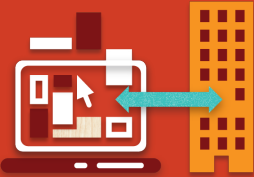MASHERY

DRIVING REAL-WORLD ENTERPRISE & B2B RESULTS WITH APIs

Gartner says 75% of Fortune 500 enterprises will open an API by 2014. Here's why.

WITH CASE EXAMPLES FROM

comcast

Expedia

USA TODAY
A GANNETT COMPANY

DRIVING REAL-WORLD ENTERPRISE & B2B RESULTS WITH APIs

When analysts say that application programming interfaces, or APIs, are today's most industry-transforming, most ROI-positive, most essential enterprise technology, are they exaggerating?

Consider this: Fortune 500 enterprises are already using APIs to open new billion-dollar revenue channels, slash development costs, speed time to market, scale partnerships, and tap outsiders for innovation. Can any other enterprise technology lay claim to all that?

Of course, how an API will benefit *your* enterprise depends on many factors, including your industry, the degree to which competitors are exploiting APIs (if haven't yet, they will), and your organization's culture. In this paper, we present the stories of three Mashery enterprise API management customers—Comcast, Expedia and USA TODAY—to illustrate how enterprises are already capitalizing on the API opportunity.

## APIs: Distribution Channels for the Digital Age

All enterprises with vibrant API programs agree on one thing: competitive advantage in the digital age is all about connecting with customers, suppliers and partners.

To be sure, that's nothing new. Coca-Cola, for example, began pursuing its "360-degree landscape of Coke" strategy decades ago. But until recently, product reach was achieved primarily through physical means—physical intermediaries (brick-and-mortar retailers) and physical logistics (planes, trains, and automobiles).

With the rise of connected devices, apps become the intermediaries, the new route to reaching customers and partners. We're talking apps in the broad sense—not just smartphone apps but also websites, enterprise apps, TV apps, and refrigerator apps. As such, ubiquity today means being present *every* time your services are relevant in *every* app your target customer *ever* uses.

AGUSTIN SCHAPIRA, PRINCIPAL ARCHITECT

" in less than 30 minutes, any group within Comcast can expose data and services to any other group."
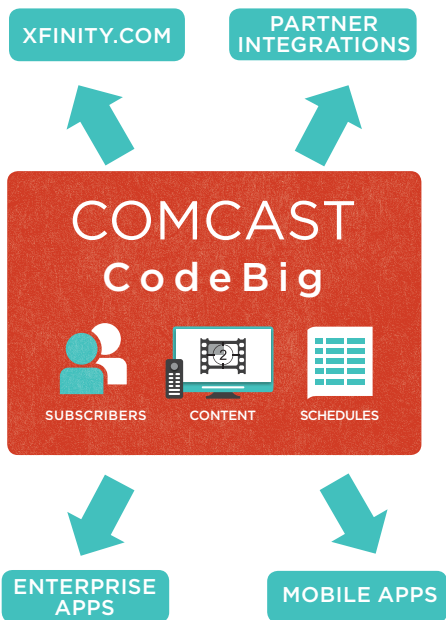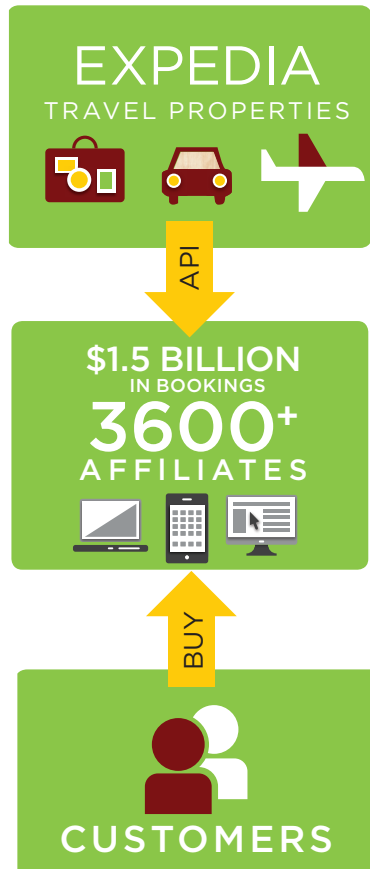
Comcast: Delivering Next-generation User Experiences through APIs

To fulfill such a tall order, you'd need a secure way of letting apps instantly, securely order up discrete pieces of your content and services in real time. You'd need a way to authorize developers and make it easy for them to get what they need. Well, that's exactly what Agustin Schapira set out to build when he launched Comcast's API platform, known as CodeBig.

Comcast is one of the world's largest entertainment conglomerates, with $56 billion in annual revenue and operations ranging from cable, Internet, and phone services to programming and production. In 2009, Schapira, a Comcast principal architect, noticed that Comcast developers were increasingly drawing on resources from different parts of the enterprise—mixing, say, subscriber information ("Does this home have HBO?") with program listings ("What's on at 8 p.m. in Dallas?")—in order to build the kind of web, TV, and smartphone experiences that customers demanded.

Unfortunately, accessing those cross-division resources typically became a project that lasted many months. No way Comcast's customers could wait that long.

A huge source of the time suck, Schapira discovered, was getting everyone to agree on data exchange protocols. The TV department

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PARTNER INTEGRATIONS

COMCAST
CodeBig

SUBSCRIBERS   CONTENT   SCHEDULES

ENTERPRISE APPS

MOBILE APPS

would have one format, while the subscriber department had another. In addition, since the scope of each project was limited, code was rarely reusable; follow-on projects had to start from scratch. "It was not ideal," Schapira recalls.

