

EVALUATION OF IPAAS

iPaaS platforms are gaining momentum and are recognised as one of the key enablers of digital transformation for their ability to provide for ever-changing business requirements with lower cost, productivity (quick-to-market), scalable solutions. Today's iPaaS marketplace encompasses a wide range of offerings and a proven evaluation methodology is required to choose the best fit for your organisation.

This whitepaper provides insights into Glue Reply's iPaaS evaluation methodology which has evolved and been successfully applied over the past 20+ years to perform assessments for customers of various sizes and maturity.



EVALUATION CRITERIA

The most crucial step in the evaluation process is establishing appropriate criteria. Most often the evaluation criteria are just focused on the iPaaS functional capabilities and immediate costs and neglect how the platform is suited to the way in which you operate and your existing capabilities.

We have identified the following core criteria which provide insight into the major aspects of iPaaS platform evaluation:

- iPaaS capabilities
- Cultural fit
- Funding model

IPAAS CAPABILITIES

The iPaaS platform enables data, application, API, and process integrations spanning across cloud and on-premise solutions. This is achieved by designing, developing, deploying, managing, and monitoring integration services. Irrespective of the size of the organisation there is a very clear shift of interest towards cloud strategies to provide on-demand integration services. IoT, mobile and microservices enablement is by moving events quickly and seamlessly between applications, IoT, mobile devices, microservices, cloud services and backend systems. The iPaaS platform supports a wide variety of deployment models i.e. on-premise, cloud, hybrid depending on the integration use cases.

It is important to understand the iPaaS offerings and its key capabilities to determine which of these are relevant to your organisation.

Functional Core Capabilities:

The base functional capabilities provided by the iPaaS platform are those classically attributed to an Enterprise Service Bus (ESB) including technology / application specific adapters & connectors, data transformation, validation, content-based routing, Messaging (queues, topics and subscriptions), ETL (batch processing), and managed file transfer (MFT).

Another core capability is API management, i.e. the process of creating and publishing APIs, enforcing their usage policies, controlling access, nurturing the subscriber community, collecting and analysing usage statistics, and reporting on performance. Some of the core components are API Gateway, API Developer Portal, Reporting & Analytics, and Monetization.

The governance capability provided by iPaaS enables the design time and runtime governance of the integration artefacts, process models, transformation, SLAs and policies. Along with the core functional capabilities, some iPaaS platforms are well-integrated with add-on business solutions (Ancillary capability) that can be an area of interest for the business. Examples include Business Process Management (BPM), Master Data Management (MDM), Rule Engine, Business activity monitoring, model-driven design and in-memory caching.

Where iPaaS technologies clearly differentiate is the management of different security contexts across on-premise, cloud, hybrid and other integration points such as Third Parties and SaaS providers. In this regard not all iPaaS solutions are alike and it is important to identify the key characteristic differences of how they support these different integration points holistically.



When looking at integration technologies it's easy to get into silo-based thinking that separates event-based integration from data integration, such as might implement an ETL/ELT pattern. Some iPaaS technologies bridge this gap and the market is split into ones that come from the data integration world and ones that come from the event/near real-time world. This has a significant impact on their characteristics that can make a substantial difference to the implementation of the tool and effectiveness thereof.

Non-Functional Capabilities:

The functional requirements alone will not make the integration service usable if it does not support the quality attributes necessary to deliver a fully functioning service. Non-functional capabilities refer to the quality of service (QOS) aspects of an iPaaS platform and the constraints under which the deployed integration service must operate. Some of the key characteristics are availability, scalability, security, usage metering (track usage metrics), performance, self and cloud hosting options, environment automation, containerisation and Business continuity & Disaster Recovery.

Support:

The support service model is the service provided by the vendor based on the contractual agreement (typically by subscription tier) agreed between both parties. Basic tiers usually provide business hour only support and higher response times versus premium tiers which provide 24x7 support and much shorter response and resolution times. It is vital to choose the appropriate support model based on your business process, continuity and operating model requirements.

The important aspect of support service delivery is the Service Level Agreement (SLA) which describes the vendor's commitments on some of the key criteria like availability, performance, security, disaster recovery and issue resolution (case management). If they fail to achieve and maintain the agreed criteria, then you may be eligible for a credit towards a portion of your subscription fee. It is a significant criterion to ensure the vendor can meet your business & technology objectives.

Another aspect of the support service is to consider the overall support available in terms of partner community (suppliers), available resource pool and supporting tooling.

