Vendor Landscape: API Strategy And Delivery Service Providers

All Buyers Should Look At API Business Strategy Capabilities

by Randy Heffner April 19, 2016









Why Read This Report

Far beyond their usefulness for mobile apps and internal integration, APIs open new angles into business strategy. Even CEOs and chief strategy officers need to pay attention. The strategic importance and broad applicability of APIs mean that it's good for application development and delivery (AD&D) pros to consider getting help from outside. This report outlines the landscape for service providers that can help with API strategy and delivery. It also provides guidance in crafting a shortlist of vendors for deeper assessment.

Key Takeaways

API Strategy And Delivery Require Seven Areas Of Expertise

Most business technology teams are likely to need assistance in one or more of seven skill domains needed for mature API strategy: business strategy; identification, design, and implementation; technology strategy and platform implementation; governance; product management; metrics and measurement; and security and privacy.

API Service Providers Offer Four Major Categories Of Services

Service providers organize the seven skill areas into four major categories of API-related services: business strategy and implementation, technology strategy and architecture, governance, and implementation.

Critical Questions Guide Your Shortlist

To sort through the vendor hype and obfuscation, focus on seven key areas of questions to better understand a vendor's qualifications: the number of truly skilled API consultants, vertical-sector API business experience, monetization strategy, API taxonomy, positioning of SOA, API product management, and developer engagement.

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17 Do Not Omit API Business Strategy From Your Vendor Analysis

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Forrester researched the market to identify and profile 20 key vendors that provide API strategy and delivery services.

Related Research Documents

A Developer's Guide To Forrester's Strategies For API Success

APIs Underpin A Digital Business Platform

How APIs Reframe Business Strategy

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API Strategy And Implementation Entail Seven Areas Of Expertise

In their most valuable and strategic usage, APIs — specifically business APIs — foster business agility and innovation by allowing an organization to dynamically deliver its assets and capabilities in a wide range of scenarios for customer engagement and ecosystem partnering. APIs open new angles into business strategy and thus deserve the attention of even CEOs and chief strategy officers. This is quite enough reason for AD&D leaders to seek outside expertise for establishing their organization's API strategy, but there are more reasons besides.

To begin with, even within one organization, there will be several threads of API strategy, and there is no single set of guidelines and best practices for designing and governing all APIs. This is because APIs are applicable to a broad range of implementation scenarios. Furthermore, one's API strategy should consider not only providing one's own APIs but also using APIs from a variety of other organizations and API providers. Across both providing and using APIs, an organization's API strategy should cover major usage profiles like:

APIs open new angles into business strategy and thus deserve the attention of even CEOs and chief strategy officers.

- APIs for business innovation and ecosystem engagement. DocuSign can charge 50% more for its basic document signing service through APIs.² Chicago Transit Authority serves up APIs to independent developers whose mobile apps let citizens and tourists connect public transport routes and status to Chicagoland parks and attractions. Lending Club enables an ecosystem of investors to provide peer-to-peer loans. Saxo Bank's APIs allow it to benefit from innovation by its institutional customers. The landscape of API-enabled business scenarios is too wide and varied to characterize in a brief summary.
- > APIs for mobile apps and customer engagement. Mobile apps (native and mobile web), web apps, kiosks, wearables, the internet of things (IoT), and other customer touchpoints require multiple types of APIs, each with its own design requirements. These include APIs that: 1) serve individual touchpoints, 2) provide a familiar experience across touchpoints, and 3) connect to consistent back-end business operations (e.g., order fulfillment).³
- APIs for B2B innovation and seamless operations. For business-to-business (B2B) integration on both the front side (e.g., customers, resellers) and back side (e.g., partners, supply chain), APIs enable seamless, efficient, customized end-to-end processes. Beyond this, they can enable whole new styles of partnering and supply chain operations. While electronic data interchange (EDI), managed file transfer, and B2B portals are still common and useful B2B connections, APIs can support customized processes for competitive disruption and deep process optimization.

- APIs as a foundation for broad-based business agility. Business APIs which provide clean, direct access to business queries and transactions, hiding siloed application complexity establish a base for rapidly reconfiguring business capabilities for new styles of customer engagement and new business models. Furthermore, business APIs provide a layer of insulation whereby rationalization of vintage applications can proceed at its own pace without affecting customer engagement channels.
- APIs for hybrid integration across SaaS and customer-managed solutions. Still other types of APIs serve integration scenarios that require detailed, behind-the-scenes, application-specific connections, whether between software-as-a-service (SaaS) applications or to connect SaaS and customer-managed applications.
- > APIs for optimization and integration of infrastructure. Achieving optimized DevOps, continuous delivery, and end-to-end life-cycle automation and management across hybrid cloud environments requires yet another type of API usage scenario. In this case, one's API strategy will leverage out-of-the-box APIs provided by development tools and cloud environments as well as custom APIs to drive deployment scripts and other elements of a hybrid cloud management setup.

