

The Ultimate Implementation Guide to API Management

Strategies, Insights, and Best Practices for API Product Leaders

Purpose, Audience & Objectives

This publication guides IT and business professionals in implementing APIs, formulating an API strategy, measuring and prioritizing business value, and architecting overall success. It walks API product leaders through a three-step process for implementing a successful API program and creating a culture. It begins with building an API team and prioritizing business value before moving into selecting an API management system and building APIs.



Who should read:

- API Product Managers
- Application Architects
- Product Owners
- Digital Product Leaders



Objectives of this Guide:

- Understand the steps of implementing an API program
- Formulate API strategy, measure and prioritize business value, and architect API success



Tools in this guide:

- Examples and worksheets to help develop plans and document decisions
- Links to tools to help measure business value and drive program success

What Will Readers Gain?

You will gain knowledge of best practices for managing the full API lifecycle and be able to:

- Assemble the right API team with clearly defined roles and responsibilities
- Define business value with clearly established, justified, and prioritized goals
- Measure API program ROI by evaluating APIs for usability, consumption, and security
- Select the right API management system using a key capability checklist and a balanced scorecard
- Identify quick wins in integrating the API lifecycle into your organization and set your program on the path to success

Worksheets in this Guide

- Identify Your Team, 7
- Defining Your API Strategy, 9
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Step 1: Prepare

- Build Your Team
- Define Your API Strategy
- Define Your Business Value
- Prioritize Your Business Value

Step 2: Select API Management Solution

- Create a Key Capability Checklist
- Assemble a Balanced Scorecard

Step 3: Architect your success

- Define your Process Flow
- Create Minimum Viable Products
- Build APIs that Are Easy to Use
- Mature through Iteration

Step 1: Prepare

APIs are ubiquitous in today's business environment, with the greatest use for internal integration. One of the most important investments you will make in your digital transformation will be in your API platform. Like with all major investments, you will need to start with a well thought out plan. With the importance that APIs have on your success, developing a clear plan will help you stay on course, communicate with everyone, identify key stakeholders, and keep your end goal in sight.

As you plan and prepare to get your digital transformation underway, complete the following steps:

- ☑ **Build your team**
- ☑ **Define your API strategy**
- ☑ **Define and prioritize your business value**

To help jumpstart your implementation, leverage the worksheets at the end of each section to develop plans, and document your decisions. Download this guide and treat it as a living document that you reference frequently as you complete the steps.

Build Your Team

At one time, APIs were only used by technical teams and IT experts, but the rise of the citizen developer, low code/no-code tools, and the API product manager role changed all that. APIs are now a significant engine of business growth and a prime instrument in the modern-day product managers toolkit. Using APIs effectively requires a new way of thinking about partnerships, a new way of collaborating among business and technology teams, and a new pace of developing, funding, and coordinating. This is where having centralized governance and organizational model is critical.

It can be called an API Center of Excellence (CoE) or an API Team. Think of it as the Project Management Office (PMO) for APIs. The charter of the API team is to be the backbone of your API program that drives governance, support, adoption, and overall strategic direction for your organization. No matter the size of your organization or the level of your API maturity, don't let the API team concept intimidate you. It doesn't take a huge team to implement your API program. You just need to cover these key roles (a person can fill more than one):

- API Champion
- API Product Manager
- API Architect
- API Developer
- API Evangelist

API Champion

The API champion is your program's executive sponsor, coach, and internal influencer. They connect the API program strategy to the organization's financial goals and business initiatives. They can be an influencer to enlist sponsors who have the ability to provide the funding and resources that API teams need to be successful, as well as break down intercompany barriers. They should be capable of developing strategic business goals and business value analysis, and have a detailed understanding of the technical capabilities of an API product offering. Their main goal is to support the API product manager in breaking down silos, unlocking funding, and freeing up technical resources.

API Product Manager

Industry best practices for implementing an API culture in any organization unanimously call for appointment of someone responsible for the program's success. This person manifests as the API product manager, the quintessential CEO of your API program, who is ultimately responsible for the implementation and adoption of your API strategy. The API product manager turns the strategy into action by managing each stage of the API product lifecycle, prioritized by API metrics and analytics along with API customer feedback. The product manager is the API subject matter expert and roadmap owner, who displays an intimate knowledge of all technical specifications and business benefits and can effectively communicate those benefits across the organization at all levels. Depending on the organization, their responsibilities may include: running standup meetings, prioritizing roadmap backlogs, defining meaningful KPIs, preparing customer presentations, and/or providing technical insights for a go-to-market strategy.

API Architect

The API architect, the technical consultant to the API product manager, may maintain responsibility for defining software environments, hardware, and other systems that keep the lights on, but for API programs, they're responsible for planning, designing, and reviewing the construction of APIs, data integrity, security, and enforcing developer guidelines. As part of their strong collaboration with the API product manager, they define the guidelines for API versions, compatibility, depreciation, and deployment. They guide API creation and implement development and testing requirements to meet the highest standards in API design. As the API program grows, this role may provide insight into and even be responsible for the scaling of the underlying systems and ensuring optimal system performance.

