5 Ways Every Telco Can Benefit From APIs

ca technologies

Introduction: The Past, Present & Future of Telco APIs

The Advancing Need for Telco APIs

Although the telecommunications industry was one of the first sectors to take an active interest in APIs, carriers have not fully capitalized on the business opportunities APIs present. However, as Web and mobile technologies evolve, it is becoming essential for every telco carrier to develop a serious API publishing program.

More and more consumers are expecting telco services to be embedded in a range of platforms – notably mobile devices, Web browsers and games consoles. Ongoing developments in mobile and Web technologies are also creating competition from new sources as hardware and software suppliers increasingly embed services in their offerings (e.g. Facetime on the iPhone).

How Telcos Can Leverage APIs

To remain competitive in this context, telcos must use APIs to increase their agility and the efficiency with which they adapt to technological change. By opening up services for reuse across multiple ecosystems, APIs greatly simplify the process of delivering services via mobile networks and the Web.

Many telcos have reacted to these developments by attempting to court the long tail of third-party app developers. As direct revenue generators, these attempts have mostly failed. However, the long tail does still offer some value to telcos and there are many other ways carriers can benefit from opening APIs to partners and internal developers.

In this eBook, we present five key ways telecommunications carriers can leverage APIs to stay competitive in a rapidly changing technological environment.

Overview: 5 Ways Every Telco Can Benefit from APIs

Maximize Technology Innovation Internally

Use internal resources to generate new ideas for service delivery

Optimize the Efficiency of New Service Development

Increase the agility of internal service development and exposure to minimize time to market

Partner with Enterprises to Support Advanced Mobilization

Share information assets with other organizations to deliver value-added hybrid services

Reach Developers & Speak Their Language

Give your developers the tools and inspiration they need to succeed

Leverage the Rise of HTML 5 & the Open Web

Harness emerging Web technologies to provide valuable in-app services

Maximize Technology Innovation Internally

Use internal resources to generate new ideas for service delivery

WHAT

Providing simple ways to abstract and access information resources across the network is fundamental to enabling innovative internal development projects.

APIs make it possible to open up existing resources as reusable services for delivery across new platforms, applications and media.

APIs also provide a monitoring and control point for network usage – providing data on usage, operational efficiency and errors.

WHY

In an increasingly competitive and technology-driven market, telcos need to innovate new ways of delivering their services.

APIs speed and simplify the process of delivering innovative new services, while reducing the cost of development (see chapter two).

APIs give telcos access to a wider pool of developers – there are simply more Web and API-focused devs than traditional, specialist telco developers.

HOW

Telcos need to adopt technologies that securely and efficiently enable the abstraction and exposure of their services as RESTful APIs.

The best way to achieve this is by using an API Gateway to protect the APIs against misuse and to translate legacy services into Web and mobile-friendly formats.

Additionally, it would be helpful to provide internal developers with a portal where they could access API documentation and discuss the APIs with other devs.

Optimize the Efficiency of New Service Development

Increase the agility of internal service development and exposure to minimize time to market

WHAT

Developing new products and partnerships relies upon exposing the most unique and useful assets from within the network.

All carrier networks contain a wealth of unique information resources. Repurposing these resources is the quickest, most cost-effective way to deliver innovative new services.

If delivered correctly, APIs provide the quickest, most cost-effective way for a telecommunications carrier to repurpose its existing information assets.

WHY

Conventional software development processes would require telcos to build new services from scratch – which is unacceptably slow and expensive in the current climate.

By exposing legacy information resources as RESTful API, telcos can quickly leverage their existing investments to build innovative new products.

Even when creating new services from scratch, an API-centric approach makes it possible to build services that can easily be repurposed across multiple platforms.

HOW

In order to quickly deploy APIs to developers, telcos must have the right API Management tools – as previously mentioned, an API Gateway and developer portal.

The API Gateway will speed the process of translating legacy assets to RESTful APIs. The portal will optimize the efficiency and effectiveness of developers.

It is also important to tailor the delivery of APIs to suit the developer audience – which may be internal employees, partner developers or long-tail app devs.

Partner with Enterprises to Support Advanced Mobilization

Share information assets with other organizations to deliver value-added hybrid services

WHAT

Enterprises of every kind are looking for ways to leverage the explosive growth in mobile devices and apps to optimize customer service and employee efficiency.

In particular, BYOD has made employee mobility a reality and multiplied the urgency for enterprises to address the opportunities and challenges mobility presents.

This provides opportunities for telcos to partner with enterprises, in order to deliver resources that enable the delivery of mobile services to customers and employees.

WHY

To remain competitive, just about every kind of enterprise needs a mobile strategy. People expect mobility – organizations that cannot deliver it will suffer.

This creates opportunities for API-enabled telcos, which have the network resources that enterprises need. APIs allow telcos to give enterprises access to these resources.

By pre-integrating telco APIs into their mobile strategies, enterprises can leverage the power of the network to get quicker, more effective results.

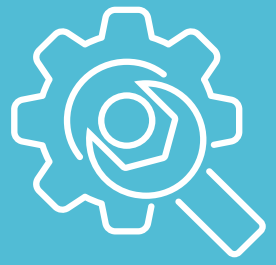
HOW

The goal is to leverage services exposed by APIs to build strategic, mutually beneficial relationships with enterprise partners and independent software vendors.

In order to do this, a telco will need technology able to expose APIs that use formats and protocols specifically appropriate for mobile and BYOD.