The Seven Skill Domains For APIs Integrate Business, Technology, And Governance

Crafting a strong API strategy requires skills across seven major areas. Vendors that provide API strategy and delivery services can help clients determine where to start, which types of APIs their API strategies will need, and how to prioritize each. This provides a basis for evolving other aspects of API strategy. The major skills required for effective API strategy and delivery are:

- API business strategy. Innovation whether via APIs or some other means doesn't happen by accident (at least not dependably). So, even if an organization's starting point is to use APIs for its own mobile apps and cloud integration needs, its API strategy should consciously address the why, when, and where of identifying and pursuing API-based business strategies. This begins with a plan to move executives to an epiphany moment when they realize that APIs rise to the level of strategic business impact.
- > API product management. Particularly with external APIs, governance may involve entirely new teams and disciplines, such as developer engagement, API plan definition, API pricing strategy, and more. Whether the organization sells physical products, professional services, software, or digital services, API product management requires strong connections to corporate marketing and strategy as well as to traditional product management teams.
- API identification, design, and implementation. Building on the scope, timing, and breadth of API types an organization will pursue, a strong API strategy will spell out the collaborative processes by which to identify, design, and build APIs of each type.



- > API technology strategy and platform implementation. Different types of APIs can benefit from different implementation technologies and platforms. A strong API strategy will map out which types run where and craft a pattern-based approach to drive best practices for using each platform element. This may establish different topologies and infrastructure for different groups of APIs (e.g., low-level intra-application APIs versus external business APIs).
- > API security and privacy. Whether used internally or externally, APIs require a specialized focus on security and privacy. B2B APIs may benefit from cross-organization identity federation. Open web APIs into customer data require mechanisms (e.g., OAuth) to ensure that customers have control over who accesses their data. Privacy regulations drive authorization and auditing requirements for APIs and the data they access. Secure coding and attack protection strategies round out the API hardening aspects of an API strategy.
- > API governance. APIs create the greatest value when an organization moves generally in a unified direction toward evolving coherent portfolios of APIs, as opposed to a haphazard, noncollaborative approach where each team does its own thing. Thus, across the life cycle of identifying, designing, delivering, and managing the operation of APIs, different roles and teams must collaborate and connect their efforts and this includes having the right collaborative touchpoints between business and technology staff. Thus, API strategy sets a path to evolve the right team structures, processes, tooling, and, above all, culture and discipline.
- API metrics and measurement. As a baseline, an API strategy should define typical operational metrics to track and guide the basics of delivering APIs. These metrics might include the likes of development costs and time, quality of production operation, infrastructure costs, and error rates. However, the more important measures of API success will be things that are harder to tie directly to APIs, such as improved customer experience, better customer relationships, pace of innovation, consistency of business results, improved time-to-market, and better end-to-end process efficiency.

API Service Providers Offer Four Major Categories Of Services

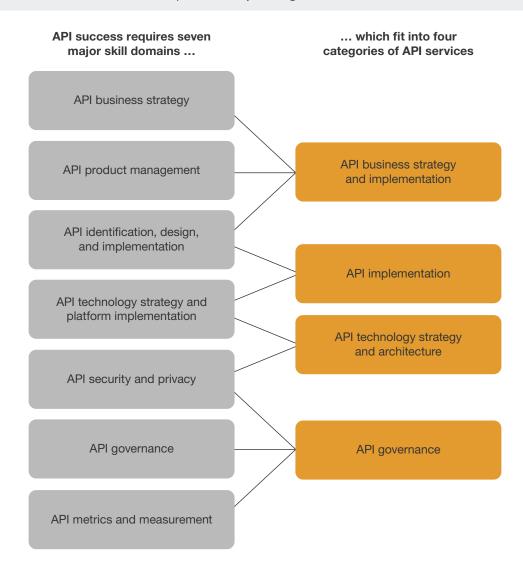
To start the process of selecting a service provider to help with API strategy and delivery, the first question to ask is to your own organization: What scope of help do we need? Forrester identifies four broad categories of API consulting and delivery services, mapped from the seven skill domains (see Figure 1):

API business strategy and implementation. The defining aspect of API business strategy is that an organization wants to change its business with APIs. In other words, rather than merely doing what the organization currently does in a more efficient way, it wants to use APIs to enable new business models, create new products or services, enter whole new markets, reach new categories of customers, reach existing customers through new channels or partners, add new value to existing products or services, or similarly open new paths to business value.