API Developer

The API developer is the keyboard-wielding frontline technical expert who transforms the wants and needs of the API customer or application developer into reality. Their main purpose is to create intuitive and highly consumable APIs while adhering to the guidelines put in place by the API architect. They fulfill this goal not only by developing APIs, but by contributing to program resources that will drive developer engagement and retention, such as documentation and tips & tricks on API discovery. Ideally, the API developer should have a strong understanding of the inner workings of the API management platform to implement security policies, traffic management, and other protocols that support the scaling of APIs per the governance model.

API Evangelist

The API evangelist is your API program's change agent. Their role is to spread the news on how your program can transform, revolutionize, and enhance how API and application developers do their jobs. This role is responsible for creating an API community and driving developer engagement. They will ensure that developers can easily access your APIs, product information, documentation, and software development kits (SDKs). They're your spokesperson for developer outreach, both internally and externally. API evangelists will lead and run hackathons, meetups, organize developer feedback, and advocate for community enhancements on the roadmap. They will also market the APIs via social media, targeted posts on LinkedIn or Github, and various other marketing activities. Evangelists can play a crucial role in the success of your API program; a star evangelist will be able to inspire change and communicate with both the technical and business communities in ways that are truly meaningful.

Pro Tip:

Although commonly advertised as individual roles, each of the API personas may manifest themselves differently based on your organizational size, budget, and technical prowess. For example, in some organizations the API product manager may assume some of the API evangelist marketing responsibilities while at other companies, it's beneficial if the product manager has a more technical focus working closer with the API architect and developer.

*See the **Identify Your Team** worksheet on the next page.

Define Your API Strategy

According to the 2019 Gartner API Usage and Strategy Survey, "98% of participating respondents either use APIs now, are implementing APIs or plan to use APIs in the coming year. Of participating respondents, 88% say that they are using or plan to use internal APIs."¹

This research solidifies what you already know to be true: APIs are now the de facto means for providing access to enterprise data and enabling complex system interactions at scale in the modern architecture stack. Internal APIs are becoming more prevalent, providing tremendous gains from reducing technical debt, reducing time-to-market for new products, and improving the developer onboarding experience.

As you search the Internet, you will find hundreds of articles and reports that tell you how to define your API strategy, what process to use, what next-gen technology to include, and even

imply that there is only one viable solution, and it's theirs.

Through our implementation efforts with hundreds of application architecture leaders and innovators, we've found three organizational API strategy archetypes:

- API security archetype
- API-led archetype
- API monetization archetype

Pro Tip:

The most successful API strategies are those that maximize developer engagement, solve a business or technical problem, and are rooted in value measurement.

API Security Archetype

The API security archetype is used by organizations with strict security measures that handle sensitive personal and financial data in high volumes, and have the expectation of maintaining indestructible levels of security for all their internal and external data transmissions.

API-led Archetype

The API-led archetype is used by companies focused on their customers' journeys and experiences, and therefore need to connect various systems, technologies, protocols, and vendors so they will all work together as one cohesive experience.

API Monetization Archetype

The API monetization archetype is inherent in organizations focused on creating customized packages and plans, the productization of data, and the licensing of their APIs for financial gain.

Cultural and organization inertia can handicap the execution of any API strategy. Unless an API product manager understands and can clearly articulate the potential value of the company's APIs to organizational stakeholders, some groups may be wary of sharing their assets and intellectual property or make the necessary investments needed to participate with customers, partners, and members across a broader ecosystem.

Pro Tip:

Clearly explaining the overarching business case, and using the use cases and best practices outlined in the ebook "[The Definitive Success Guide for the API Product Manager](#)" to set priorities, can guide the evolution of your API program and the overall success of your strategy.

***See the Defining Your API Strategy worksheet on the next page.**

Define Your Business Value

Understanding how the business and technical drivers of your organization and industry mesh with your API strategy, and ultimately map to the vision and goals of your executive leadership team, play a critical role in determining the priorities of your API program. Most people over commit and under deliver on any project's goals. If the planning process, project plans, and business initiatives do not map back to these drivers, it won't matter what your ROI forecast is—you'll face an uphill battle getting buy-in and project approval at every level. Having clearly defined, justified, and prioritized goals will make it easier to decide where to start to gain the most value for your business.

Pro Tip:

Resources that can be helpful in ROI justification are key performance indicators (KPIs) of the desired quantitative and qualitative outcomes that are measured by collecting information about your API's performance in the market and its impact on your company's way of doing business.

***See the Define Your Business Value KPIs worksheet on page 10.**

If you plan on using a KPI approach to help define and track your business value, API products are measured on an analysis of the business impact (external and internal), the ROI calculation (increase in profits + cost savings / costs), and your team's ability to consistently deliver measurable value while exceeding defined targets. The outcome is that API products identified as having strategic value but low product readiness—or that are easy to build but have minimal business benefit—are likely not the best initial candidates for the API program or project launch.

