RogueWave SOFTWARE

Akana

# How to create tomorrow's winning API strategy for your business today

## LEARN FROM ENTERPRISES WHO'VE TAKEN API MANAGEMENT FROM PILOT TO PRODUCTION

You understand that doing business in the digital age requires an unprecedented level of agility, security, and interconnectedness with partners and customers, both internal and external. This is why you've started planning, deploying, and managing APIs. Learn how to create the right API management foundation for your organization and see the business benefits others are having as a result of making the move.

Doing business in the digital age requires an unprecedented level of agility, security, and interconnectedness with partners and customers, both internal and external. You understand that, which is why your enterprise has started planning, deploying, and managing APIs. But how do you create an API First strategy that is secure, scalable and easy-to-manage? Using actual business case studies, this white paper guides enterprise architects, CIOs, and other digital transformation leaders on how to create the right API management foundation to enable your organization to best respond to new regulations, embrace new partners and revenue opportunities, and boost your financial top and bottom lines.

# The road to modern API management

The general public first became aware of APIs a decade ago, as Web 2.0 companies used APIs to share parts of their core application publicly to developers. An oft-told example: Netflix let developers search its video library, retrieve user ratings, and embed Netflix videos into their web sites or apps. This profited Netflix's partners, while also extending Netflix's feature set, reach, and marketing. Netflix's user growth boomed, helping the streaming video company attain its leading position today.

99 percent of companies don't operate like Netflix. But when you step back and think about what APIs really are — a latent business capability exposed as a technical service for developers (internal or external) to use — you realize that 99 percent of companies CAN benefit from an API strategy.

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Think of that legacy server loaded with customer purchase data that your sales department would love to connect with, or product availability and shipping information which, if properly exposed, could keep business partners and customers in the loop in real-time, boosting customer satisfaction and, ultimately, sales.

## Real customers with winning API strategies

- £17B UK-based retailer
- Leading 300-year-old UK bank
- $30B US farm equipment manufacturer
- Commonwealth of Pennsylvania
- Global vehicle fleet management provider
- $22B global insurance company

If these scenarios sound familiar, that's because they echo many of the promises made by Service-Oriented Architecture (SOA) proponents in the prior decade. By creating an integrated, rationalized infrastructure, SOA promised efficiency, cost savings, and agility. In practice, most SOA projects proved to be over-ambitious, rule-bound, and drove away the developers that were supposed to benefit from it.

Today's revolution — APIs for your internal enterprise departments or for external B2B partners — is SOA 2.0, or SOA done right? The ultimate goals — saving time, labor, and money, building brand and marketing, and boosting sales — remain the same. But the execution — to enable open ecosystems and reusable microservices that solve actual developer and business problems — is far smarter and more practical. It's no longer about re-architecting the enterprise for its own sake, but about transforming the business.

Following are some examples of enterprises deploying API management strategies — read on to learn about all the business benefits they are reaping as a result.

## Boosting your partners for profit

Here's a real example from a user of the Akana Platform. A leading American manufacturer shows that you don't have to be a web startup to benefit from today's ecosystem economics. The company makes $30 billion a year from manufacturing and selling tractors and other farming equipment. Its latest tractors are equipped with sensors adept at collecting data about weather, soil conditions, topography and GPS coordinates, machine hours, and fuel consumption. It's powerful data that helps farmers dramatically improve their crop yields. But first, it needed to be unlocked and made shareable with agronomic experts and farming vendors.

Here's how the company made that happen. Using a hosted version of the Akana Platform, it created a public API portal. Using Akana's secure authentication OAuth feature, farmers can then share the private farming data from their tractors to experts and suppliers, who analyze the data and offer tailored advice on what farmers should plant. This creates its own economic boom — better crop yields, improved sales by the company's partners, and more tractors sold.