Education:

The majority of vendors provide training options supporting different roles (developer, architect, administrator, operation support, etc.) to educate the team to achieve better productivity, quality, and usability through tried and tested patterns.

The other areas to consider are community forums (ask questions and discuss integration topics), knowledge centre (documentation, best practices, webinars and more), events (break-out & briefing sessions) and regular product updates and roadmap.

Regulatory & Legal capabilities:

Data management & protection is to have a data classification scheme in place that defines types of data according to the sensitivity and policies on data residency. If your organisation has specific requirements and obligations, you should look for providers that give you choice and control regarding the jurisdiction in which your data is stored, processed, and managed.



It is relevant to assess the ability to protect data in transit through encryption of data moving through or within the platform. Also, sensitive data should be encrypted at rest, to limit exposure to unauthorised access. Sensitive data in the cloud file system or object store should be encrypted.

It is important to understand the vendor's data loss and breach notification processes and ensure they are aligned with your organisation's risk appetite and legal & regulatory obligations.

Contracts:

The majority of iPaaS platform can be procured on a contract basis with fees paid monthly or annually.

Comparatively the traditional enterprise middleware contracts are fixed license cost irrespective of the consumption which can carry a significant cost. In addition, customers must purchase maintenance agreements for the traditional middleware platform to get ongoing software upgrades and updates.

CULTURAL FIT

Cultural fit is understanding the existing behavioural culture of your organisation and the changes required while adapting to the new platform. This is relevant to most of the departments in the organisation but mainly to the integration and operations teams.

It is important to understand the maturity of your existing integration capability by assessing the current existing integration state across **people, processes, and technology** to determine how the new platform would fit into it. Some organisations would already have a mature integration capability supporting the existing business needs and are just focused on migrating to an iPaaS platform whereas for others it may be an entirely new capability. We factor the cultural fit of an organisation based on the following aspects:

People

Knowing your workforce's skillsets will enable you to choose an iPaaS that best utilises your pre-existing teams. Evaluate this by assessing how technologically capable is your existing workforce and how capable do they need to be. What kind of cultural changes need to occur for the new platform to be adopted? What roles and skills do you already have and what needs to be developed? How to efficiently upskill the existing team through education and training sessions? How quickly they need to be proficient? To achieve the maximum potential of the platform, it is vital that people should acknowledge and embrace it.

Some iPaaS platforms provide significant benefits in productivity over previous-generation integration tooling. Their productivity varies widely because the 'closeness to code' varies. This in turn forms a very important decision point, around the introduction of the so-called citizen integrator and how/to what extent this should be embraced. Citizen integrator enabled tools are a real double-edged sword because in some cases developers do not like them to work on and the extent the enable the paradigm depends on organisational considerations.

Another important people factor is how the capability is organised. There are concepts such as competency centres, Centres of Excellence and Centres for Enablement all with their own connotations and implications and all fitting differently into organisations according to the broader organisational construct. In addition to this, there are important decisions around the discipline of integration and to what extent it should conflate event-based integration, data integration, B2B and data engineering.



Process

To successfully incorporate an iPaaS platform into your organisation, you should consider how your current operating model, sourcing strategy, and development approach are organised & governed and what modifications could be needed to ease collaboration? How is your organisation structured? What changes are required to the existing sourcing strategy? How mature is your integration function? An organisation with a well-structured integration function will have capabilities like governance, architecture & design, delivery, and support & operations. Some organisation may have a lean-IT team and would have outsourced the complete or partial capabilities of the integration function to an external vendor who provides a managed service. Again, an organisational construct is often also implemented such as a Centre of Excellence.

Technology

Understanding how the new integration capability (iPaaS platform) would holistically fit into your enterprise-wide technology landscape. Does this platform align with the current and future technology landscape? Does it support the integration of your Software-as-a-Service (SaaS), Commercial of the Shelf (COTS), in-house and legacy systems? Furthermore, does it support your key development language and can it be integrated into your existing capabilities like DevOps, CI/CD, agile methodology, BDD and TDD. Who develops and accesses the platform? For example, does your organisation have an in-house IT team, or will business users (i.e. “citizen integrators”) be the ones working directly with the platform to create and manage integrations and data flows? Is your organisation willing to use open source vs. proprietary platforms? Another aspect to consider is whether the iPaaS vendor already provides / has partnerships with the key technologies in your landscape.