API business strategy services require a provider to have expertise within your industry but also the ability to think outside the box of a particular vertical sector. In addition, designing and implementing an API business strategy requires adaptations to each of the other services listed in the next bullet points. For example, API management technology must support specific marketing and relationship management goals for each audience that will use the APIs. And an API governance model must fit with the API product management approach.

- > API implementation. Service provider qualifications for implementing APIs draw from both traditional systems integration skills (e.g., development factories, asset libraries, testing teams) and API-specific requirements such as layered API design, API gateway policy configuration, and API performance and scalability testing.⁴
- > API technology strategy and architecture. To establish a strong platform for APIs, a service provider must have skills with all five major elements of an API platform: API infrastructure, API testing, API runtime management, API service life-cycle management, and API management. Beyond this, the provider must be able to craft a unified platform out of your menagerie of cloud, vendor-managed, and customer-managed applications and infrastructure.
- > API governance. The foundation of strong API governance is a strong API taxonomy. Different categories (i.e., open web, B2B, internal, product APIs) and types (e.g., data, transaction, integration, UI, utility) of APIs require different design guidance, different levels of oversight, and different styles of collaboration. With a good taxonomy in place, API governance should be implemented via incremental changes to processes, team structures, and deliverables, with a priority focus on API portfolio management (i.e., evolving coherent portfolios of APIs within each business domain).

FIGURE 1 The Seven API Skill Domains Map To Four Major Categories Of Services



Critical Questions To Ask To Find The Right Service Provider For Your Organization

Raw data about a service provider — such as the number of API consultants or vertical sectors — tells only part of the story about the vendor's ability to help create a world-class API strategy and deliver top-notch APIs. Thus, it is critical to dig underneath the raw data by asking probing questions to assess a vendor's true qualifications. The most important areas to vet are:

Number of API consultants. It is easy for vendors to fudge on numbers of employees qualified in a given area, but there is a particular risk when it comes to the number of API consultants. If a vendor claims a high number of API consultants, it could very well be that the vendor uses a technically focused definition of API skills. This is fine if you are looking only for API implementation skills, but API business strategy requires a very different skill set. At this stage of industry maturity with APIs, it is highly unlikely that a vendor will have a high number of employees with API business skills. API governance is also a highly specialized area wherein soft skills with organization and collaboration are key. Ask vendors to provide a specific breakdown of their number of consultants by skill area.

Raw data about a service provider tells only part of the story about the vendor's ability to help you create a world-class API strategy and deliver top-notch APIs.

- API business experience in your vertical sector. A vendor may have many clients in a sector but have no substantial knowledge or experience with API business strategy in that sector. API business strategy requires a specific
 - angle into thinking in ecosystems and adjacencies. Ask for specific case studies where the vendor helped clients change their business using APIs. Ask how cases in other sectors may apply to your specific challenges. Ask how APIs might open opportunities for your organization in whole new ecosystems that it does not currently serve.
- Monetization strategy. Just because they say "monetization" doesn't mean they understand it. If, in talking about monetization, the vendor focuses only on charging for APIs, its view is too limited. Ask how the vendor would guide your executives in thinking about how to make money from APIs, and listen for three ways: 1) charging by counting API calls, 2) charging for the value delivered through APIs, and 3) making money indirectly via the wide-open opportunities of expanding business ecosystems and possibilities via APIs. For many organizations, the third category will be the most important.⁸
- > API taxonomy. The richness of a vendor's taxonomy for APIs says much about the vendor's potential for having strong client guidance on APIs. Each type of API has its own set of best practices for design and governance, so, without a rich taxonomy, the vendor will be unable to apply the best guidance for each API type. Ask the vendor to provide complete documentation on its API taxonomy, listing each type of API it recognizes as distinct and important. Quiz the vendor on how it adapts its treatment of API types within its design guidance and governance models.
- Service-oriented architecture (SOA) in relation to APIs and/or integration. When vendors align SOA with integration services rather than unifying SOA with its API services, it may indicate that in past years they were slow to understand the strategic business importance of SOA services. Industry leaders have always had business agility, external partnering, and the like as central elements of SOA strategy and as more important than mere integration via SOA. Compared with vendors with unified SOA and API services, vendors that link SOA to integration are less likely to have years of experience maturing the business aspects of their thought models and governance. Ask them for early case studies of business-centered SOA work for clients.

