API360:

The Complete API Strategy Model
for the Enterprise

ca
technologies

Enabling Growth With APIs

Growing your enterprise is an ongoing priority. And, as the application economy continues to expand, it's likely that you're looking at digital business initiatives to fuel a significant portion of that growth. Among the most promising objectives of such a strategy are:

- **Providing superior digital experiences** for consumers though mobile
- **Expanding markets and revenue streams** through multiple channels
- **Connecting employees and partners** to enterprise data anywhere, anytime
- **Launching innovative new services** in the Internet of Things (IoT)

Successfully executing a digital strategy requires the ability to launch new apps and coordinate your digital presence with partners. Application Programming Interfaces (APIs) create the connectivity required to share enterprise data and digital content with those apps and partners over the Internet.

APIs are a critical component of digital business—empowering developers to build apps across any channel and enabling partners to incorporate your data or services into their offerings. By making it easier for other organizations to access your services, you create value and growth opportunities.

So how do you go about creating and managing an API program while navigating the challenges of exposing your intellectual property outside the enterprise? Let's take a look at how some early adopters have successfully managed APIs to create growth.

Doing APIs Right

Not surprisingly, many of the organizations that have set the standard for API development and deployment are among the most successful businesses in their respective industries. For instance:

- **Google**—By creating an API that makes it easy to embed Google Maps in their partners' websites, Google has established its Maps app as the industry standard, while driving traffic to other Google services.
- **Facebook**—Facebook partners improve their user experience by making it easy for visitors to log on using their Facebook credentials. And, as a result, Facebook is even more integral to their member's day-to-day lives.
- **Amazon**—Amazon pioneered the strategy of incremental expansion of their business model—ensuring that each new offering provides value both in what it delivers and what it enables
- **Salesforce**—The first truly open API, Salesforce can coexist with virtually any CRM system, offering a competitive advantage among organizations seeking a sales management utility.

By analyzing these examples and others, it's clear that an enterprise model for API success must address these four key requirements:

Alignment and Usefulness >

Engagement and Usability >

The Ability to Scale and Evolve >

Manageability and Security >

Let's look at each in turn.

Alignment and Usefulness

Making APIs Work for You and Your Partners

To achieve maximum impact from API-based digital initiatives, your APIs must generate value for both your organization and your target audience. That means they must be closely aligned with your internal objectives to help further your overall business strategy. And they must offer end users something they want or need, delivered with an engaging and frictionless user experience.

It's also important to watch for, and avoid, potential barriers to success. Common examples include:

- **Too Much Faith in the "Long Tail"**— Actively cultivate a user community. Third-party developers will not pay for access to your APIs until they are convinced there is a benefit to doing so.
- **Service Perfectionism**—Focus on how and why APIs will be used and address those needs as they are identified instead of building the "perfect" API that no one wants to use.
- **Technological Obsession**—Prioritize your API business strategy, then mold your technology to fit that strategy instead of trying to force-fit pre-selected technology into your strategy.
- **Tunnel Vision**—Keep an eye out for narrowly scoped projects that fall outside your enterprise API strategy and bring them back into alignment, if and when they are identified.

Making APIs Work for You and Your Partners

To assure the necessary balance between strategic alignment with your enterprise business strategy and maximum usefulness to users, here are some key question you should ask:

- What are my business goals and how can APIs help me achieve them?
- Do I have funded projects that could benefit from APIs?
- How do I ensure the APIs I introduce enable future value—both internally and for end users?
- What are the unmet needs in my industry that can solved using APIs?
- Who are the disruptors in my industry, and how are they using APIs?
- What business model does my API enable or extend?

As with any initiative, it's important to establish measurable goals by which you can evaluate success. When it comes to achieving optimal API alignment and usefulness, the **following deliverables are key**:

- **API Roadmap and Project Cross Reference**—What is your path to success for each API project you initiate?
- **Organizational Model**—Who are the stakeholders, and what roles do they play?
- **API Business Models and Business Cases**—Decide what the success of your API program should look like.
- **API Academy Strategy Assessment**—The CA API Academy can evaluate your strategy with an outside eye.

Engagement and Usability

Enabling the Developer Community

For your enterprise API strategy to succeed, you need partners to integrate your APIs into their own applications and solutions. You can't wait for developers to seek you out. You need to identify and engage developers you believe can contribute to your success.

Successfully driving adoption of your APIs requires aggressive marketing. And, in a fast-paced, highly competitive app economy, first to market often wins the day. So, to that end, it's worth considering a program of incentives for early adopters of your APIs.

Your marketing efforts also need to emphasize how easy your APIs are to use. The number of developers who have already registered with your API program—and the level of activity your APIs are driving in the developer community—can serve as valuable endorsements. And tracking the time from developer registration to "hello world" can help convince other developers that your API represents the fast track to market.