FUNDING MODELS

This criterion covers the organisation’s approach towards funding the platform subscription fee (annual or monthly), delivery of integration solutions, and the ongoing operation support and evolution of the underlying iPaaS platform. Some organisations allocate IT funds centrally to support predetermined corporate projects that are owned and managed by the IT team (Central funding) whereas in other cases it is funded by the project with integration being a line item (Project-based funding). Still, others have a hybrid model and some develop a capital-based (Capex/Opex preference) funding model.

Traditionally, integration platforms were established on-premise as a one-off cost as part of the central project (central funding) and the project teams would fund to build & deploy the integration solutions specific to the project. The central team would also manage the funds for the software licenses, infrastructure, operational costs, etc. However, the pricing of the iPaaS platform mechanism is different compared to the traditional funding approach, and identifying the iPaaS vendor matching your organisation’s funding model is crucial.

The iPaaS vendor’s typical price is based on subscription service for a fixed contract term offering different pricing tiers (base, standard, premium) and also depends on your variables, such as the number of connections, the volume of data, the number of processing cores, the number of transactions or the number of seats.

Following are some of the pricing variables:

- **Number of connections:** based on the summation of the number of connectors used.
- **Number of transactions:** based on number of transactions.
- **Number of CPUs:** based on number of processors provisioned.

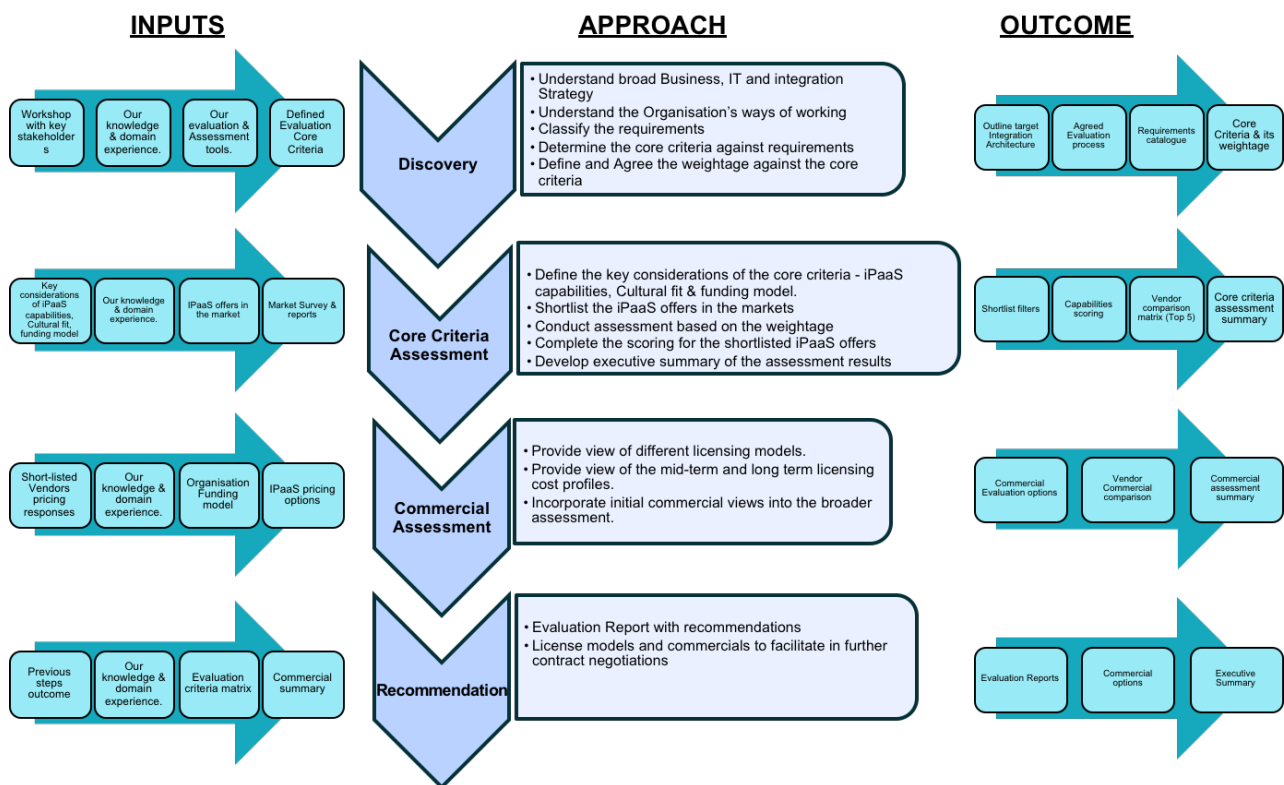


This move to more pay as you use models allows you to get started with a smaller budget covering just what you need but the funding vehicle to secure additional funds and gradually increase subscription costs as more integrations are delivered.

