The New Normal in APIfication Post COVID-19

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What is APIfication?

APIfication has become one of the important levers for Enterprise Digital Transformation and has been quite beneficial to several enterprises in many ways for effective Digitization, be it for cost reduction, enhanced internal and external communication between systems, omni-channel experience, and so on. As COVID-19 is posing new and unanticipated challenges for global enterprises to keep all their systems and resources well-connected with minimal maintenance and high availability, APIfication is fast becoming a necessity rather than a good-to-have approach.

Let us first understand what the APIfication is. In simple terms, APIfication is enabling access to functionality and data from business applications to different types of consumers including internal developers, customers, partners, vendors, etc.
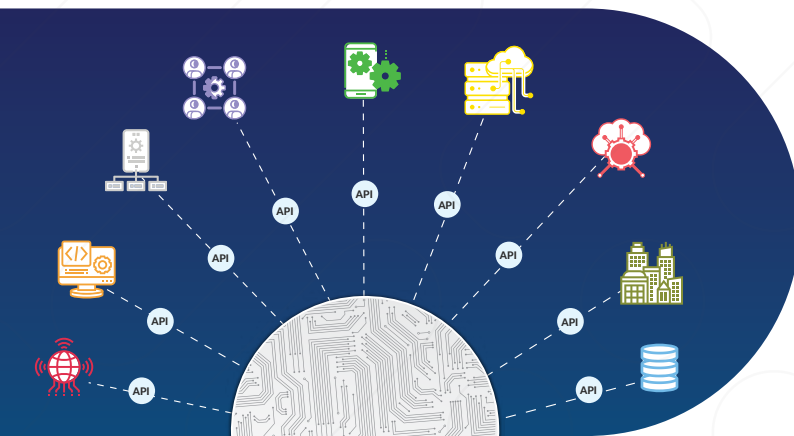
The business objectives of an organization are duly considered to decide what information should be made available in the form of APIs. APIs are lightweight yet powerful interfaces offering technology-agnostic integration for consumers and complete control to the providers. They are the basic building blocks of a composable enterprise or modular design approach adopted for digital transformation.

Some of the APIfication benefits mentioned below clearly indicate the reason for enterprises across domains to embrace it rapidly as a part of digital transformation.

- Decentralized way of facilitating business functions in a short time, building an internal as well external API marketplace
- Complete freedom to developers to build solutions quickly as per the business needs with the underlying functionality readily available as APIs, provide business agility
- Enables API consumers to focus on their core business solution while the providers manage APIs
- Real-time data exchange fueling business growth with cross-selling and up-selling, building personalized customer experience by leveraging past transactions, etc.
- Completely secure APIs built for sharing data with external consumers
- Powerful revenue stream for data providers with minimal effort
- With the emergence of hybrid cloud integration, the power of cloud can be leveraged to provide scalable, performing, and resilient API building blocks to consumers for unlocking the power of data from legacy systems as a part of the legacy modernization strategy

Evolution of API Strategy

In the past, every business unit in an enterprise used to have its own development team to manage its applications. Due to the lack of interaction and collaboration within a business unit team and also across teams from different units, the applications remained isolated across units within the enterprise. This resulted in a lot of duplicate functionality and posed challenges like maintainability, redundancy, and non-uniform outcomes.

To overcome this, the systems started invoking existing functions from other systems. However, it introduced tight coupling between the systems. Technology dependency and change impact became obstacles in seamless inter-system communication. This generated the need for effective API based integration solutions for easy communication between internal systems of an enterprise. These solutions allowed loose coupling between internal systems with the interface layer separated from the underlying implementation. This introduced SOA-based (Service-oriented Architecture) web applications which became popular soon. Gradually, the need for real-time integration between internal systems for improved customer experience boosted the significance of APIfication.