- API product management. For organizations that offer external APIs, it is important to have product management discipline as part of API strategy. This is especially true if one charges for using APIs but it is important even if monetization is indirect. Quiz vendors to be sure that they guide clients' API product management using traditional product management models (i.e., for insurance products or automobiles or refrigerators), not in ways that draw from IT governance (i.e., application portfolio management). API products require straight-up business skills.
- Developer engagement and hackathons. Especially when it comes to open web APIs, whole new areas of skill and experience are necessary to draw in broad communities of the right kinds of developers. Hackathons are a key mechanism for this, but it extends further to developer portal design, marketing and communication strategies, and more. Quiz candidate vendors on their specific experience and case studies for developer engagement. Hackathons can also help with internal, B2B, and product APIs, so also ask how they guide and conduct those.

Organizations Must Choose From Three Types Of Service Providers

As a starting point for selecting an API service provider for your organization, Forrester identified 20 service provider vendors across three major categories (see Figure 2). In researching the market, we learned that a variety of other vendors may offer specialized angles into APIs. Most notably, some of the API management product vendors include aspects of API business strategy within their professional services offerings (e.g., Akana, Apigee, CA Technologies, IBM, and TIBCO). For the most part, we have chosen to focus our analysis on providers with broad-based API offerings and skills, although we have included a few narrowly focused vendors as examples of specialty services.

FIGURE 2 Three Major Categories Of API Strategy And Implementation Service Providers

Category	Description
Smaller providers that specialize in APIs and integration	Although these providers are smaller than many, they focus a high percentage of their effort and skills on APIs and related disciplines (e.g., integration).
Midsized players with geographic or sector specialization	These providers tend to have broader lines of service, such that integration and APIs are not a high proportion of their revenue stream.
Global-scale providers with many service lines	For clients that use many types of consulting and technology delivery services, the global firms can often provide a one-stop shop — with localized services across diverse geographies.

Smaller Providers That Specialize In APIs And Integration

Two smaller providers are worthy of inclusion in this vendor landscape. Beyond these two vendors, there are many small systems integrators across the industry landscape, some of which specialize in integration delivery. Although some of these are making inroads into APIs, we have excluded them because these vendors tend to have limited resources or narrow geographic presence, making them appropriate for only a narrow slice of Forrester clients. For clients interested in smaller vendors for

API strategy, we recommend using the skills and questions listed in this report as tools in developing a vendor shortlist.

The two vendors below are highlighted because they have: 1) demonstrated strong success delivering for large enterprises on more than one continent, 2) specialized enough in APIs to have their own API management solutions, and 3) performed a substantial proportion of their API delivery work using other vendors' solutions (see Figure 3).

For clients interested in smaller vendors for API strategy, we recommend using the skills and questions listed in this report as tools in developing a vendor shortlist.

- > CI&T. CI&T is the only vendor in our landscape headquartered in South America (it also serves North American clients). It incorporates APIs (private and public) as part of its focus on the extended enterprise. In its marketing of its API services, CI&T centers on business models, road maps, API design, developer engagement, partner support, and quick-cycle startup with a client's first API. CI&T implements API management using Apigee or its own product, which it manages through a subsidiary, Sensedia, that it spun out in 2007 with an SOA repository tool. Sensedia launched its API management solution in 2013.
- > Torry Harris Business Solutions. Torry Harris has a long history of specializing in SOA deployments, which it has extended into API strategy and implementation services. Although Torry Harris has its own API platform and tooling, API-o-Blocks, it also implements several vendors' API management solutions. Torry Harris sees APIs as a way to enable one's business to serve as a platform for ecosystem innovation, which then forms a foundation for defining an API strategy that covers governance, life-cycle management, development, testing, and operation of APIs. The firm includes hackathons, monetization strategy, organizational structure, and platform definition within its API service capabilities.

FIGURE 3 API Strategy And Delivery Vendors: Small Providers With API Specialization

Vendor	API management vendor partnerships*	Number of API consultants [†]	Geographies served	Industry focus
CI&T	Only with its own Sensedia subsidiary	60	North America, South America	Consumer products, pharmaceuticals, oil and gas, high-tech manufacturing, retail, financial services, insurance
Torry Harris Business Solutions (THBS)	Apigee, CA Technologies, IBM, WSO2, as well as THBS's own API-o-Blocks solution	750	North America, Europe, Africa, Asia, Oceania	Pharmaceuticals, industrial products, media, telecommunications, financial services, insurance, government

^{*}This column lists the formal partnerships each vendor has with API management vendors. Many of the vendors will implement using additional vendors beyond those listed.