Setting out to change all that, Schapira asked his teams to build new functionality by exposing it as services accessible through RESTful APIs. That is, each piece of content or service should have a URL, just like a web page, that's easily callable by developers. In addition, Schapira promoted CodeBig as a central place for Comcast developers to publish and consume APIs.

He built CodeBig with Mashery, so that every API would seamlessly get scalability, access control, advanced reporting and best practices. "CodeBig makes it easy for these teams to share information without having sit down in a room with each other," says Schapira.

The upshot: Schapira has slashed the time it takes for Comcast teams to expose resources from many months to around 30 minutes. With CodeBig, an API creator simply enters the service's hostname and path, defines access limits, and starts issuing keys to those who want to consume it. (Schapira lets each group issue and manage its own keys through Mashery.)

The benefits are evident in a stream of new Comcast online experiences, like the Xfinity iPhone app and the Xfinity.com website, which let users remotely schedule programs for recording on DVRs in their homes. But that's just the tip of the iceberg. Comcast teams have built dozens of internal-use enterprise apps that grab data from different departments, all using CodeBig. Explains Schapira: "The goal is that APIs become so fundamental to how we operate that people don't notice them anymore, like the air."

Expedia's Billion-Dollar API

With the growing popularity of APIs, more and more enterprises are managing them like products, with product managers, marketing goals, and revenue targets. That's certainly the case at Expedia, where an API generates over $1.5 billion in annual travel bookings.

Expedia Affiliate Network (EAN) serves over 10,000 partners—businesses that contract to offer Expedia hotels under their own brand. Five years ago, 90 percent of EAN revenue came through a web template—a framed HTML window that affiliates could embed in their own sites. EAN had an API back then, but not very many affiliates used it.

That changed as affiliates began deploying native mobile apps and advanced Websites. More specifically, affiliates wanted piecemeal access to Expedia content so they could seamlessly integrate it into their own interfaces and experiences. As a result, the API, which lets affiliates grab not only bookings, but also photos, search results and user reviews (and all of that in 20 languages!) became hugely popular. API traffic grew big enough that EAN needed tools for managing it and turned to Mashery. Today, 80 percent of EAN's revenue will run through partner sites that use the API.

"This is a massive fundamental shift," says Vice President of Product & Marketing Benoit Jolin, "and it's all about the enterprise moving from a focus on building products to more of a platform mentality."

In the platform model, Jolin says, the enterprise's job is to create great services that can be packaged by in-house teams, but might ultimately be delivered to end-users through partners. Jolin believes the platform model will ultimately win out because it lets enterprises reach more customers. As an example, he points to cutting-edge travel sites such as Gogobot (social trip planning), Fodor's (city guide apps) and Room 77 (room views) that EAN didn't create but that add to EAN bookings thanks to the API.

"Unless you're Steve Jobs," Jolin says, "it's very difficult to create a set of products that will be right for everyone. And with an API, you don't have to."

USA TODAY: Leading News Apps and 700+ Distribution Partners

USA TODAY has also seen increased demand for sharing its content, both from its own developers—who want to build new, engaging mobile apps—and from partner licensees looking to distribute USA TODAY headlines, articles, and data in their own apps and websites.

To meet this demand, USA TODAY traditionally built a custom data handler—often through an exchange of flat files—for each new app or partner. But according to Erik Bursch, USA TODAY Director of IT Operations and Content Systems, custom handlers had many disadvantages. "They were time-consuming to build and document, and they were difficult to maintain when the underlying data structure changed," Bursch says. "Worse, there was no systematic way to understand how these channels were performing."

Hoping to overcome those challenges, USA TODAY launched the USA TODAY API, a public web portal for sharing data with partners of all types, in 2010. USA TODAY API grants access to news articles, census results, photos, movie reviews, book lists, and sports salaries among other datasets. Some of the APIs, such as USA TODAY headlines, are available for public developers, meaning anyone who accepts the terms of use can visit the site, get a key, and start building apps with them. (USA TODAY recently relaxed the terms to permit commercial use for headlines.)

There are also 15 private APIs, including those that provide full-text of USA TODAY news articles, available only for contracted licensees. At USA TODAY's Mashery-made web portal, developers can register for access, make live API test calls using the interactive documentation, and see usage reports on their own app activity.

Bursch credits the API with some amazing achievements. First, it has let USA TODAY deploy best-of-class apps on new platforms nearly as quickly as they hit the market. As a result, USA TODAY boasts leading iPad and Kindle Fire news apps. Also, just like at Comcast, the API has slashed the time it takes for partners and internal teams to get access to USA TODAY data from months to minutes.

Today, over 700 partners have access to the API. A year ago, Bursch guesses, most of his business development staff had never heard of an API. "Now they all know about it," he says, "because it lets partners quickly take a look a the data we offer."

Interestingly, the public APIs, while offering more limited content, serve not only as way for USA TODAY to leverage the broader developer community, but also as a kind of long-tail partner marketing channel. Developers at other companies can use it to build prototypes that make the case to their colleagues for pursuing formal licensing relationships with USA TODAY.

Finally, because the API is deployed through Mashery, Bursch and his team can see how it performs in real time. For example, he can see which API partners and apps are generating the most traffic, which methods are most popular, and which apps are driving page views back at USA TODAY's website. Because Mashery is a multi-tenant, Software as a Service (SaaS) platform that scales dynamically, Bursch never worries about infrastructure or capacity. When asked recently what he did to prepare for spikes in demand caused by trending news stories, he answered, "Since we leverage Mashery's platform, which we feel is appropriately configured, they handle those concerns for us."

ERIK BURSCH, DIRECTOR OF OPERATIONS, CONTENT SYSTEMS

"USA TODAY's public APIs, while offering more limited content, serve as a kind of long-tail partner marketing channel."

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