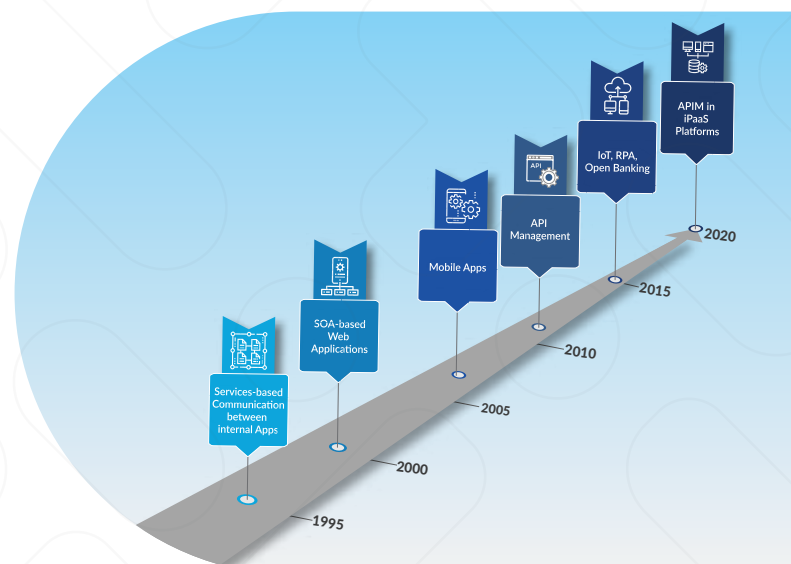The *Figure 1* below depicts key milestones in the evolution of API strategy in the last couple of decades.

Figure 1 : Evolution of API Strategy

While the APIs were getting popular within an enterprise, the digital transformation that followed extended these APIs' benefits for external users. Earlier, data exchange with external consumers was mostly done by using file handoffs. However, the business need of external consumers for real-time data feed forced enterprises to opt for APIs for effective business process integration. This became a more secure option with API gateways providing out-of-the-box security features and enabling flexibility in easy integration with different identity providers. It also introduced a new customer experience channel with the emergence of mobile apps powered by APIs, thereby offering a self-service based user-friendly solution.

Enterprise Service Bus (ESB) platforms used for seamless integration of multiple systems with different protocols, technologies, and data formats also started leveraging APIs as a simple yet powerful mode of integration. MuleSoft, a leading integration platform, evangelized API-led integration for flexibility, agility, and maintainability. With the growing volume of APIs, it became extremely important to manage, secure, monitor, and maintain APIs effectively. Hence, API management platforms became an extremely important element of API strategy. In fact, some enterprises with a mature API strategy have even evangelized Centre for Enablement (C4E) to facilitate and encourage API utilization in a simple and standardized manner.

Eventually, the API marketplace came into existence wherein an enterprise would make domain specific APIs available to developers, either internal or external. It is an important milestone in API strategy evolution towards enabling consumers to operate in self-service or plug-n-play mode. There are enterprises that have already successfully implemented an API marketplace for their developers as well as customers, partners, and vendors to accelerate business growth. This has helped them to refine their API Strategy and become more sustainable in handling challenges.

IoT (Internet of Things) further expanded the scope of APIs across technology innovations by leveraging APIs for connecting remote devices to provide centralized device monitoring and management, thereby simplifying human life. Domain-centric solutions like open banking APIs and healthcare APIs established industry standards to build application networks across enterprises for enhanced customer service.

Figure 2: Global API Management

Reference : https://www.marketresearchfuture.com/reports/api-management-market-2429