Enabling the Developer Community

To advance the conversation with developers in a way that increases the chances of them adopting your APIs, there are some important questions you need to answer:

- Who are the intended and expected consumers of my APIs?
- Who are the developers who will attract clients to my APIs?
- How do I attract and retain the right consumers and developers?
- How do I factor my API consumer needs into my API design?
- How do I continually enhance the developer experience (DX) for my API?
- What tools does my developer community need to help them use my API?

Among the key deliverables to achieve optimal API developer engagement and usability are:

- **Developer Program**—Systematically identify and target developers who are the "right fit."
- **API and DX Design Principles**—Prioritize a few essential principles and defend them strenuously.
- **API Consumer Toolkits**—Create a resource that includes documentation, software development kits (SDKs), samples and more to help streamline developer onboarding.
- **Hands-On Education Programs**—Develop programs for applied instruction to help developers quickly master your APIs.
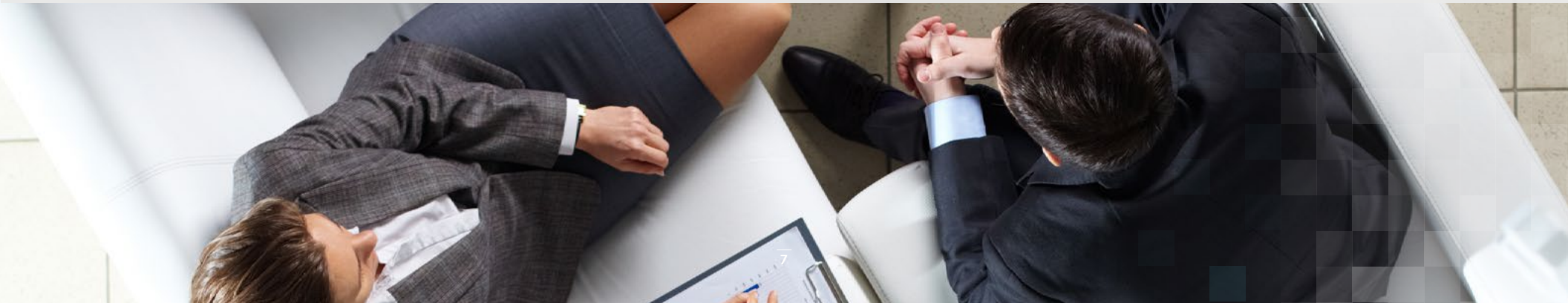
Ability to Scale and Evolve

Future-Proofing Your API Investment

If the digital economy has taught us nothing else, it's made it clear that change is the only constant. Agility and flexibility are the currency of digital initiatives. That means your APIs must be able to change and adapt over time to meet changing partner and user demands. And they must also be able to scale to accommodate changes in the size of the business.

For the purposes of supporting your API strategy, not all enterprise architectures are created equal. So, what defines "good" enterprise architecture from an API architect's standpoint?

Good enterprise architecture does:
- Focus on the horizon.
- Synthesize multiple perspectives.
- Impose appropriate constraints.

Good enterprise architecture does not:
- Obsess over standardization.
- Care exclusively about technology.
- Favor models over reality.

Future-Proofing Your API Investment

To accurately evaluate your organization's preparedness to scale and evolve your APIs as needed to meet changing market needs, you'll need to be able to answer the following questions:

- What factors will affect the design time scalability of my APIs?
- What about runtime?
- How should I version my APIs?
- What are the technology trends I need to consider for my APIs?
- What are the organizational constraints that will affect my success?
- How can I leverage my existing assets for APIs?

And to ensure that your API program is creating agile, flexible APIs that make it easy for developers to create projects of varying size and complexity, **you'll want to create the following assets**:

- **API Architecture Guidelines**—Avoid establishing rigid standards that might stifle innovation and drive developers away.
- **API Development and Deployment Methodology**—Managing the systems development life cycle (SDLC) is essential, as API adoption and continuous delivery methodologies and DevOps culture all go hand-in-hand.
- **Technology Roadmaps**—Plan around the fact that today's systems are almost certain to be obsolete within three years.
- **Intensive Skills Training**—Provide internal staff and your partners opportunities to build skills in real-world environments.

Manageability and Security

Taking the Right Precautions

While well-defined digital initiatives are essential to the growth of your enterprise, opening the door to outsiders carries significant risk. It is important to maintain control over how your APIs are being deployed to avoid finding out too late that you're involved in an arrangement that does not serve the best interests of your organization. Therefore, your APIs should be designed so that their activity is easy to track and manage. Likewise, your APIs must limit user access to your organization's data to that which is absolutely necessary and make sure that all users with access are appropriately authenticated.