Questions to help guide the design of your KPIs as they relate to your business impact and organizational readiness include:

Business Impact:

- What is the measurable impact of APIs on business objectives and customer needs?
- What is the impact of using APIs versus doing nothing or keeping things as they are?
- How much will this contribute to the organization's goals?

Organizational Readiness:

- What is the technical difficulty in building APIs (back-end systems, integration, technical debt, etc.)?
- What is the readiness of the organization (Marketing, Legal, Product, etc.) to deliver and adopt APIs?

Worksheet: Defining Your API Strategy

(EXAMPLE) API STRATEGY

- Build and maintain the most developer-centric experience by creating personalized experiences across all touchpoints, anticipating developer needs, and providing customized service and documentation when needed.
- Make increasing developer loyalty the highest priority.
- Provide the highest level of personalized service and give developers the communication channels they want.
- Connect all environments (internal and external) of applications and data to provide partners, developers, and end-users with a seamless experience—and the business with the ability for agile change.

MY API STRATEGY

Worksheet: Define Your Business Value KPIs

(EXAMPLE) API VALUE ANALYSIS

		DATA SOURCE	STRATEGIC	READINESS ● ● ●	BASELINE	UPDATE FREQUENCY	TARGETS
EXTERNAL (BUSINESS IMPACT)	Customer retention	Prod Mgt	✓	●	500 customers	Monthly	100%
	Customer acquisition	Sales Ops		●	50 opportunities	Monthly	25% ↑
	ROI	Fin	✓	●	\$25M	Quarterly	325% ↑
	Market share	Mktg	✓	●	20%	Monthly	15% ↑
INTERNAL (ORGANIZATIONAL READINESS)	Product quality	Prod Mgt		●	5 days tech debt	Quarterly	—
	R&D viability	Tech	✓	●	10 velocity points	Weekly	50% ↑
	Marketing adoption	Mktg		●	1000 leads	Monthly	50% ↑
	Sales adoption	Sales Ops		●	1000 MQLs	Monthly	25% ↑

MY API VALUE ANALYSIS

	DATA SOURCE	STRATEGIC	READINESS ● ● ●	BASELINE	UPDATE FREQUENCY	TARGETS
EXTERNAL (BUSINESS IMPACT)						
INTERNAL (ORGANIZATIONAL READINESS)						

Prioritize Your Business Value

Don't make the mistake of coming up with and attempting to get project approval for hundreds of APIs at the outset. It will cost your organization valuable time, money, and resources. In addition to the business viability discussed in the previous section, review your potential APIs for usability, consumption, and security to determine if they're worthy to be part of your API program.

Evaluating each and every API against these measures will give you the context to understand if and how the API will be used, by whom, and at what consumption rate.

Pro Tip:

Creating an API-centric strategy as the cornerstone of your business transformation, and using tried and true business and technical guidance suggested by Nelson Petracek in "[API Success: The Journey to Digital Transformation](#)," will help you cement your long term API management success and navigate the pivotal decisions that lie ahead.

***Refer to the Strategic Prioritization worksheet on the next page.**

Security is an important aspect of an API strategy, regardless of how your APIs will be consumed or exposed. As with the various protocols, frameworks, standards, or specifications associated with the API program, it is important for API owners to be aware of the different forms of API security and various business and technical impacts they have on the overall success of your strategy and program.