Midtier Players With Geographic Or Sector Specialization

Midtier vendors tend to have broader lines of service, such that integration and APIs are not a high proportion of their revenue stream as is the case for smaller vendors (see Figure 4). This will be of interest for clients looking to consolidate API strategy and delivery services with other services from a single provider. However, midtier vendors have limitations in terms of the geographies they serve and may serve a limited number of industry sectors. We include five midtier vendors in the landscape:

- > Hexaware. Channels, partners, operations, and agile workplaces are primary drivers that Hexaware uses to guide clients with API strategy. Within each of these areas, the firm identifies specific goals and initiatives that benefit from API enablement. API strategy projects include business maturity assessment and API audience (i.e., developer) alignment. API governance addresses organization, process, platform, risk, and life-cycle management, and Hexaware's API platform vision encompasses new and existing technology elements as well as microservices, mobile, business rules, and application integration.
- Mindtree. Digital-first consumers, connected products, and developers (independent and B2B partners) drive API strategy for Mindtree, with APIs as both enablers and products. Maturity for APIs starts with channel enablement, develops toward API monetization, and connects to corporate governance of data, risk, and compliance. Mindtree's API reference architecture incorporates a four-part taxonomy of APIs, business models, marketing, and DevOps, as well as microservices, legacy IT, workflow, rules, and event processing. It incorporates APIs into its integration and SOA competency center offering.

This column lists the number of API consultants claimed by vendor. Due to limited visibility, Forrester does not independently validate these claims.

- Perficient. Seeing APIs as a driver of the digital economy, Perficient offers an API business value assessment service to start clients on the road to API strategy. Its API management offering aims to enable APIs both internally and externally to partners and developers. With its API architecture offering, the firm aims to establish a client's API platform, portal, design standards, and development approach. Perficient treats SOA and APIs together, versus considering SOA to be only part of a client's integration architecture and strategy.
- > Syntel. To address the demands of digital, Syntel has established a separate Digital One unit, comprising three groups: Insight One (analytics, data management), Transform One (processes, customer experience, integration, mobility, legacy modernization), and Connect One (IoT, application delivery, process integration). API strategy and delivery fit within Transform One. For Syntel, the major API drivers are customer engagement, B2B, developer and value chain collaboration, and extended business reach and revenue. It organizes its offerings into five major areas: strategy, design, build, operate, and governance for APIs.
- > **Tieto.** Focusing on organizations headquartered in Northern Europe, Tieto places APIs within its Business Integration Brokerage (BIB) offering. As a central element in a digital platform, Tieto's API model brings together functions and data from back-end and third-party systems to enable modern solutions (e.g., for customer experience and IoT). Its API services cover landscape and discovery, API definition, architecture and implementation, monitoring and analysis, and API support. Tieto can run the APIs it creates in its own cloud environment or in a public cloud of the client's choosing.

FIGURE 4 API Strategy And Delivery Vendors: Midtier Players With Geographic Or Sector Specialization

Vendor	API management vendor partnerships*	Number of API consultants [†]	Geographies served	Industry focus
Hexaware	MuleSoft, WSO2	80	North America, South America, Europe, Asia, Oceania	High-tech manufacturing, retail, transportation, professional services, construction, media, utilities, telecommunications, financial services, insurance, healthcare, education and social services
Mindtree	Apigee, IBM, MuleSoft, Oracle, TIBCO (Mashery)	50	North America, Europe, Asia, Oceania	Consumer products, pharmaceuticals, high-tech manufacturing, industrial products, retail, transportation, media, financial services, insurance
Perficient	Apigee, CA Technologies, IBM, Microsoft, MuleSoft, Oracle, TIBCO (Mashery)	30	North America	All sectors except primary production and transportation
Syntel	Apigee, CA Technologies, IBM, MuleSoft, TIBCO (Mashery)	130	North America, Europe, Asia, Oceania	Retail, financial services, insurance, healthcare
Tieto	Axway, IBM, MuleSoft, Oracle	50	Northern Europe	All sectors except professional services and construction

^{*}This column lists the formal partnerships each vendor has with API management vendors. Many of the vendors will implement using additional vendors beyond those listed.

