relevant service provider for their needs or facilitate the contractual formalities between customers and providers, if necessary, via pre-defined framework contracts.
 - Expressions of Interest: ATOS (TBC)
- **Financial simulation:** to favour user adoption and competition within the several CSPs, the marketplace should include a financial simulation feature. Customers would then be able to forecast and compare the costs of the options that fit their needs
- **Advanced payment and order management** (applicable to the platforming scenario only): under certain advanced scenarios, the European Cloud Marketplace may offer payment functionalities to process the purchase of services made via the marketplace. In addition to payment gateways, multiple sub-features can be envisioned/considered such as (but not limited to):
 - Escrow and commission fees (in the case of brokerage services),
 - Standardized framework contracts,
 - Billing and invoice operations,
 - Multiple payment options.
- **Automated certification system:** beyond a basic manual and declarative certification system (relying on information provided by the service providers themselves), more advanced certification features can be envisioned. For instance, an automated and trusted digital certification system could be developed, and access granted to public, and possibly private, certification and audit agencies. While the development of this digital certification platform would come at a higher upfront cost, it would distribute the verification responsibility and accelerate verification of certifications through digital authentications. The repository (or part of it) could be made readable to all, providing all firms and citizens with direct access to verify certifications and further strengthening trust in the European ecosystem. The repository could therefore be used for other applications of the forthcoming EU Cloud Rulebook.
- **Advanced customer service:** beyond the most basic forms of customer service, more advanced features can be designed and implemented (or acquired), such as, but not limited to:
 - AI-powered customer service (chatbots to improve the user experience for instance)
 - Knowledgebase, forums, or even training services
 - Self-care functions (via notice boards or universal search features)
 - Service Level Agreement (SLA) management can be used to provide the desired transparency and guarantees, including data privacy and protection
 - Customer/contact tracing
 - Expressions of Interest: ATOS (TBC)
- **Advanced reporting and analytics:** reporting and analytics features can also be developed into more advanced (freemium) versions. Notably, the marketplace can

provide users the option to personalize their reports or to export data to outside platforms via connectors and APIs. For instance, with the help of the brokering services data, the marketplace could provide personalized consumption monitoring for each customer.

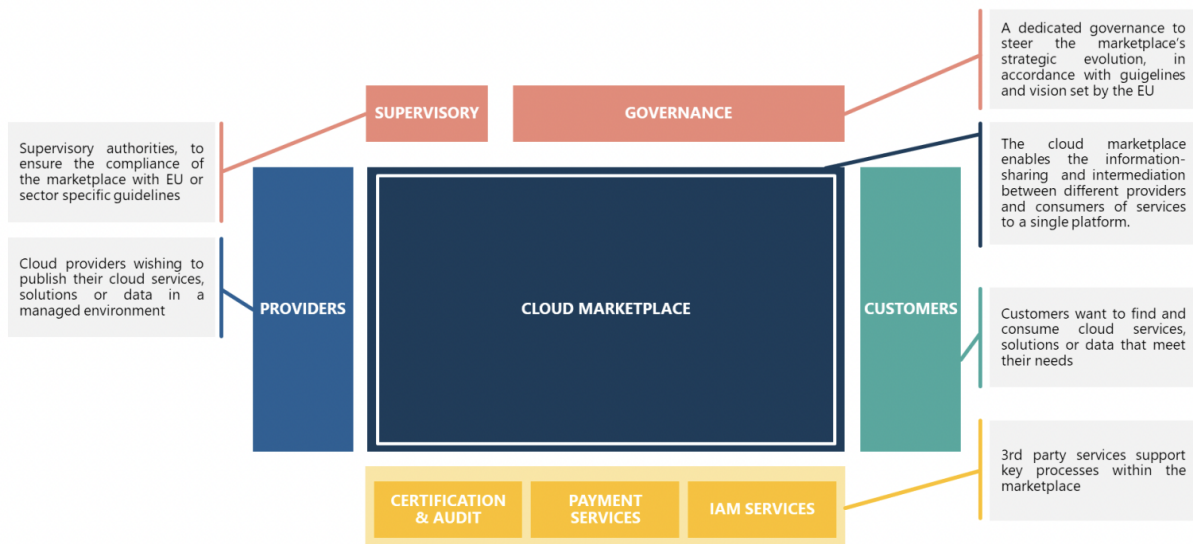
User journeys (from conceptualization analysis)