This will inevitably involve the deployment of a mobile-ready API Gateway (or Mobile Access Gateway) with functionality for messaging, geolocation etc.

Reach Developers & Speak Their Language



Give your developers the tools and inspiration they need to succeed

WHAT

Developers will be at the core of any successful API strategy. API-enabled telcos need ways to engage and educate developers.

Whether these are internal, partner or long-tail developers, it is vital to provide devs with the tools they will need in order to be productive.

This is likely to include documentation, testing tools and discussion forums, delivered via an online portal, as well as special events like hackathons and developer challenges.

WHY

Simply put, there is no point in having APIs if you do not have developers building powerful services that leverage these APIs.

Developer engagement is about more than publishing an API via a portal. It is about giving devs a truly frictionless environment and an inspiring support network.

Providing an experience that is seamless, informative and fun for Web API developers will lead to the creation of more and better services against your APIs.

HOW

Interfaces, materials and events must be created with devs in mind. You need to create experiences tailored to the needs and interests of your specific developer audience.

To achieve this, you will need to adopt technology that simplifies the process of building a portal that is both full-featured and customized to your audience's preferences.

Ease of use is paramount. The portal must make it quick and easy for developers to discover, register for, learn about and leverage your APIs.

Leverage the Rise of HTML 5 & the Open Web

Harness emerging Web technologies to provide valuable in-app services

WHAT

The online world is changing, as standards like REST and HTML 5 plus innovations in mobile and cloud technologies revolutionize the way people use the Web.

Simply put, these standards and technologies are allowing people to do more online, from a greater variety of locations and platforms.

The openness of these innovations means applications and services are increasingly portable across devices, which introduces a range of opportunities for telcos.

WHY

Today's Web is an open ecosystem where key services like identity and payment are no longer completely dominated by major player like Apple, Google and PayPal.

In this open ecosystem, telcos with serious API strategies will be perfectly placed to provide vital services like in-app payment and identity federation.

In the coming years, emerging technologies like WebRTC and Firefox OS will create ever-more business opportunities for API-enabled telcos.

HOW

Ongoing developments in the open Web are making it increasingly urgent for every telecommunications carrier to adopt a complete API Management solution.

This solution must be full-featured enough to deal with key existing standards like WebSocket or XMPP and flexible enough to adapt to emerging open Web technologies.

Used together, the CA Mobile API Gateway and CA API Developer Portal represent the most complete technology available for telco API publishing.

Learn More: CA Mobile API Gateway Data Sheet

Examples of Innovative, API-Enabled Telco Services

Rich Voice

The voice network is a core asset, which can be used to build innovative new services, if it is exposed in a language familiar to Web and mobile developers. Major carriers have already had success turning voice into services.

Rich Messaging

IP-based messaging services can bring together presence and other contextual details about the user. RCSe (rich communication suite) and joyn services have taken the first step but this ecosystem should be open to any client via API.

In-app Payments

Apps are not just for mobile and – with increasing adoption of HTML5 – new ecosystems will develop through which carriers can regain lost ground. In-app payment is a key way for carriers to reduce friction for developers and consumers by enabling consumers to purchase goods and services without laboriously entering credit card details or other credentials.

Identity Aggregation

Customer identity management is a huge opportunity for telcos – in a world were users regularly switch between multiple Identities (phone number, email, Twitter etc.), there is significant demand for simple ways to aggregate these identities.

Examples of Innovative, API-Enabled Telco Services (Continued)

Network Monitoring and Control

Applications – both internal and external – can benefit greatly from understanding aspects of network performance and being able to request network configuration on demand. For example, if an application can understand network load at a particular location and time, it may be possible to adapt the application's behavior to optimize performance.

Customer Information

Applications can use customer information as a resource as they seek to improve the user experience. If an app can determine that a customer is approaching a data limit or is currently roaming or does not have unlimited messaging, the application experience can then be tailored and improved.

M2M Communication

With carriers funneling data streams for machine-to-machine (M2M) applications, there are many instances in which the transmitted content can be reduced (e.g. timestamps or location) and inserted after the fact using network intelligence, which is readily available. This means remote devices can be less intelligent and therefore cheaper.

Conclusion: The Keys to a Successful Telco API Strategy

In order to keep pace with technological change and remain competitive, telecommunications carriers must use APIs to open up their services for quick repurposing across a range of Web and mobile platforms. Opening services to the long tail of third-party developers can be important for encouraging innovation but the real value APIs hold for telcos comes from making services available for reuse by internal resources and external "mid-tail" partners.

A properly-focused API publishing strategy can empower any telecommunications carrier to efficiently repurpose its existing services, collaborate with partners and maximize employee productivity. However, using APIs to expose telco services also inevitably creates a range of significant security, data translation and developer management challenges.

These challenges are best addressed by using an API gateway and developer portal. An API gateway installed either as a hardware networking appliance or a virtual machine will filter, mediate and audit the flow of service data. A developer portal will provide a one-stop-shop for developers to discover, learn about, test and leverage the APIs.

CA Technologies provides the most complete available solutions for telco API Management. The **CA Mobile API Gateway** simplifies the process of publishing APIs, securing information assets, adapting data and optimizing performance. The **CA API Developer Portal** makes it simple to deploy a full-featured, branded developer portal.

CA Technologies provides the most complete available solutions for telco API Management.

To learn more, visit ca.com/api

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CS200-88295

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