Global-Scale Providers With Many Service Lines

For clients that use many types of consulting and technology delivery services, the global firms can often provide a one-stop shop — with localized services across diverse geographies. API transformations can be combined or run in parallel with a variety of other types of digital initiatives

and traditional services. That said, API business strategy is new and unique enough that global

resources do not necessarily imply leadership.

Thus, it is critical to examine each vendor on your list as to its experience leading clients into new business models based on APIs. This is important even if your initial focus is on internal APIs (e.g., APIs for your own mobile apps). We identified 13 global providers with a focus on API strategy and delivery (see Figure 5):

API business strategy is new and unique enough that global resources do not necessarily imply leadership.

This column lists the number of API consultants claimed by vendor. Due to limited visibility, Forrester does not independently validate these claims.

- Accenture. Starting with API enablement and architecture, Accenture's goal is to get clients up quickly with APIs for mobile apps or other urgent initiatives. It couples API enablement with its customer experience, analytics, and API center of excellence offerings. These are underpinned by API architecture and patterns, platform selection, life-cycle governance, runtime governance, API management, and API delivery. Accenture offers a capacity-based API development model, where clients pay for a certain volume of Scrum team capacity and receive APIs as the team is able to deliver.
- Cognizant Technology Solutions. For Cognizant, the API economy is about protecting and growing one's digital business by reaching customers through additional channels via external and enterprise (internal) ecosystems. With a focus on exposing data through APIs, Cognizant's view of API strategy encompasses monetization, change management, operationalization, governance, platform, and API road map. Governance includes life-cycle, runtime, and API program governance. Its services range from business drivers, consulting, and maturity assessment through platform blueprints and build-out to implementation, quality assurance, and developer engagement.
- > **Dell Services.** Business integration is the core of enterprise IT strategy for Dell, which it covers in three practice areas: Enterprise Integration (for applications and B2B), Responsive Integration (IT and process agility via SOA, BPM, and event management), and Edge Integration (customer experience via cloud integration and APIs). For internal and external digital strategy, Dell's API model includes developers, life-cycle management, security, and productization. Its services include API strategy (including monetization), architecture and implementation, and support and assurance (including developer community management).
- Deloitte. Three major focal points form Deloitte's approach to APIs, which it believes have been elevated from a development technique to a business model driver. With a focus on business capabilities, the firm identifies new API-based services based on a client's business objectives. The firm also focuses on organization and technology. Its API services range from conceptualization (road maps, monetization, process transformation blueprints) to API definition and platform design to API realization (development, testing, launch). Deloitte sees APIs as integral to enterprise integration and to its digital agility transformation framework.
- > Fujitsu. For Fujitsu, APIs are one key enabler for connecting people, information, and infrastructure inside and outside an enterprise. Rather than focusing on APIs per se, the firm sees APIs as part of a wider integration ecosystem for value chain creation. Fujitsu works with APIs by extending existing systems, creating APIs as part of new system development efforts, or helping clients with strategies to maximize private and public use of APIs. Fujitsu focuses on its own cloud platforms, RunMyProcess and MetaArc, although it will implement on other platforms as well.
- > HCL Technologies. With HCL's approach, API strategy picks up once the overarching business strategy and business model have been defined. Internal APIs focus on reuse; B2B APIs focus on co-creation; open web APIs focus on crowd innovation. HCL's API enablement begins with landscape and discovery, which covers overall API strategy, packaging, monetization, and business

model. API conception and design picks up with user and scenario analysis to identify data and functions to be API-enabled. HCL follows these with development (including API platform setup), testing, and adoption (e.g., API support and refinement).