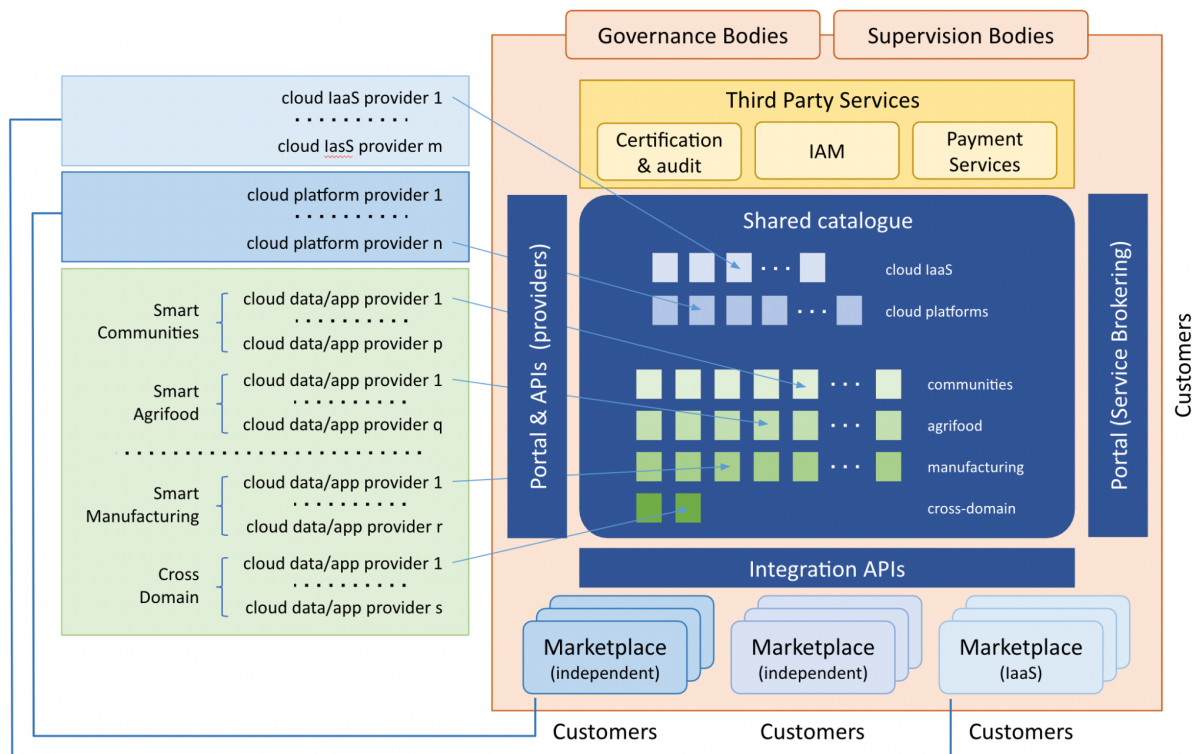
Following is the copy and paste of relevant fragments from the conceptualization analysis. However, they need to be adapted to our vision.

Overview of players

the marketplace's architecture and operating model will need to incorporate a common set of features and enable access to different stakeholders. Five key players would take part in using, supporting, or overseeing the marketplace: customers, providers, the marketplace operators, brokers, and supervisory and governance bodies.

Figure 9: Simplified representation of marketplace operating model & stakeholders





Customers

European public and private customers of cloud services looking for a trusted and secure one-stop-shop for cloud services will use the marketplace to find the cloud services that best meet their needs. They access the marketplace via a customer interface ('portal') that provides access to a more or less restricted range of features based on the chosen scenario:

- Browsing for cloud services via the marketplace catalogue made available via the customer interface.
- Creating an account via the marketplace's IAM system
- Contacting providers directly via the marketplace or via the services of a broker
- Placing and managing an order for cloud services via the marketplace
- Make payments via an integrated payment system

Providers

Cloud service providers (CSPs) are private companies that offer cloud services to other businesses, public institutions, or individuals. In the relational scenario, they access the marketplace via a provider portal where they can upload their catalogue of services in the prescribed format. They also make access to their services available for certification and audit agencies that certify these services and to supervisory authorities to share rules and standards. In the transactional scenario, they could receive orders from the marketplace's order management system and customer payments through third-party payment service providers if their service offering includes curated/exclusive cloud services. In the platforming scenario, their services could be delivered via a dedicated IaaS/PaaS provider and communicate service consumption data to the marketplace. Cloud service providers will use different marketplace features:

- Accessing the marketplace's provider interface portal by creating a specific account via the marketplace's IAM system
- Listing and describing cloud services via the marketplace's service catalogue

framework • Declaring the certifications of their cloud services via the marketplace's certification system • Engaging with and providing cloud services to potential consumers, perhaps via a marketplace broker or even by leveraging the marketplace's order management and payment services.