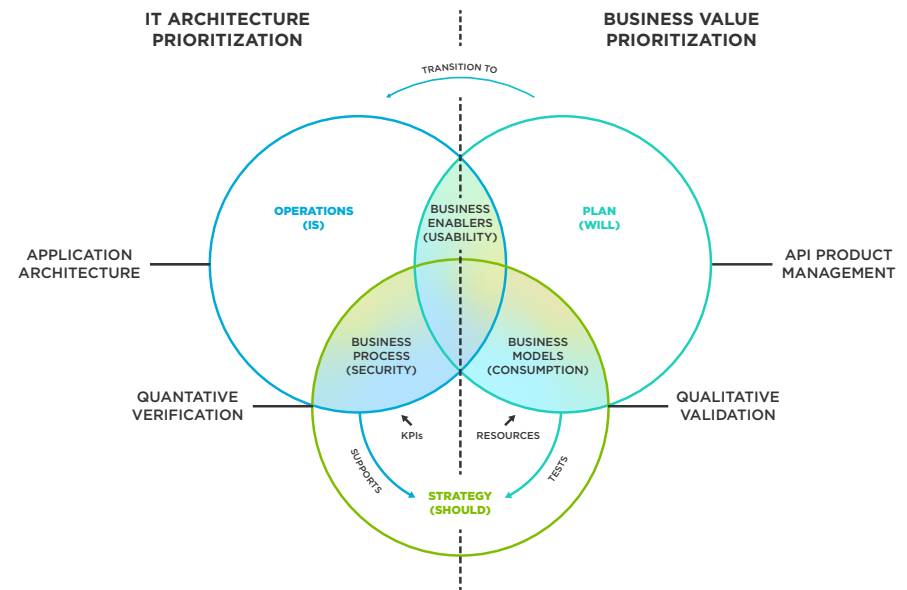


Figure 1 Evaluating an API Strategy

Worksheet: Strategic Prioritization

(EXAMPLE) BUSINESS GOALS & PRIORITY

GOALS	METRIC	PRIORITY
WILL THE APIs BE USED?		
Identify top API products	Number of API calls	Must have
Identify top users	Number of active users API usage	Important
New revenue/service opportunities	Increase in service revenue Number of partners Lifetime customer value	Nice to have
WILL MY INTERNAL TEAMS CONSUME THE API?		
Better visibility into internal users	Number of active developers	Must have
Increase API adoption	Increase my conversion rate by (x%)	Must have
Executive reporting	API usage reports	Must have
WILL THE API INCREASE DATA SECURITY?		
A standardized process for authentication and authorization	OAuth, SSO, LDAP	Important
Minimize security faults	Whitelisting, blacklisting reports	Important
Role-based access	Auditing and logging	Must have

MY BUSINESS GOALS & PRIORITY

GOALS	METRIC	PRIORITY
WILL THE APIs BE USED?		
WILL MY INTERNAL TEAMS CONSUME THE API?		
WILL THE API INCREASE DATA SECURITY?		

Step 2: Select an API Management Solution that Connects your People, Process, and Technology

“API” has become a common term thrown out when questions are being asked and answered about a new application or feature set you’re reviewing. Whether it’s to purchase, integrate, or partner, nine times out of ten, someone will ask if there is an API that can be exposed or consumed. The most common response is “yes,” and the vendor will go on to explain how it works.

Multiply this one conversation by the thousands that are going on across your business, and you will soon start to understand the magnitude of APIs and the need for a way to manage them. Just creating thousands of APIs is not enough; you must also manage and govern them using an API management system. This system will surround your APIs with supporting functions: user management, monitoring, and reporting to ensure that your program does not become a bucket of patchwork code, manual workarounds, and security vulnerabilities.

As you evaluate API management platforms, complete the following steps:

- ☑ **Create a key capability checklist**
- ☑ **Identify key differentiators**
- ☑ **Assemble a balanced scorecard**

Pro Tip:

It’s important that you select the API management solution that complements your organization’s culture, enables your API strategy, easily fits into your current architecture, and provides your developers with the technology that improves the way they operate, scale, and deliver reusable assets.

Create a Key Capability Checklist

Whatever API management system you are evaluating, you must ensure that the capabilities your organization will need now and in the future are included in the platform and offered at the right cost. The best tool to help you in this evaluation process is a simple checklist.

***See the Key Capability Checklist worksheet on page 18.**

Identify Key Differentiators

Managing your new API infrastructure and security may be a new concept for your IT team. In addition to the above checklist, ensure that you install an API management system with product differentiators that enable you to scale your business, implement your business strategy, and closely monitor your API performance:

- Cloud-native capabilities
- API monetization
- API analytics

Cloud-native Capabilities

Cloud-native API design capabilities help you develop, discover, and connect cloud-native and event-driven microservices with APIs out of the box and with minimal setup. Additionally, your developer community will demand that the selected platform puts security and performance at the core while providing complete control over the ability to define policies, request authentication/authorization, and validate all requests. Opening the door for you to embrace modern architecture approaches like serverless, microservices, and containers leads to benefits such as:

- **“Dependable” security:** Build security and compliance as a part of your app dev
- **Business agility:** Take advantage of microservices’ autonomous lifecycle to evolve independently and deploy frequently

- **Automated deployments:** Use modern CI/CD processes to implement consistent quality code that’s readily available to users

API Monetization

If your API strategy calls for treating APIs as products, your enterprise may be in uncharted waters, requiring that you establish competencies in disciplines such as API marketing, ecosystem or platform positioning, API lifecycle management, and/or developer outreach. Additionally, API product managers must consider how to approach the direct and indirect monetization of APIs. Direct monetization provides access to data or services via APIs in exchange for money (for example, through a subscription-based plan). Indirect monetization can use APIs to develop ecosystem relationships. For example, a public land registry gives access to its services by offering a subscription-based plan to third-party tools for architects, notaries, lawyers, real estate agencies, and others.

API Analytics

Analyzing API performance and measuring value is of the utmost importance to the success of your API strategy. It requires your organization to have best-in-class data visualization, monitoring, and value reporting capabilities to report on KPIs that are valuable to your leadership and strategic goals. For example, your analytics should be able to provide:

- **Insight-driven results:** Real-time data insights on your ecosystem—apps, consumption, performance, and usage metrics (spikes, latency, response times) for end-to-end program visibility.
- **Risk mitigation:** Real-time monitoring and alerts on system thresholds, capacity and payloads to safeguard your APIs and data from potential danger.

- **Customer experience improvements:** Drive better relationships with customers (developer and API consumers) and better decisions based on insights and measures of customer engagement
- **KPI status:** Make better decisions based on user insights and track the performance of APIs throughout their full life cycle

Analytics can help you demonstrate API program performance, facilitate data-driven decisions, and respond quickly to customer and market changes.