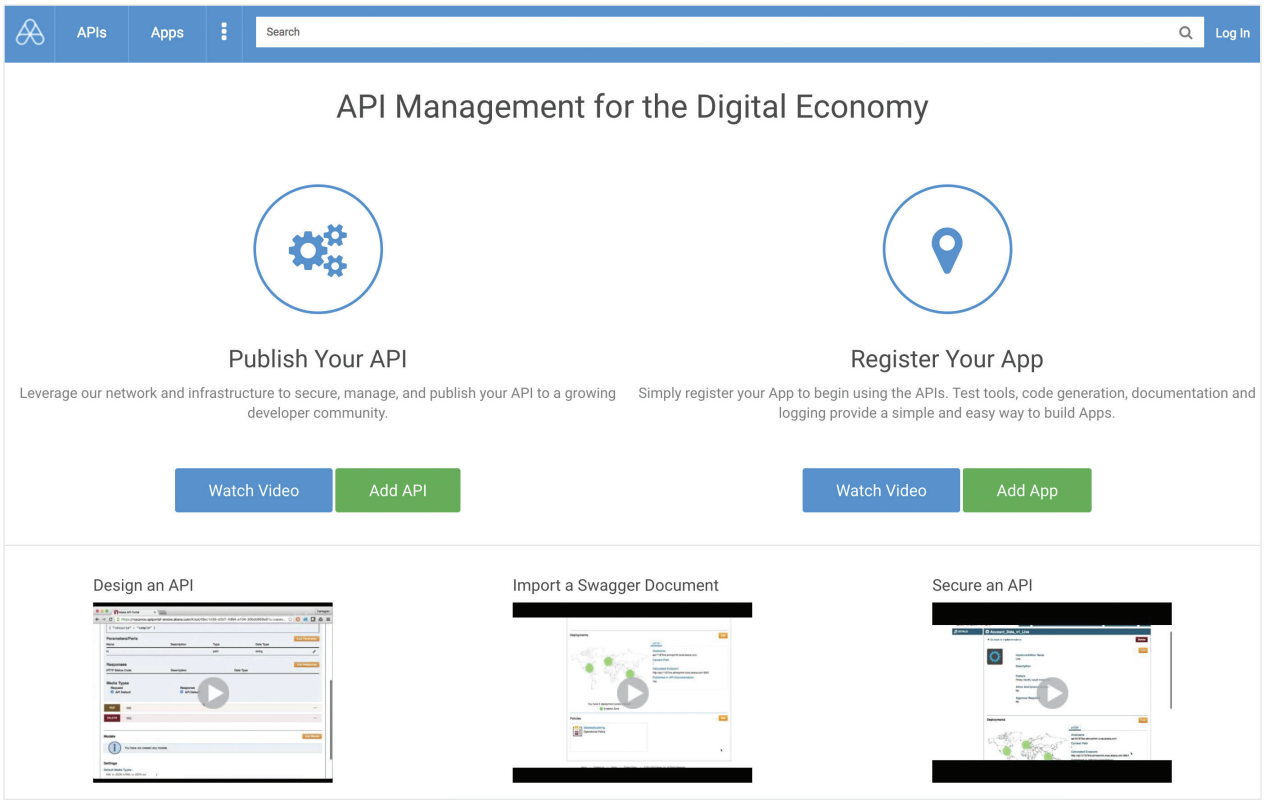



**Figure 1: Example of a customizable API portal**

## Improving customer service

Customers are the lifeblood of any business, and improving customer service is an obvious boon for any company. For one global vehicle fleet management provider, APIs are helping it boost customer service. The company's telematics software residing on-board all its trucks had long been collecting data such as vehicle condition, driver location, fuel consumption, and more. But making this data readily available to its truck customers had traditionally been more difficult. Using Akana, the company now publishes a set of APIs through which its customers can tap into analyzable data to improve things like driver routes, time to destination, fuel efficiency, and more. That helps customers of the fleet management provider save time and money, boosting their satisfaction.