Marketplace operator and broker

The marketplace operator could either be an independent institution or a private contractor hired or appointed to oversee the day-to-day operations of the marketplace. The broker can be the same contractor, or a separate private entity whose sole role is to facilitate matchmaking and transaction fulfilment between consumers and CSPs. The broker facilitates the transaction in exchange for a commission until a deal is reached. The operator and the broker develop and manage the features that the marketplace offers to its customers and cloud service providers, more specifically:

- The operator develops and manages the marketplace via a mature backend/frontend (containers, middleware, and runtime) administration platform. The operator will thus oversee security, observability, and management of the platform
- The broker provides access to a detailed and understandable description of cloud services and their associated certifications via the marketplace's service catalogue
- The broker also interacts with CSPs and consumers, potentially via communication features integrated into the marketplace.

Unless they are funded by other means, the operators and broker must generate revenue for their service (see chapter 5.2).

Supervisory and governance bodies

European institutions would be the public sponsors of the marketplace at a European level. These institutions notably define the guidelines and overall strategy imposed on the marketplace via the marketplace's Steering Committee. The marketplace Steering Committee is an association of key players entrusted with the responsibility of overseeing and developing the marketplace, notably representatives from European institutions, representatives from relevant regulatory and audit agencies, the marketplace operator and a potential third-party marketplace supervisor.

Supervisory authorities that specialize in specific sectors (such as banking or healthcare) may already be subject to oversight by dedicated supervisory authorities. These independent sectoral supervisors / supervisory authorities will provide specific guidelines and legislations applicable to the consumption of cloud services in their specific/respective sectors.

These institutions will carry out specific actions to control the activities/operations of the marketplace:

Even if the European institutions do not necessarily play a direct role in the marketplace, they exercise their supervisory and sponsoring role via their anticipation into the marketplace's Steering Committee.

- The marketplace Steering Committee oversees most of the strategic decision-making of the marketplace, in coordination with several key stakeholders such as the marketplace operator, institutional sponsors or potential public or private partners, like GAIA-X.
- The supervisory authorities give access to a potential shared and trusted repository of service certifications, or an automated certification system, to ensure that the marketplace's service catalogue only displays accurate information about certified cloud services.

Third-party services

Third-party services will be needed to support key processes within the marketplace. Regardless of the different scenarios, public and private certification and audit agencies must not only certify and verify compliance with the announced EU Cloud Rulebook, but also certify the services provided by cloud suppliers. The IAM provider manages the identities of customers and providers regardless of the scenario applied. For the transactional and platforming scenarios in which the transaction takes place within the platform, payment service providers (PSP) must be added; these third-party services oversee payment processing and the payment information system.

The certification and audit agencies are various public or private organizations that help validate the reliability, security, and sovereignty of certain cloud services by checking/verifying their compliance with predetermined market-wide certifications. The IAM provider can be a private entity that specializes in the development of IAM services, or a trusted public entity with a pre-existing IAM system which is being leveraged by the EU marketplace. Payment service providers (PSP) are third-party companies that specialize in building payment infrastructure and provide it to other companies in exchange for a service fee. PSPs can equip the marketplace with the ability to process online transactions between different parties.

These third-party providers must fulfil some specific tasks/responsibilities with respect to marketplace activities:

- The certification and audit agencies certify the services, solutions, or data offered by providers; they officially recognize the standards met by the services offered within the marketplace. The supervision and the sharing of rules and standards with the marketplace operator are also a responsibility of the certification and audit agencies.
- IAM providers securely manage the identities of participants accessing the marketplace and their access to specific applications, systems, or services. They also protect sensitive systems, assets and information from unauthorized access or use. They ensure that only legitimate, authenticated users have access to the marketplace.
- Payment service providers manage the payment gateway of the marketplace. They send the transaction information, initiated by the customer, to a payment processor used by the provider's acquiring bank. Finally, they manage payments or transactions through the platform.

For all these third-parties (the audit and certification agencies, IAM providers and PSPs), the marketplace represents a new source of revenue, as it gives them access to a new market (the cloud service providers, the marketplace, and the customers).

Charting the provider and customer journey

Provider journey

Figure 14: overview of the provider journey



The provider journey could be broken down into four stages:

- **Subscription:** at the 'subscription' stage, providers join the cloud marketplace to sell their products and services. This consists of three steps – registering on the marketplace, verifying their compliance with the marketplace's basic standards and criteria and defining the framework and preferential contracts along with the pricing of their products and services (for transactional and platforming scenarios).

KPIs to monitor: number of service providers subscribed per period of time; average subscription time per stage (esp. compliance verification).

- **Referencing:** the provider references their products and services onto the marketplace catalogue. For this purpose, providers must be able to enter and update their portfolio of services in the marketplace catalogue following a prescribed format, list and verify the corresponding certifications, and promote them to consumers on the platform (and track interactions with customers).