***See the API Management Platform Requirements worksheet on page 21.**

Assemble a Balanced Scorecard

For most organizations, outlining basic needs when selecting a software vendor can be a cumbersome task that generally falls behind normal operational workload; The task goes to someone not yet familiar with your API strategy. To help in this process, create a balanced scorecard to assist your team in the evaluation process.

Listen to the requirements of your technical teams, understand your enterprise architecture limitations, and keep your eyes and ears open for signals of differentiation and innovation. All this can be mapped back to your API strategy and provide you with the trifecta for an effective API management system that connects your people, process, and technology.

***See the API Management Platform Scorecard worksheet on page 23.**



Worksheet: Key Capability Checklist

(EXAMPLE) API MANAGEMENT PLATFORM CHECKLIST

CAPABILITY	DESCRIPTION	<input checked="" type="checkbox"/>
API PORTAL	<ul style="list-style-type: none"> • Customizable design, look & feel, workflows, forums, documentation, and governance • Developer onboarding with configurable sign up and approval process • Self-learning and hosting of bundled resources and specs like API proxies and other API configurations • Easy access with key registration for gaining access to the tools and information developers need to explore, test, and consume APIs 	<input type="checkbox"/>
DESIGN FLEXIBILITY	<ul style="list-style-type: none"> • Development of APIs from any data source including backend systems • API modeler to create API specifications with simple options for defining resources, methods, and responses of the API • Any data source contract-first modeling, with native OAS, plus native Node.js hosting of API implementations 	<input type="checkbox"/>
BEYOND REST APIs	<ul style="list-style-type: none"> • Support for non-REST APIs such as SOAP and GraphQL; and support for and integration with microservices environments • Architect cloud-native apps with API choreography, event-driven APIs, and other non-REST protocols such as AsyncAPI, WebSockets, GraphQL, gRPC, and Kafka types 	<input type="checkbox"/>
PERFORMANCE	<ul style="list-style-type: none"> • High throughput, low latency, scalability through federated and distributed API gateways • Reduced latency using global caching, HTTP cache-control headers, surrogate cache-control, custom caching adapter • Multi-tenant architecture and geo-routing and automated failover as part of disaster recovery 	<input type="checkbox"/>
ACCESS & SECURITY	<ul style="list-style-type: none"> • Single system management of traffic for all gateways, including embedded microgateways • Definable access and security policies like rate limiting and throttling between consumers and role-based and group-aware access control • Robust security standards such as OAuth2, HTTPS, JWT, HMAC, XML sig, Kerberos, CORS, WS-I, ISO 27001, PCI, Hitrust, Kubernetes Secrets with RBAC, and mTLS 	<input type="checkbox"/>

CAPABILITY	DESCRIPTION	<input checked="" type="checkbox"/>
DEPLOYMENT OPTIONS	<ul style="list-style-type: none"> • Anywhere deployment including on-premises, in the cloud, or in a hybrid environment (gateway on-premises with cloud based API management) • Multi-cloud support including AWS, Azure, or private cloud deployment options • Edge deployment using microservices, service-mesh, north-south and east-west service patterns 	<input type="checkbox"/>
API ANALYTICS	<ul style="list-style-type: none"> • Monitoring and visualization with custom operational and usage-based KPIs and endpoint-level drill down capabilities • Operational reporting and monitoring of real-time performance and business metrics of APIs, packages, plans, endpoints, and developer analysis • Business value reporting combining business KPIs with API metrics delivering actionable insights 	<input type="checkbox"/>
INTEGRATION	<ul style="list-style-type: none"> • API-led integration with seamless registry, discovery, and reuse of APIs and artifacts • Product management of APIs as products and orchestration of APIs, applications, and systems • Connectors/adapters out of the the box for common business SaaS services 	<input type="checkbox"/>
INNOVATION	<ul style="list-style-type: none"> • Open API standards for industry accelerators like open banking and HL7 FHIR healthcare interoperability • Mobile and multiexperience development of APIs for mobile, web, and wearables capable of engaging with new conversational ecosystems • Service mesh to create, purpose-built applications that are easier to design, develop, and deploy 	<input type="checkbox"/>

MY API MANAGEMENT PLATFORM CHECKLIST

CAPABILITY	DESCRIPTION	<input checked="" type="checkbox"/>
API PORTAL		<input type="checkbox"/>
DESIGN FLEXIBILITY		<input type="checkbox"/>
BEYOND REST APIs		<input type="checkbox"/>
PERFORMANCE		<input type="checkbox"/>
ACCESS & SECURITY		<input type="checkbox"/>
DEPLOYMENT OPTIONS		<input type="checkbox"/>
API ANALYTICS		<input type="checkbox"/>
INTEGRATION		<input type="checkbox"/>
INNOVATION		<input type="checkbox"/>

Worksheet: API Management Platform Requirements

(EXAMPLE) API MANAGEMENT PLATFORM ENABLERS

CAPABILITY	CONSIDERATIONS	PRIORITY
BUSINESS OF APIS*		
Enable an API Ecosystem	Create a value chain with API products	Must have
Create a Marketplace	Monetize API products and expand channels	Important
Create a Developer Platform	Engage developers with API products	Important
DEV & OPS & PRODUCTIVITY		
Collaboration	Facilitate the collaboration of diverse persona technical requirements and business needs	Must have
App Dev	Provide apps and tooling to power the pipeline	Important
Microservices Management	Provide visibility and apply policies to all APIs and microservices	Important