Or take the Pennsylvania state government, aka the Commonwealth of Pennsylvania. It wanted to expedite the delivery of its benefit and assistance programs to needy residents. To enable that, the agencies sought to automate manual processes and improve efficiency through real-time data exchanges between federal, state, and county government agencies. The Commonwealth migrated its legacy applications to a new web services security infrastructure that uses Akana to manage the APIs.

The agency now provides streamlined management, standardized security, and regulatory compliance for its web services. Cross-agency communication between the various government agencies and business partners is now better, with the establishment of industry-accepted and open standards for securely sharing data. The built-in security of the Akana Platform let the Commonwealth avoid the need for custom, costly security development. Best of all, the online governmental services to residents are fast, secure, and consistently provided, enhancing citizen trust and satisfaction.

### Open Banking and PSD2: Introduction

The banking sector is undergoing massive disruption driven by regulatory changes, particularly in Europe where Open Banking and PSD2 regulations are set to transform how customers move and manage their money.

The Competition and Markets Authority has required the nine largest current account providers in the UK to implement Open Banking, which enables customers to allow Third Party Providers (TPP) highly-secure access to their current accounts for the purposes of gathering transaction data or making payments on their behalf.

A similar regulation is the Payment Services Directive 2 (PSD2), which requires all payment account providers (not just current account providers) in the EU to allow third-party access. PSD2 does not call for an open standard, but Open Banking will have to meet the legal requirements of PSD2.

Learn more.

## From regulation to innovation

PSD2 is a European Union law that requires banks by 2019 to create a technical interface that securely opens customer data and services to outside developers called Third Party Providers (TPPs). This open banking mandate is driving financial institutions to not only deploy APIs, but also create a strategy for securing and managing them.

While many banks are rushing to comply with the bare minimum of PSD2, others, like one leading UK bank, are seizing it as an opportunity to innovate. This three century-old bank is using APIs to open its core capabilities to partners and create new ways to reach customers and tap into outside innovation. To enable that business goal as well as comply with PSD, the bank sought to create an open developer ecosystem both inside and outside of its business that enabled new projects to be built faster.

The bank determined that the solution was to build a centralized digital and mobile repository of reusable services powered through an API portal from Akana that makes finding and using APIs fast and easy for developers. For external developers, these include APIs related to customer payments and other transactions, and security, while for its internal developers, they include middle-tier and back-end APIs reusable across the company.

The bank has already released three open banking APIs: ATM Locator, Branch Locator, and Product Details. Developers flocked to the portal, which received more than 500,000 unique hits shortly after its release. By going a step above regulations and simple API systems, the bank is already starting to see some of the intended benefits, in the form of new partnerships and services and better customer service, all created with less time, money, and effort than before. It is poised to become the poster child for banking innovation, proving that you can teach an old dog new tricks.

## Creating agility through APIs and microservices

One of the ten largest global insurance companies, with $22 billion in revenue, had only five percent of the global employee market, despite its size and brand recognition (on par with Coca-Cola).

One big reason: the insurer's sluggish IT infrastructure, which hampered its ability to fine tune its offerings to attract customers and make it easier for agents and brokers to sell. Its large monolithic applications, written in .NET and traditional Enterprise Service Buses (ESBs), not only made it slow (6 months or more) to tweak its applications, but risky to make those changes, too.

To modernize its IT systems and regain the ability to change its apps quickly without risk, the insurer wanted to deploy microservices, APIs, a security gateway and portal, and move from a waterfall to Agile/Scrum development process. Fortunately, it found a solution to enable this — the on-premises Akana Platform for API management.

This gave the insurer a way to manage the portfolio and lifecycle of its microservices, automate agent and partner onboarding, design and document APIs, aggregate services to form new APIs, and apply security consistently across APIs internally and externally. So far, the insurer has rolled out its developer portal and defined customized workflows for onboarding its partners. It's continuing to establish its desired Agile development process that will make the company more competitive in today's fast pace of business.

Learn more by downloading the full case study.