To sufficiently protect your enterprise's assets and reputation, you should apply the following guidelines to your API initiatives.

The Five Pillars of API Management:

1. **EXPOSE** enterprise data and functionality in API-friendly formats.

2. **PROTECT** information assets exposed via APIs to prevent misuse.

3. **AUTHORIZE** secure, seamless access for valid identities.

4. **OPTIMIZE** system performance and manage the API lifecycle.

5. **ENGAGE**, onboard, educate and manage developers.

**READ THE 5 PILLARS
OF API MANAGEMENT EBOOK**

Taking the Right Precautions

How well are you managing your APIs? And how well are you mitigating the risks associated with sharing APIs with developers? Consider the following questions:

- What operational metrics do I need for my APIs?
- What business metrics do I need for my APIs?
- How can I use these metrics to increase business agility?
- How can I control access to my APIs without putting up new barriers?
- Who are the principals involved in my APIs and how can I protect privacy?
- What API-related threats do I need to protect against?

The potential business benefits of APIs are highly attractive, but you can't chase those benefits at the expense of accountability and security. Before offering your APIs to outside developers, it is **essential that you clearly define and implement the following policies and capabilities**:

- **API Analytics and Reporting**
- **API Identity and Security Model**
- **API Infrastructure and Operations**
- **API Management Platform**
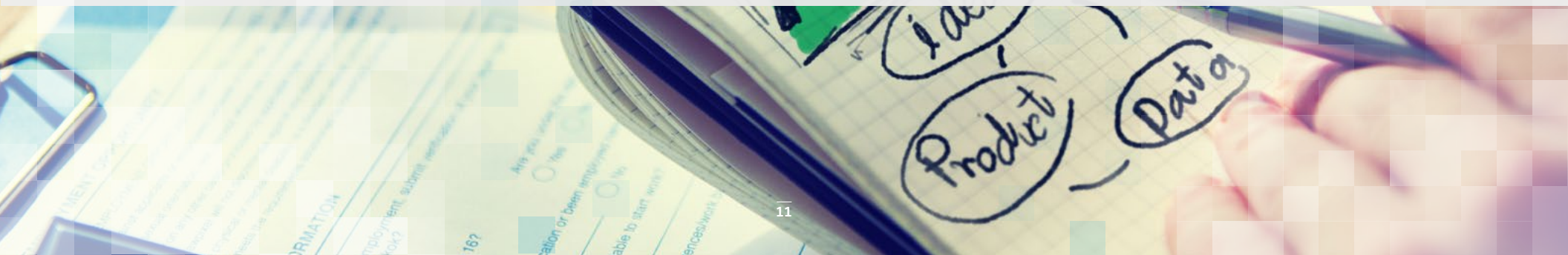
Integrate Everything, Enable Developers and Secure the Open Enterprise With CA API Management

CA API Management is a robust, enterprise-grade solution that can enable the success of your API initiatives. It provides the tools your organization needs to integrate and expose legacy systems and applications as APIs. It also allows you to quickly and efficiently onboard, enable and manage developers to create apps that add to the value of your enterprise. And, just as importantly, CA API Management secures your enterprise data to meet the toughest compliance and regulatory standards, while providing you with full control over which apps, developers and partners can access your APIs.

In addition to our API management solution, CA also conducts API Academy workshops and boot camps. API Academy workshops are intensive, one-day, lecture-format sessions, while bootcamps provide three-to-five days of hands-on applied instruction. Among the topics covered in both settings are:

- **The principles of API design**

- **Improving API adoption by enhancing the developer experience (DX)**

- **Designing APIs and software development kits (SDKs) for mobile, web and the Internet of Things**

- **Building effective API management teams**

Learn How You Can Power Your Digital Business With **CA API Management**. Visit **ca.com/api**.

About CA API Management

With over 400 API Management customers across sectors as diverse as communications, financial services, government and retail, CA Technologies offers industry-leading technology and know-how that helps organizations deliver value through APIs. CA provides a complete API Management solution, including a full-functioned API Gateway with military-grade security and a developer portal offered in on-premises and SaaS versions. Learn about CA API Management at **ca.com/api**.

API Academy
API Strategy, Architecture and Design Services

The API Academy team consists of industry experts who have been brought together by CA Technologies to develop free resources for the community and provide expert consulting services for organizations that want to take their API programs to the next level. To learn how the API Academy can help your organization with API strategy, architecture and design, visit **apiacademy.co**.

CA Technologies (NASDAQ: CA) creates software that fuels transformation for companies and enables them to seize the opportunities of the application economy. Software is at the heart of every business, in every industry. From planning to development to management and security, CA is working with companies worldwide to change the way we live, transact and communicate – across mobile, private and public cloud, distributed and mainframe environments. Learn more at **ca.com**.

ca technologies®