

CHANGING FACE OF INTEGRATION

THE CHANGING FACE OF INTEGRATION: CLOUD, DIGITAL AND APIS.

New technological paradigms such as Cloud, Digital and Big Data present businesses with new opportunities for improved customer centricity and an opportunity to engage in a more real-time manner with customers. Glue Reply supports companies in adapting integration strategies and IT architectures to the changing technological conditions and emerging paradigms such as APIs, Microservices and automation.

Digital Transformation is underpinned by a shift towards customer centricity of businesses and providing customers with more relevant digitally enabled services. In order to get closer to the customer and provide them with more meaningful information, businesses essentially need to integrate data sources and provide relevant information to the context of a situation.

The concept of a bimodal IT, also known as two-speed IT, is closely related to this development of a digital capability. While fast changing, agile technology approaches can provide the required proximity to the customer, enterprises still often rely on traditional approaches in other areas of IT such as systems of record. These traditional approaches are typically considered slower and less responsive to the business imperative. The reality of operating a business with multiple ways of working (and multi-speed IT) is that integration - the area that stitches these together is significantly changing as a discipline.



THE NEED FOR SPEED

In traditional scenarios, the intermediation between the system of records layer and the customer facing channels was handled by some sort of Enterprise Service Bus (ESB) architecture. This kind of classic Service Oriented Architecture (SOA), however, sometimes no longer satisfies the need for agility in organisations. Technically, it is not Service Oriented Architecture itself which causes the challenges, but the way in which it has been realised. With the emergence of APIs the technology used for integration has changed significantly. APIs typically offer finer granularity compared with Services in an SOA environment. To companies this enables more flexibility and the ability to deliver much more rapidly and productively to support the realisation of a more customer centric experience. To support this a whole new genre of API Management tools have permeated the industry.

Integration tool providers have reacted to this development and are now also offering platforms supporting both SOA and API paradigms simultaneously. This mainly happened by adding the API to an existing platform designed for SOA Management, which means, no true integration of the two worlds took place - the result: While the platforms offer the same capabilities, they do not necessarily offer the same productivity.

The maturing of cloud services has introduced another disruptor in the integration landscape: An integration Platforms as a Service (iPaaS) can combine API and traditional integration capabilities whilst also offering deployment in cloud, on premise or enabling hybrid topologies.

Another key area of change in the market is related to mobile. Mobile first approaches have been widely adopted in the market where companies attempt to provide better user experience following a customer centric philosophy. While this was initially not related to integration domain, the emerging Mobile Application Development Platforms (MADPs) with their ability to quickly deploy changes have a considerable impact on how integration is realised. This is due to the fact that realisation of services now more often start from the User Experience end and are conducted in an agile way. The best MADPs have recognised the connection point is the API and have themselves developed API Management capabilities, not for general purpose integration but to fulfil the need to expose and manage the APIs in a homogenous way from the mobile application's perspective.

Microservices as a broad domain of encapsulation and management of functionality as deployable services also significantly impacts the integration domain. It firstly introduces patterns to solve common problems, such as enabling microservices to be a supplementation to existing applications as opposed to customisation, and equally as an alternative approach to developing full solutions. In most cases the demands of the microservices architecture are intrinsically dependent on the integration capabilities that are used for composition, orchestration and exposure. These again are not exactly orthogonal to the classic use of integration and some microservice platforms have inherent integration capabilities in their own right, but specialised for their specific purpose. Low-code platforms represent a less developer-oriented solution to at least some of the problems that microservices are able to solve and again their integration follows a similar requirements pattern to microservices, in providing some integration capabilities.

An additional added complexity in the integration domain is the prevalence of multi-cloud vendor integration and dealing with multiple security contexts concurrently. On top of the additional complexity dealing with multiple cloud vendors, there is the challenge of also sometimes needing to integration with cloud suppliers' own integration capabilities that are intrinsic in their cloud PaaS offerings.



An interesting side-development in the broad integration domain is traditional data integration technologies have become increasingly near realtime to deal with scenarios such as dynamic personalisation, next best action and similar analytically driven processes.

The final new integration horizon is the maturing of identity integration, where federated/distributed identity integration is increasingly being standardised in approach. Through standards such as OpenID and OAuth and their respective realisation, identity integration often layers on top of other forms of integration.



In summary, the above developments in the industry mean a typical classic SOA approach will struggle to deal with the modern reality of integration. Integration is prevalent in more places and in more different ways than it was historically. Integration now starts more often at lower level, with APIs rather than services defining the granularity because the customer-centric realisation is key. Consumers as well as business users' expectations have also changed, leading to the necessity of more integration in less time.

There is an emerging reality in some organisations where it is not the integration that is in a spaghetti mess, but that the integration technologies themselves are also in the same situation without a clear view on the judicious use of appropriate technologies to solve specific characteristics of problem.



DESIGN ORIENTED, AGILE INTEGRATION

Glue Reply is supporting organisations in understanding the changing market and making the technological changes contextually relevant to them. This is done through delivering strategies and architectures to support organisations in harnessing the benefits they can accrue from the paradigm shifts and enabling organisations to execute in a manner that delivers on the digital imperative in an responsive and robust manner.

Glue Reply also helps companies to leverage the capabilities of new end-to-end integration that require a new way of thinking: traditional approaches to centralised governance have proven to thwart the beneficial effects of more agile processes and counteracted the new technology's enabling capabilities. Therefore Glue Reply assists their customers in determining viable, result-oriented integration strategies following an agile approach, to quickly maximise the benefits of the architecture both for the organisation and its customers.

Glue Reply also helps organisations to plan their capabilities around integration and organise them in the most appropriate manner, and can help in the successful introduction of both new technologies and new ways of working.

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.

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