As per one of the market research reports, the Global API Management market is expected to reach USD 3 billion by the year 2022 as depicted in *Figure 2*.
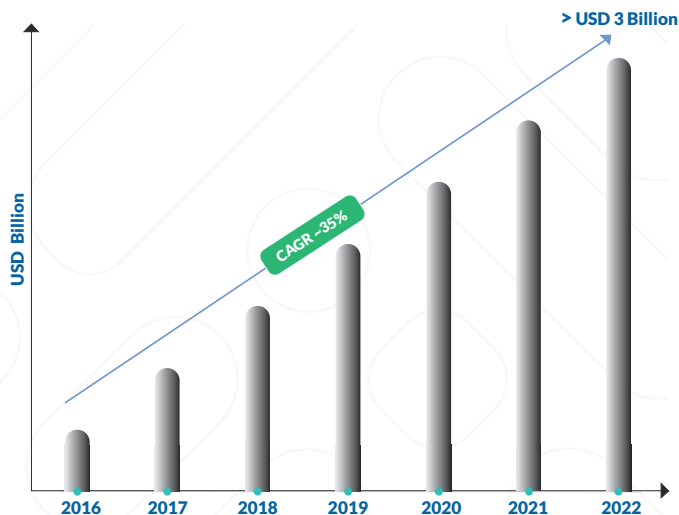
The New Normal Post COVID-19

COVID-19 has forced organizations to think and act quickly around the key areas mentioned below:

- Health and safety of employees as well as customers
- Seamless customer experience to end users
- Exploring avenues to mitigate business impact
- Ensuring social distancing and touchless operations

To address the above areas, a remote working strategy becomes an obvious solution. It has been in use since long, primarily for cost saving and operational efficiency. However, enterprises are now forced to explore it to enable touchless and remote customer operations. It can be used to achieve Enterprise Automation and eliminate human intervention as much as possible, thus enabling seamless remote business services.

As a basic building block for remote working, the importance of APIfication will grow multi-fold post COVID-19. Now, let us look at a few areas where remote operations supported by APIs will prove to be critical:

- **Employee Workplace:** The topmost priority for many organizations since Covid-19 started, has been to facilitate work from home and ensure uninterrupted customer service while ensuring safety measures for employees. This would further need virtualization at different levels like infrastructure, applications, etc., to make work-from-home a seamless process. Employee on-boarding used to be a time-consuming process with lots of physical forms required to be filled. However, Hexaware has already adopted digital touchless on-boarding through API-based integration of their existing systems. It has significantly improved much important employee experience for new joiners. Hexaware has also introduced a smart AI Assistant to resolve trivial queries from employees with minimal turnaround.

- **Retail Supply Chain:** During COVID-19, almost everyone was looking at risk-free and easier ways of getting food and other necessary things delivered at home. This helped several existing online delivery services flourish. However, these services were falling short to meet the demands of the huge population. Hence, multiple new services (including government initiatives) were on-boarded for complete automation of order to delivery process by using APIs. Even in the existing supply chain management systems, effective usage of APIs has triggered changes in the manufacturing and supply pattern based on demand trends.

- **Education:** Continuity in learning is critical for students to achieve their respective degrees, diploma, or certification well in time. Also, regular education is still in classroom form at large. But the COVID-19 restrictions forced educational institutions to embrace online learning platforms to provide remote education. Multiple API powered platforms were made available in a short duration for schools and colleges to provide a seamless learning experience to students.

- **Healthcare:** While most of the hospitals provisioned rapidly the checkup and treatment facilities to attend COVID-19 victims, the non-COVID diagnosis and treatments were either stopped or minimized. Some of the healthcare technology companies have now developed APIs that enable healthcare service providers to offer remote medical diagnosis services to patients based on their historical data, artificial intelligence, and medical science. The APIs can be utilized by service providers in a different manner. Such API led solutions have also contributed immensely to COVID-19 diagnosis in some or the other way.

- **Information Dissemination:** Quick sharing of information between service providers and consumers has become highly critical now. To build a seamless and effective omnichannel strategy with multiple communication channels, APIs are best suited to build transparency, share latest findings, and innovations which can help consumers in their day-to-day life. For example, healthcare providers, medical research institutions, government agencies, companies, and other organizations must share vital coronavirus data with each other as well as update their employees, customers, and even the general public.

- **Banking:** Though online banking already covers maximum possible banking operations, a large segment of bank customers, especially the senior citizens, still prefer in-person banking in some regions like APAC. However, the COVID-19 lockdown has put a constraint on in-person banking and health risks have forced senior citizens to look for an alternative. With the help of APIfication, either the banking services were made available online or in-person branch visit management was effectively done using the online appointments system.