- **IBM.** The three drivers of APIs for IBM are innovation, customer engagement, and business growth. Disruptive opportunities come from analysis and identification of an organization's key assets and services. APIs can make customer experiences more personal, adaptive, predictive, and relevant. IBM's API services begin with awareness briefings, workshops, API pilots, and readiness assessments. Following these, IBM will plan and execute API architecture and platform enablement together with API implementation and delivery.
- > Infosys. Building on its integration practice, Infosys sees APIs as a way to expose enterprise functions and business services to the external world to expand customer reach and drive revenue growth. Typical usage scenarios include two-speed IT, omnichannel, extensions to SOA strategy, IoT, and B2B. Its service offerings center on API management implementation and delivery of APIs using microservices. These include a focus on life-cycle management, security, monetization, and API socialization.
- > PwC. PwC approaches its services not as single-point offerings but rather as fully integrated solutions. Thus, it addresses APIs primarily through its Integration Fabric and High Velocity IT offerings. The Integration Fabric service includes assessment, architecture blueprints, platform implementation, and integration competency center setup. High Velocity IT centers on organizational alignment, enablement for mobile and digital commerce, and transformation of IT delivery tools and processes. PwC sees APIs as a means of connecting an organization's data and services for new ecosystems and new revenue streams.
- Tata Consultancy Services (TCS). As TCS sees it, internal APIs enable integration, B2B APIs enable partner collaboration, and open web APIs foster innovation. APIs allow an organization to be where its customers are at any time and in any place. With its services, TCS aims to help clients identify how APIs can serve as ingestion and delivery mechanisms for existing and new business models, channels, and revenue streams. API platform services include life-cycle management, security, testing, and governance. Implementation services include proofs of concept, incubation, and factory-based API development.
- > **Tech Mahindra.** B2D business to developer is the new relationship and innovation opportunity that Tech Mahindra sees with public APIs, while internal APIs spur innovation within an organization. APIs create a platform for digital transformation, and Tech Mahindra's services include API business strategy and partnering strategy for revenue enhancement. These drive API management strategy and an implementation road map, together with services for API development, testing, support, governance, and business operations. Tech Mahindra's collaborative innovation platform may help clients identify disruption opportunities.
- > Unisys. Unisys places APIs within its integration services, using its Application Modernization Platform as a Service (AMPS) as a framework for API strategy, design, development, and governance. AMPS centers on improving business agility to drive revenue growth and cost

- efficiency. For Unisys, APIs are the gluing mechanism for enterprises and a vehicle to have a positive impact on the bottom line, including new classes of products. As keys to API success, Unisys emphasizes alignment between business strategy, API governance, and delivery practices.
- > Wipro. Wipro sees APIs as central to digital business strategy. It organizes API opportunities into five areas: revenue, reach, engagement, innovation, and integration. Its API business services include executive workshops to identify candidate API opportunities, definition of API business models, and API productization and go-to-market strategy. After these come technology advisory services (e.g., reference architecture, security), API modeling, and governance and life-cycle management. Delivery services include platform setup (with Wipro's API Connect Platform as an option), API implementation, and managed API operations.

FIGURE 5 API Strategy And Delivery Vendors: Global, Cross-Sector Providers With Many Service Lines

Vendor	API management vendor partnerships*	Number of API consultants [†]	Geographies served	Industry focus
Accenture	Apigee, IBM, Microsoft, MuleSoft, Oracle, TIBCO (Mashery)	2,050	Global	All sectors
Cognizant	Akana, Apigee, Axway, CA Technologies, IBM, Microsoft, MuleSoft, Oracle, Software AG, TIBCO (Mashery)	2,500	Global	All sectors
Dell Services	Microsoft, TIBCO (Mashery)	150	Global	Pharmaceuticals, transportation, media, financial services, healthcare
Deloitte	IBM, MuleSoft, Oracle	N/A (Undisclosed)	Global	All sectors
Fujitsu	Apigee	1,000	Global	Primary production, high-tech manufacturing, industrial products, retail, transportation, professional services, utilities, telecommunications, financial services, insurance, healthcare, education and social services, government
HCL	Apigee, CA Technologies, MuleSoft, Software AG, TIBCO (Mashery), WSO2	5,000	Global	All sectors except wholesale, professional services, and construction
IBM	No formal partnerships	N/A (Undisclosed)	Global	Pharmaceuticals, oil and gas, retail, transportation, media, telecommunications, financial services, insurance, healthcare, education and social services
Infosys	Apigee, Axway, CA Technologies, IBM, MuleSoft, Software AG, TIBCO (Mashery)	500	Global	All sectors except primary production, chemicals, construction, and government
PwC	CA Technologies, MuleSoft, SAP	N/A (Undisclosed)	Global	All sectors except wholesale and construction
TCS	Akana, Apigee, Axway, CA Technologies, IBM, Oracle, Software AG, TIBCO (Mashery)	N/A (Undisclosed)	Global	All sectors except oil and gas, professional services, construction, and government

^{*}This column lists the formal partnerships each vendor has with API management vendors. Many of the vendors will implement using additional vendors beyond those listed.

[†]This column lists the number of API consultants claimed by vendor. Due to limited visibility, Forrester does not independently validate these claims.

FIGURE 5 API Strategy And Delivery Vendors: Global, Cross-Sector Providers With Many Service Lines (Cont.)