MY API MANAGEMENT PLATFORM ENABLERS

CAPABILITY	CONSIDERATIONS	PRIORITY
BUSINESS OF APIS*		
Enable an API Ecosystem		
Create a Marketplace		
Create a Developer Platform		
DEV & OPS & PRODUCTIVITY		
Collaboration		
App Dev		
Microservices Management		

Worksheet: API Platform Scorecard

(EXAMPLE) API MANAGEMENT PLATFORM SCORECARD

COMPANY NAME: Example SYSTEM CATEGORY: API Management CONTACT: John Doe	OVERALL RATING:	3.00
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AREA	SCORECARD CRITERIA	RATING SCALE FOR EXPECTATIONS <i>1= BELOW, 3= MEETS, 5= EXCEEDS</i>	COMMENTS	AREA WEIGHT	AREA RATING	WTD. RATING
ARCHITECTURE High throughput, low latency, and scalability combined with best practices and technology that result in flexible, consumable and extensible experience	Supports multiple deployment options (e.g. On-prem, SaaS, and hybrid)	3	Add comments here	20%	3.00	0.60
	Provides appropriate technical capabilities and skills to support multi-tenancy	3	Add comments here			
	Provides flexible scaling and provisions additional capacity based on load and traffic	3	Add comments here			
DEVELOPER PORTAL Innovative developer community engagement model and tools offering configurable partner and developer onboarding and experience management	Provides customizable registration workflow and forms	3	Add comments here	15%	3.00	0.45
	Provides appropriate user management and access controls (e.g role based & group-aware access control)	3	Add comments here			
	Provides features for single sign-on and integration with 3rd party solutions	3	Add comments here			
API GATEWAY API lifecycle management, API mocks, configuration management, streaming, and standardized CI/CD deployment options	Supports the entire API lifecycle governance	3	Add comments here	10%	3.00	0.30
	Provides features for automating the development process	3	Add comments here			
	Provides appropriate technical capabilities for traffic management (quotas, rate limiting, etc.)	3	Add comments here			
API SECURITY General security standards and polices for user access, data processing, API authentication, and protection against malicious attacks	Supports single sign-on for administrators and users	3	Add comments here	15%	3.00	0.45
	Provides appropriate data security controls (e.g. data processing, data storage, and data access)	3	Add comments here			
	Supports API security mechanisms (e.g. tokens, encryption, policy systems, etc.)	3	Add comments here			
API ANALYTICS Basic monitoring and reporting on API program performance and advanced analytics to provide business KPIs and API metrics visualization	Provides out of the box configurable reports for API metrics	3	Add comments here	10%	3.00	0.30
	Provides drill-down analytics for API program health checks and KPI analysis	3	Add comments here			
	Offers on demand report generation for exception handling and real-time troubleshooting	3	Add comments here			

AREA	SCORECARD CRITERIA	RATING SCALE FOR EXPECTATIONS <i>1= BELOW, 3= MEETS, 5= EXCEEDS</i>	COMMENTS	AREA WEIGHT	AREA RATING	WTD. RATING
API SDLC	Provides support for DevOps practices like automation, workflows, scripts, and testing tools	3	Add comments here	10%	3.00	0.30
	Provides support for CI/CD, multiple deployment options, and governance of independent API teams	3	Add comments here			
	Provides audit trail (date, time, user) of all changes made to production systems	3	Add comments here			
API INNOVATION	Provides open API support for industry accelerators (e.g. open banking, HL7 FHIR Healthcare)	3	Add comments here	10%	3.00	0.30
	Accelerates time to value through activation of an API economy and multiple monetization models	3	Add comments here			
	Supports microservices and service mesh architectures	3	Add comments here			
TRAINING & SUPPORT	Provides effective and timely communication regarding changes	3	Add comments here	5%	3.00	0.15
	Supports proactive response to meet the needs for quality, service, cost, and technical support	3	Add comments here			
	Provides access to user community to gain insights, guidance, and support	3	Add comments here			
INDUSTRY EXPERIENCE	Provides a comprehensive API strategy and investment plan	3	Add comments here	5%	3.00	0.15
	Provides strong API management rooted in industry experience and thought leadership positions	3	Add comments here			
	Provides cloud-based solutions for diverse customer sets	3	Add comments here			