OUR APPROACH

Our approach to evaluating iPaaS platforms is outlined in the activities below. During each of these activities, we bring our experience and intellectual property (IP) to rapidly and effectively determine the right platform for you.

Figure 1: Evaluation Approach



Discovery:

Every organisation is unique and so is their integration capabilities which are dependent on a plethora of factors. It is crucial to understand the broad Business, IT & Integration strategy of an organisation for the evaluation. For example, the organisation's hosting strategies like a cloud-first approach or private cloud or hybrid integration, etc. is a key factor in evaluating the iPaaS platform. Apart from the broader strategies, it is also crucial to understand the upcoming business demand for integration and the use cases required to support it.

Core Criteria:

By understanding the Organisation's requirements related to the iPaaS capabilities and the ways of working would aid in assigning the appropriate weightage to the core evaluation criteria, i.e. iPaaS capabilities, Cultural fit and Funding model. Based on the requirements, the ratio of the weights assigned would vary. The below example illustrates a high-level summary of an evaluation:



Core Criteria	Capabilities	Scored Weighting	Weighting in %
iPaaS Capabilities	Functional Core Capabilities	0.4	60%
	Non-Functional Capabilities	0.2	
	Support	0.1	
	Education	0.1	
	Regulatory & Legal capabilities	0.1	
	Contract	0.1	
Cultural fit	People	0.6	20%
	Process	0.2	
	Technology	0.2	
Funding model	Funding approach	0.4	20%
	Pricing	0.6	

Figure 2: Core Criteria & its capabilities weighting (example)

It is not feasible to perform a thorough evaluation of all iPaaS offers because the number of candidates is too large. Based on the weighted core criteria, our expertise integration knowledge along with vendor rating reports from industry analysts like Gartner, Forrester wave, we shortlist the best iPaaS offerings suited for the organisation.

A detailed final result matrix will provide comparable analysis across shortlisted vendors based on assessment outcomes. The platform assessment summary represented in matrices and graphical analysis would be provided using our evaluation toolkits. A sample high-level summary scorecard:

Criteria	Vendor 1	Vendor 2	Vendor 3	Weighting in %
iPaaS Capabilities	5	6	4	60%
Cultural fit	1.6	1.2	1	20%
Funding model	1.2	1.1	1	20%
Total	7.8	8.3	6	100%

Figure 3: Scorecard – Summary (example)

A proof of concept (PoC) can be conducted to assess the viability of the iPaaS platform(s) to solve the business needs, for example, connecting to the SaaS apps like Salesforce.com, SAP, Dynamics 365 etc. We strongly favour also considering non-functional testing such as productivity, the ability for citizen integrators to realise their objectives etc.

Commercial Assessment:

The next step is the commercial assessment which assesses the different licensing models and other costs associated with the short-listed iPaaS platforms. Depending on the organisations ask, this can be a high-level estimate based on similar implementations or detailed pricing done in conjunction with each of the shortlisted vendors. We also provide 3 to 5 years of the total cost of ownership across the short-listed vendors to highlight where short-term cost efficiencies might be eroded in the longer term.

It is worth highlighting that because most iPaaS solutions are cloud-based that there is sometimes a commercial challenge with the vendors standard terms because they might not be holistic enough for an organisations' needs.



Recommendations

Finally, an evaluation report with platform recommendations including best-suited license models would be presented to the organisation to help the organisation in taking an informed decision.

CONCLUSION

The approach described in this whitepaper is a means of performing an iPaaS platform evaluation based on the core criteria. However, we expect to tailor this approach to fit any Organisation's needs. With our well-proven assessment framework & toolkits, accelerators, and our deep integration expertise, our approach is holistic and vendor-agnostic which helps the organisation to select the right iPaaS platform which will add the best value to their business.

GLUE REPLY

Glue Reply is the Reply Group Company specialising in IT architecture, integration and data solutions that drive business value. Pragmatic in its approach, Glue Reply provides independent advice on the technology solutions that achieve clients' business objectives. Glue Reply's core proposition is to help organisations maximise the value from their business change and technology investments by helping them define, design, implement and resource best practice. Glue Reply works with many companies as a trusted advisor as well as being known for getting stuck into the nuts and bolts of any technical challenge to ensure the desired outcome. Glue Reply's solutions drive operational excellence whilst preparing clients for digital transformation, cost reduction and data exploitation.

For more information please contact us at glue@reply.com or call us on +44 (0) 20 7730 6000