Vendor	API management vendor partnerships*	Number of API consultants [†]	Geographies served	Industry focus
Tech Mahindra	Apigee, CA Technologies, MuleSoft, Microsoft, Software AG, TIBCO (Mashery), WSO2	2,300	Global	All sectors except wholesale, construction, and utilities
Unisys	Akana, IBM, Oracle	2,000	Global	All sectors except primary production, chemicals, industrial products, wholesale, construction, and media
Wipro	Akana, Apigee, Axway, CA Technologies, IBM, Microsoft, MuleSoft, Oracle, Software AG, TIBCO (Mashery), WSO2	980	Global	All sectors

^{*}This column lists the formal partnerships each vendor has with API management vendors. Many of the vendors will implement using additional vendors beyond those listed.

Recommendations

Do Not Omit API Business Strategy From Your Vendor Analysis

For many organizations, the starting point for APIs will be something other than API business strategy, such as APIs for mobile apps, B2B partnering, or to renew and refresh an SOA strategy. It is fine to start someplace else, but API business strategy should be part of the thought process and planning from the very beginning. All of the seven skill areas are important, but maturing an API business strategy requires the longest lead time. Besides that, the right vendor can help you get executives to the epiphany of understanding the strategic business importance of APIs. All this makes it important to:

Ask very pointed questions about API business strategy competency. Although all of the vendors claim to have competency with API business strategy, they talk about it and define it in very different ways. The best articulations will include the central importance of rapid business reconfiguration in times of disruption (or to cause one's own disruption), the need to plan and prepare for the unknown, and the need to invest and build incrementally — including the need for API business experimentation.

[†]This column lists the number of API consultants claimed by vendor. Due to limited visibility, Forrester does not independently validate these claims.

- business strategy will be demonstrated by a combination of deep knowledge of vertical-sector business dynamics (e.g., knowing the persistent problems, challenges, and competitive dynamics of an industry), cross-industry awareness of how APIs are driving business change, and outside-the-box thinking on how an organization might use its key business capabilities and assets in completely different industries and ecosystems other than those it currently plays in.
- Assess the vendor's ability to position API business strategy within your starting point. As important and impactful as API business strategy can be, if your starting point is elsewhere, you won't want to put heavy investment into it now. In such cases, it is important for the vendor to incorporate future preparation for API business strategy into the API strategy you need today.

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Endnotes

- ¹ APIs allow an enterprise to go beyond its traditional offerings to pursue new markets and customers by creating new products and services from its assets, data, or processes. APIs can also create new go-to-market strategies and new value for existing offerings, such as targeting customers through influencers rather than targeting customers directly. See the "How APIs Reframe Business Strategy" Forrester report.
- ² For its web-based document signing service, DocuSign's professional plan allows 10 documents to be sent for signature per month, at a cost of \$20 per user per month. For the same 10 documents per month, DocuSign's startup API plan costs \$29.99 per month. Source: "DocuSign Pricing," DocuSign (https://www.docusign.com/products-and-pricing) and DocuSign (https://secure.docusign.com/developer).

- ³ The time-to-market pressure on delivering mobile apps may lead to a short-term focus to merely deliver something that works. This is a mistake, because it will shortchange the role of mobile APIs in an organization's omnichannel strategy and its wider goals of agility and consistency across processes, customers, and partners. See the "How To Design APIs For Mobile" Forrester report.
- ⁴ As an example of layered API design, consider that mobile apps are served by at least three types of APIs: touchpoint-specific APIs, multitouchpoint APIs, and business APIs. See the "How To Design APIs For Mobile" Forrester report.
- ⁵ Forrester describes the five major elements of an API platform as part of our overall guide to API success. See the "A Developer's Guide To Forrester's Strategies For API Success" Forrester report.
- ⁶ Four major categories of APIs enable different angles into business value. See the "Brief: Four Ways APIs Are Changing Your Business" Forrester report.
 - Different types of APIs deliver that value in different ways. See the "Establish Your API Design Strategy" Forrester report.
- ⁷ Ecosystem analysis entails examining your customers' processes and the firms, products, and resources they use adjacent to your firm's products and services. It is key to understanding API business opportunities. See the "APIs Underpin A Digital Business Platform" Forrester report.
- 8 When executives ask, "How are firms monetizing their APIs?" they typically mean, "How are they charging for them?" But this is too narrow of a question. The real question is, "How are organizations making money with APIs?" The answer is much broader than simply charging for them. See the "Monetizing APIs: Help Execs Think Bigger, And Drive More Revenue" Forrester report.
- ⁹ APIs have strategic value for business, and API management solutions are a crucial part of any organization's API approach. See the "The API Management Solutions Market Heats Up" Forrester report.

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