MY API MANAGEMENT PLATFORM SCORECARD

COMPANY NAME: SYSTEM CATEGORY: CONTACT:		OVERALL RATING:				
AREA	SCORECARD CRITERIA	RATING SCALE FOR EXPECTATIONS <i>1= BELOW, 3= MEETS, 5= EXCEEDS</i>	COMMENTS	AREA WEIGHT	AREA RATING	WTD. RATING
ARCHITECTURE	High throughput, low latency, and scalability combined with best practices and technology that result in flexible, consumable and extensible experience					
DEVELOPER PORTAL	Innovative developer community engagement model and tools offering configurable partner and developer onboarding and experience management					
API GATEWAY	API lifecycle management, API mocks, configuration management, streaming, and standardized CI/CD deployment options					
API SECURITY	General security standards and polices for user access, data processing, API authentication, and protection against malicious attacks					
API ANALYTICS	Basic monitoring and reporting on API program performance and advanced analytics to provide business KPIs and API metrics visualization					

AREA	SCORECARD CRITERIA	RATING SCALE FOR EXPECTATIONS <i>1= BELOW, 3= MEETS, 5= EXCEEDS</i>	COMMENTS	AREA WEIGHT	AREA RATING	WTD. RATING
API SDLC	Provides support for CI/CD, multiple deployment options, and governance of independent API teams					
API INNOVATION	Accelerates time to value through activation of an API economy and multiple monetization models					
TRAINING & SUPPORT	Supports proactive response to meet the needs for quality, service, cost, and technical support					
INDUSTRY EXPERIENCE	Provides strong API management rooted in industry experience and thought leadership positions					

Step 3: Architect Your Success

At this point, you've defined a winning API strategy, selected the right API management system, and assembled a rockstar team to conquer the world and take your digital transformation to the next level. What's next? Here's where the rubber meets the road and you integrate the API lifecycle into your organization. Keeping aligned with your API strategy, follow these steps as part of your rollout plan:

- ☑ Define your process flow
- ☑ Create minimum viable products
- ☑ Mature through iteration

Define a winning API strategy, select the right API management platform, and assemble a rockstar team to conquer the world and take your digital transformation to the next level. What's next? Here's where the rubber meets the road and you integrate the API lifecycle into your organization.

Define your process flow

Define key pieces of your business and technical processes and map out the API end-to-end lifecycle. The goal of this step is to develop a visual representation of your API processes and how

they map to internal business processes. Figure 2 shows an example of an API end-to-end lifecycle process (Fig 2).

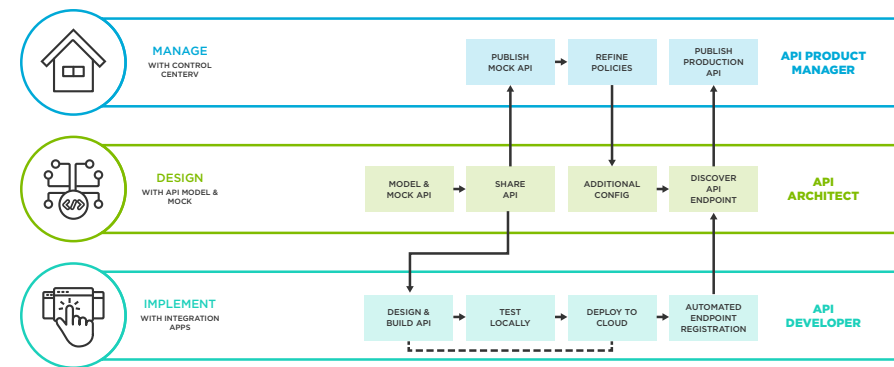


Figure 2 API end-to-end lifecycle.

To map your own API end-to-end lifecycle process:

- Start at the point where an idea becomes an API opportunity
- On whiteboard or paper, draw each step of the information flow across your API ecosystem
- Identify critical system integrations

***Refer to the Business Process Flow worksheet on the next page.**

Worksheet: Business Process Flow

(EXAMPLE) API END-TO-END LIFECYCLE

STAGE	ENTER THIS STAGE WHEN...	OWNER
DESIGN	API budget approved, data sources identified, and resources allocated	API Architect
IMPLEMENT	API mockup created, endpoints configured, and security settings added	API Developer
MANAGE	API built, tested, deployed, and endpoints and policies registered	API Product Manager
STEADY STATE	API published	API Product Manager

MY API END-TO-END LIFECYCLE

STAGE	ENTER THIS STAGE WHEN...	OWNER
DESIGN		
IMPLEMENT		
MANAGE		
STEADY STATE		

Pro Tip:

Discuss the sample process with your API Team and modify it to fit your organization's business and technical environments. If you don't have a defined API end-to-end process, now is a good time to define one.

Create Minimum Viable Products

Full lifecycle API management includes everything you need to get an API modeled, built, and published for your community to consume. Although the lifecycle does have numerous stages, and some can be more lengthy than others, speed is still the goal. Your focus should be to release minimum viable products (MVPs) that meet the core requirements and can be rapidly scaled and improved based on market feedback. When creating MVPs, follow these guidelines:

- Build APIs that are easy to use
- Secure your APIs
- Test your APIs

Build APIs that Are Easy to Use

Design your API according to best practices. Focus on consumption, security, and provide easy to understand documentation and SDKs. Keep it simple and ensure that you are providing data that your consumer needs to enrich their application.

Secure your APIs

Enforce general security management capabilities across APIs (internal and external). Offer authentication like OAuth, role-based

access control (RBAC), SSO, or LDAP, in conjunction with transport layer encryption (TLS) to protect data. Implement API throttling, rate limiting, and quotas to maintain API peak performance.