KPIs to monitor: number of services listed on the catalogue; ratio of services listed per service provider; price evolution of services

- **Selling:** providers must then be able to sell their services quickly and securely to consumer and receive payment. Depending on the implementation model, this may or may not take place on the marketplace, and in the former case, may benefit from the support of a broker. If the marketplace does not support transactions and delivery, it must allow for efficient redirecting of consumers interested in purchasing a service towards an external site or process where the transaction and delivery can take place (e.g. the providers' own website).

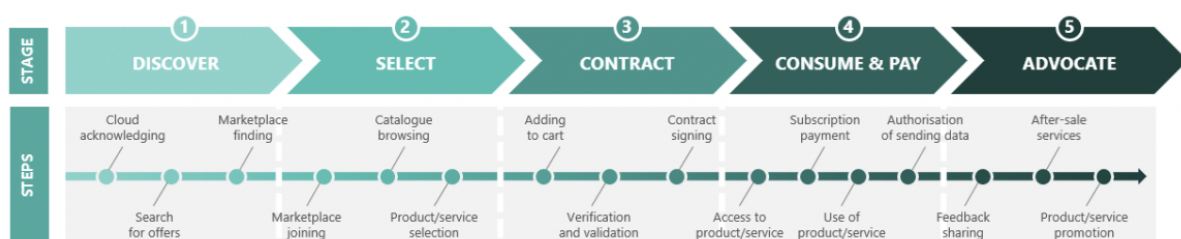
KPIs to monitor: number of services and aggregate financial value of services sold per period of time; transformation rate.

- **Monitoring and follow-up:** once providers have sold their service, they will need to be able to monitor consumption, provide after sale support and leverage the experience to innovate and continuously strengthen their service offering.

KPIs to monitor: customer satisfaction and churn rate; number and outcome of incidents reported; provider response time.

Customer Journey

Figure 15: overview of the customer journey



The customer journey is made up of five stages:

- **Discovery:** the 'discovery' stage consists of three steps: recognizing the need for or interest in cloud services, being informed of the existence of the marketplace, registering as a user. For these stages, the marketplace must ensure it is easy to find by organizations seeking to use cloud services in Europe, and that it facilitates access to trusted, easily comprehensible information on cloud services.

Non exhaustive examples of KPIs to monitor: number of visits by unregistered users; source of visits; profile of unregistered users; time to register; number of new

subscribers per period of time.

- Selection: prospective consumers of cloud services will then browse the catalogue and seek to find services that match their requirements. They will want to be able to shortlist and compare services – a feature that will benefit from a standardised nomenclature of information between providers – and verify their level of compliance / certifications. The operator may choose to allow open access to browse the catalogue i.e. even to unregistered organisations, in order to strengthen the marketplace's role as a trusted source of information.

Non exhaustive examples of KPIs to monitor: page visits; information/certification most often checked.

- Contract-signing: once they've chosen their preferred service, user should have the ability to place the order (like 'adding to cart') and proceed to signing a contract. In the relational scenario, users would have the possibility to be redirected to the provider's own website or a third-party process.

Non exhaustive examples of KPI to monitor: conversion rate, number of products and services sold per period of time and associated revenue

- Consumption and payment: consumers then expect to start using the service almost immediately, requiring tight synchronization between the marketplace and providers' systems. This must also integrate consumption tracking in order to enable pay-per-consumption, while still providing users with transparency and control over the consumption data they share with providers.
- Advocacy: it is important to consider that the consumer journey does not end after services have been transacted. Customer support, feedback, as well as advocacy, is key to retain demand and target innovation (see the 'Amazon Flywheel' model presented in figure 4). the 'advocacy' phase is made up of three steps – sharing the feedback, after-sales service, and product promotion. The marketplace should help providers collect feedback and turn consumers into active ambassadors on and outside of the platform.

Non-exhaustive examples of KPIs to monitor: customer feedback; number and outcome of incidents reported; level of customer involvement on platform.

Inputs for the proposal

Section RELEVANCE

Section 1.1 Objectives and activities

Section 1.2 Contribution to long-term policy objectives, policies and strategies — Synergies

Section 1.3 Digital technology supply chain

Section 1.4 Financial obstacles

Section 3. IMPACT

Section 3.1 Expected outcomes and deliverables — Dissemination and communication

Expected outcomes and deliverables

Dissemination and communication of the project and its results

Section 3.2 Competitiveness and benefits for society

Section 3.3 Environmental sustainability and contribution to European Green Deal goals

Other inputs

Business Model

Assume target clients to be added in this section ?

- Public sector
- Specific industries ?
- Confirm what these client would buy from this marketplace vs other marketplaces

Assume there would be entry criteria for providers to add services onto the marketplace ?

Assume potential monetization model to be included ?

- Indicative cost of selling on the market place
- Any incentives for selling services on this marketplace ?
- How does the marketplace governance and ops get paid for ?

Who owns this market place overall ? a consortia ?

Thoughts