## Making and saving money with APIs

Boosting the top or bottom lines are the ultimate goals of any business. An API First strategy can enable that. Take this American multinational hotel chain. It's using the API management software from Akana to publish and manage APIs exposing its reservations and rewards data and systems to online travel sites, travel agents, and other potential partners. This boosts room bookings and sales to consumers and also tour operators. In an earlier era, exposing the core of your business would seem suicidal. In today's ecosystem economics, creating a platform for partners can generate new revenue.

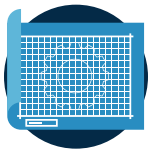
Or take this £17 billion-a-year UK-based retailer, which operates more than 1,000 stores in Europe and Asia. It is in the early stages of a multi-year IT transformation program with the goal of saving the company £500 million a year. Integrating data and applications throughout this worldwide conglomerate is key to reaching this ambitious target. To accomplish this, the retailer is creating secure, manageable shared services using what it calls a "Group API Framework." Every API-enabled IT asset will become available to virtually any system in the company. This will enable Division A to see transactions from Division B's supply chain application by accessing the app as a shared service. These transactions will also be secured and monitored, so that their sharing doesn't cause usage spikes that cause the original application to perform badly — or fail.

To accomplish all these goals, the retailer is using a cloud-hosted version of the Akana API Gateway. Besides streamlining the management and securing of these APIs, Akana provides real-time monitoring of the APIs and service performance, as well as alerts and reporting. A powerful policy manager lets the company quickly change policies across hundreds of services and APIs. That is also leading to faster app development overall, with support for DevOps and other modern development practices such as continuous integration and continuous delivery of code.

Learn more by downloading the full case study.

## Now what?

To help achieve their business transformation goals and enact an API strategy, all of the enterprises above chose an API management platform. Enabling you to easily create and manage these APIs is only job one. A comprehensive API management platform offers many more powerful features, as well as a range of deployment options (on-premises, cloud, or hybrid). Below are eight capabilities you and your team should put on your checklist:



**API design** – Does the platform let you define and document your API with easy-to-use, graphical tools?

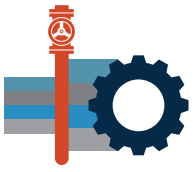
**API portal** – Can you create an attractive, social-friendly and brand-compliant portal that makes it easy for developers to find and consume APIs?

**API security** – Does the platform offer rich authentication and authorization features such as OAuth and OpenID? How well does it prevent attacks such as man-in-the-middle, SSL protocol downgrades, authenticated-but-not-authorized API clients, rooted mobile devices, malicious code, etc.?

**API lifecycle management** – Can the platform ensure you're building the right APIs? Once the APIs are built, can it reduce human error by automating API provisioning and promotion, e.g. leveraging DevOps with auditable control?

**API analytics** – What business insights can you generate and display in a graphical way for best consumption?

**Mediation and integration** – Can the platform create modern, well-structured APIs from your legacy applications and multiple back-end sources?



**API traffic management** – Can the platform monitor and control the flow of traffic of APIs to maintain high quality of service?

**Deployment options** – Does the platform offer fully hosted cloud, hybrid, and on-premises scenarios?

## Best practices for a future-proof API foundation

1. **Define the strategy around your business, your potential audience, and how the APIs will be consumed.**
   a. Is the audience internal or external to your company?
   b. How secured must these APIs be?
   c. How should they be aligned with Disaster Recovery?

2. **Categorize your APIs by data sensitivity, criticality, and volume.**
   a. Apply applicable compliance rules such as Payment Card Industry (PCI) or Personally Identifiable Information (PII)
   b. Think granularity
   c. Determine ownership

3. **Separate portals, security, controls, paths for internal and external consumers.**

4. **Set up and apply common API presentation view by agreeing on a Definition Language such as Swagger.**
   a. Include sample requests and responses
   b. Apply security
   c. Determine consumption model, offered licenses, etc.

5. **Create SLA policies that consider your backend capacity.**

6. **Use caching for APIs running static data like office locations and contacts.**

Ask us how Rogue Wave Akana can help your team implement a successful API strategy and drive business innovation at roguewave.com.

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