Pro Tip:

A resource that can be helpful in understanding the complete API lifecycle and managing the integration in your organization's business processes and software development model is Nelson Petracek's "[API Success: The Journey to Digital Transformation](#)," in which he describes how the API lifecycle varies from traditional software development.

Test Your APIs

Include testing in every stage of the API lifecycle. One recommended starting point is to use mock apps to allow testing of API contracts before the underlying service(s) are built. Another recommendation is to employ an iterative software development lifecycle (SDLC), and automate API testing and deployment.

***See the Minimum Viable Product worksheet on the next page.**

Mature through Iteration

When you are considering iteration, you know that you have reached the end of your API's first lifecycle. This is not the proverbial end of the road, but rather an opportunity to communicate the business value of your API and release a roadmap that incorporates market feedback. This process includes:

- KPI Definition
- Continuous Improvement

Worksheet: Minimum Viable Product

(EXAMPLE) API MVP LIST

AS A (TYPE OF USER)	I WANT TO (PERFORM A TASK)	SO THAT I CAN (ACHIEVE A GOAL)
As loyalty program member	I want to view and book redemption flights through the mobile app	So that I can use my loyalty points to book redemption tickets without switching to an alternate interface

MY API MVP LIST

AS A (TYPE OF USER)	I WANT TO (PERFORM A TASK)	SO THAT I CAN (ACHIEVE A GOAL)

KPI Definition

Transforming API data into actionable insights and valuable business measures requires that the API Team defines and measures the right KPIs to demonstrate value as it relates to the organization's core business goals and KPIs. Example KPIs include number of active developers, number of API calls, number of active users, average revenue per user (ARPU), lifetime customer value score, and much more.

***See the Define KPIs worksheet on the next page.**

Continuous Improvement

After an API has been in the market for a short period of time, the API Team should review market and user data to plan roadmaps. Here are some questions to start asking:

- Is performance taking a dip because of call volumes?

- Are developers asking for additional features to make their lives easier?
- Has the market shifted?
- What are the top five support issues raised last quarter?

The process of addressing these questions lies with your organization's product management model. If you are following a pragmatic marketing approach, the API product manager will work these insights into their market definition and product roadmap feature backlogs.

***See the Iteration Planning worksheet on page 33.**



Continue the Momentum

As your API program and team grow, set your sights on new use cases that can unlock innovation opportunities. If you've been focused on developing and deploying internal APIs to accelerate digital transformation initiatives, you may consider exposing an API to mobilize innovation from an external developer community. Some API teams may find that once data or a new service is exposed, people will think of new ways to use the data. More importantly, users will come up with recommendations for how more data can unlock a specific innovation. You may also choose to take a deep dive into your usage patterns to identify better ways of giving access to data and services to foster innovation and revenue growth. In the API world, you can't just build APIs and sit back and watch them grow—they need nourishment.

Business agility is now a business necessity. Widely fluctuating markets and disruptions of all types demand that businesses adapt more quickly than ever to stay resilient, or risk losing their right to stay in the game. Many organizations have mountains of data full of untapped value just waiting to be

discovered. Every business wants to grow partner ecosystems so they can focus on what they do best while relying on others to help fill go-to-market needs and provide scale so they can better serve their customers.

APIs that are designed, delivered, and managed as products can support all of these goals. They can make an organization's digital assets available for everyone's consumption. They can enable an instantaneous business turnaround in response to market shift for change in the customer journey. API products can expose an organization to new businesses, partners, and ecosystems. And they can do all of these things quickly and with agility, creating a competitive advantage. The journey starts with getting the first API product on the roadmap.

APIs are how modern business is executed. They've become an integral part of the IT architecture and also a catalyst for industry disruption and innovation. Organizations that approach APIs with the right team, strategy, and execution plan will be destined for success in today's marketplace.

Since 1995, Campari has completed 27 acquisitions. Each time, to publish APIs to the outside world, the company needed to integrate the acquired company's systems and data, first transforming it to make it consistent with its standards. Its digital transformation journey to create digital products started in late 2017. With its TIBCO API platform and well-defined API-first strategy, it provided secure access to its data, increased partner and customer adoption of its APIs, and paved the way for innovative new services to be quickly offered to the market. Rapid innovation came from aligning APIs to offer B2B services and deploying Open API initiatives for the developer community.



“Our API strategy is starting right now. So this is the biggest change that we are looking forward to do since we are really exposing our data to external developers. This will enable Campari Group to share data that was not shared before as well as providing services that were not provided before.”

—Campari Integration Architect Alessandro Lanna

Build your momentum. Visit the [TIBCO API-Led Integration website](#) to learn about the benefits of API-Led Integration to accelerate your enterprise with API-led microservices, serverless functions, and integration flows seamlessly connecting all your business systems and data sources in a single actionable platform providing you with the tools to redefine your digital business model, pivot to new verticals and adapt to changing customer expectations, fluctuating markets, and technology trends.