All the above services are offered to retail consumers mostly via a mobile application or web application for easy access. The application, in turn, has a strong backend orchestration of APIs connecting multiple systems of records to fulfill consumer requests. APIs provide the required scalability, security, reusability, and hence the agility in building digital solutions for the masses.

Digitization with seamless customer experience, remote touchless operations, and maximum enterprise automation will ensure higher customer satisfaction as well as business growth. To make these solutions sustainable, moving these workloads to cloud is necessary for gaining the required scalability, performance, and security with low administrative effort and TCO. Thus, post COVID-19, the digital transformation will no longer be an option but a mandatory strategy for most businesses to not only survive but also sustain and grow multi-fold. Satya Nadella, the CEO of Microsoft, while delivering the first quarterly result during Covid-19 in April 2020 that the company saw two years' worth of digital transformation in just two months.

The shift in customer services will not only enable enterprises to be well-prepared for COVID-19 like situations in the future, but also help to meet the two key objectives below:

1. Enhance customer experience
2. Reduce expenses and grow business

In short, APIfication is here to become the new normal for businesses of all sizes!!
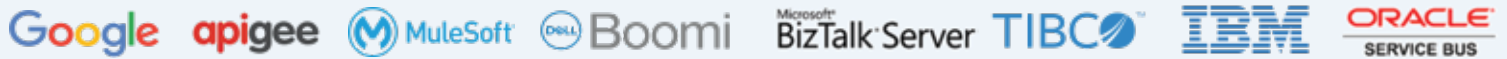
Hexaware can enhance your APIfication Journey

Over the years, Hexaware has successfully delivered numerous API and integration implementations of varying sizes and complexity. We have a mature and strong API and integration practice with the following differentiators:

- An expert task force comprised of
  - 390+ API & Integration consultants
  - 100+ MuleSoft certified Integration developers and architects who are proficient in API led integration
- 1000+ years of API & Integration experience
- 5+ years of partnership with MuleSoft, the Leading Integration Platform

We have delivered projects successfully across a plethora of leading middleware platforms shown below:

Google · **apigee** · **MuleSoft** · **Dell Boomi** · **Microsoft BizTalk Server** · **TIBCO** · **IBM** · **ORACLE SERVICE BUS**

Our API service catalog given below ensures collaboration with our customers at every stage of their APIfication journey:

- API Strategy & Consulting
- API Architecture & Blueprints
- API Design and Development
- API Management
- API Monetization
- API Maturity Assessment & Governance

Hexaware has launched its homegrown product, Amaze® for Applications for seamless enterprise cloud adoption in early 2020. Apart from cloud adoption, the cloud re-platforming product has also helped some of our customers to undergo legacy applications modernization in very short timeframes. Amaze ® brings out the true power of business services by making them available as REST APIs, ready for internal or external consumption. It also offers automation in API testing and DevOps to ensure release quality and agility. While APIfication of legacy platforms to enable business growth is a key feature of Amaze, it offers other valuable benefits such as TCO reduction, technology upgrade, operational excellence with cloud adoption and accelerated time to market.

All our enterprise-level strategic service offerings mentioned below use APIs as the basic building blocks and include APIfication as one of the key milestones:

Automate Everything   **Cloudify Everything**   **Transform Customer Experiences**

Proof-points

Hexaware helped a US based Credit Union build an integrated portal offering improved Customer Experience and Business Growth

Customer was facing the below business challenges:

- Customer staff was using disparate systems and SaaS platforms to offer products and services to their members. To get a complete view of a member, they had to visit more than one system.
- Collating complete information about a member was a time-consuming process.
- Suitable product recommendation was a challenge without complete information.
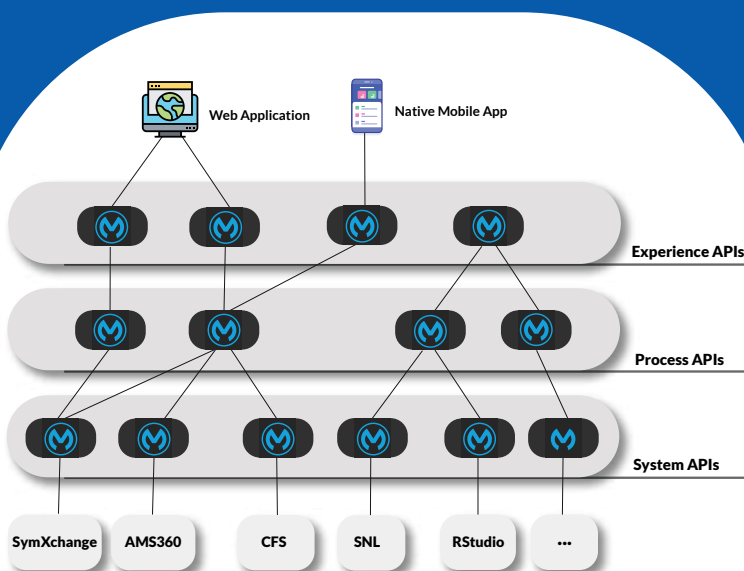
Hexaware in partnership with MuleSoft delivered a simple yet powerful solution leveraging API led Integration as shown below.

- Re-usable APIs built around systems of record and composed as per the business function requirements of the newly built web application
- The APIs orchestrated the One Customer View, aggregated data from disparate sets of customer data and presented in a unified view in real-time
- Separate layers of APIs with specific purpose implemented adopting futuristic design for an omni-channel digitalization roadmap
- The One Member View not only improved customer service by providing relevant information but also helped the US based Credit Union to sell appropriate products & services by quickly interpreting customer needs through collated data

Web Application   Native Mobile App

Experience APIs

Process APIs

System APIs

SymXchange   AMS360   CFS   SNL   RStudio   ...

It delivered the following benefits to the customer:

- Unified Customer View to accomplish enhanced customer engagement and improved operational efficiency
- Increase in the generation of new revenue opportunities
- Relationship Managers now have an accurate and complete snapshot of their customers

What Next?

While the world moves on to the new normal of living with COVID-19, organizations and business entities are busy getting their services back on track. However, to sustain and grow in the fiercely competitive consumer world, enterprises are aggressively exploring newer means of digital innovation and market disruption. With an intent to reach mass consumers in remote service mode and enhance customer experience, APIfication undoubtedly proves to be a strong catalyst for business growth. It would undoubtedly help the people, businesses, and the economy to return to normalcy as fast as possible. So, start thinking whether you have really exploited the power of API and integration and is there an opportunity to trigger business growth with APIfication. In case of any assistance required, please reach out to Hexaware for availing our proven API and lifecycle services, from API strategy consulting to successful implementation with considerable TCO reduction.

About the Author

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Udaykant Sawant works as a Solution Architect in Java-based AWS/Azure cloud and Integration solutioning at Hexaware Technologies Ltd. He is Mule 4 certified Developer and Architect. He has provided API based solutions for multiple customers over the years contributing towards their Digital Transformation objective.

About Hexaware

Hexaware is the fastest growing next-generation provider of IT, BPO and Consulting services. Our focus lies on taking a leadership position in helping our clients attain customer intimacy as their competitive advantage. Our digital offerings have helped our clients achieve operational excellence and customer delight. We are now on a journey of metamorphosing the experiences of our customer's customers by leveraging our industry-leading delivery and execution model, built around the strategy— 'AUTOMATE EVERYTHING[TM], CLOUDIFY EVERYTHING[TM], TRANSFORM CUSTOMER EXPERIENCES[TM].' Hexaware services customers in over two dozen languages, from every major time zone and every major regulatory zone. Our goal is to be the first IT services company in the world to have a 50% digital workforce.

Learn more about Hexaware at http://www.hexaware.com

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