Mobility: Plugging Into the API Economy
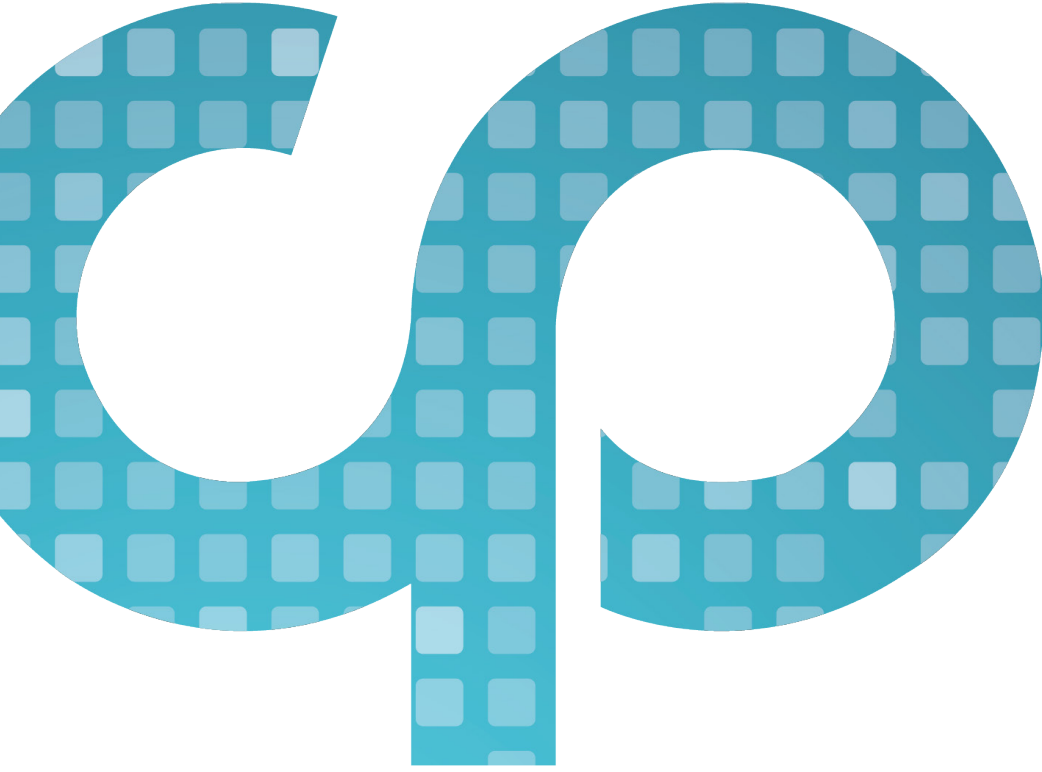
By Kevin Casey

Channel Partners™

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Table of Contents

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About
the Author

KEVIN CASEY writes about technology and business for a wide variety of publications and companies. He won an Azbee Award, given by the American Society of Business Publication Editors, for his InformationWeek.com story, "Are You Too Old for IT?" He's a former community choice honoree in the Small Business Influencer Awards.

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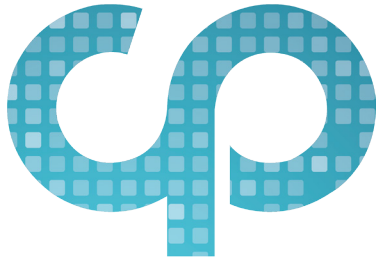
Mobility: Plugging Into the API Economy

THE APPLICATION PROGRAMMING INTERFACE, OR API, ISN'T NEW, BUT THE BOOMING API ECONOMY REMAINS relatively untrod ground for many partners.

In our hyperconnected world, however, that may mean you're overlooking potentially significant opportunities, especially as cloud, mobile and other technologies continue to revolutionize traditional business models, both in the channel itself as well as among its customer base. APIs can enable high-value mobile projects, such as diagnostic tools to optimize apps, in-app messaging and video, push to talk and even IoT projects.

"APIs are becoming the fundamental building blocks for mobility and digital transformation, acting as the new atomic structure that enables connectivity while hiding complexity," says Elijah Martinez, product manager for **SAP Cloud Platform**. "Partners can utilize this new API ecosystem by leveraging existing APIs to enhance customer mobile scenarios without requiring resources to build services, as well as help customers generate their own APIs which can be integrated into other sources, driving broader adoption."

APIs 101

Applications programming interfaces (APIs) are simply code that lets applications communicate directly with one another. Why should partners care? Standards-based APIs make complex processes repeatable, saving significant time and effort.

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For the uninitiated, or for a quick refresh, here's a quick definition excerpted from TechTarget: An API is "code that allows two software programs to communicate with each other. The API defines the correct way for a developer to write a program that requests services from an operating system (OS) or other application." Later in its primer, you'll find a compelling reason to pay attention: "Software that was once custom developed for a specific purpose is now often written referencing APIs that provide broadly useful features, reducing development time and cost and mitigating the risk of errors."

In simple terms, APIs enable you do more for your clients with less work. "The push toward open (public) APIs means that new applications can be built on top of existing services in a fraction of the time," Martinez says. "This is the reason ProgrammableWeb, the largest database of public APIs, grew from only a few hundred APIs to over 17,000 listed APIs in only a few years."

In this report, we'll highlight some real-world examples of successful API-enabled mobile communications projects and discuss how partners can help customers use APIs to move their mobility-enhanced business projects forward.

APIs & Mobility: Real-World Examples

The buzz about the so-called API economy is grounded in very real catalysts, and one of them is the mobile revolution in the workplace.

"Mobile-enabled software has become the norm as a way for organizations, partners and customers to engage with business processes," says Leonie McGloin, program marketing manager for mobile platforms at Red Hat. "However, as endpoints and user interfaces multiply, point-to-point integration is no longer sustainable. Instead, APIs are becoming the accepted means for connecting business assets — IT systems and data, internal and external personnel, client applications and customers — to maximize their potential value."
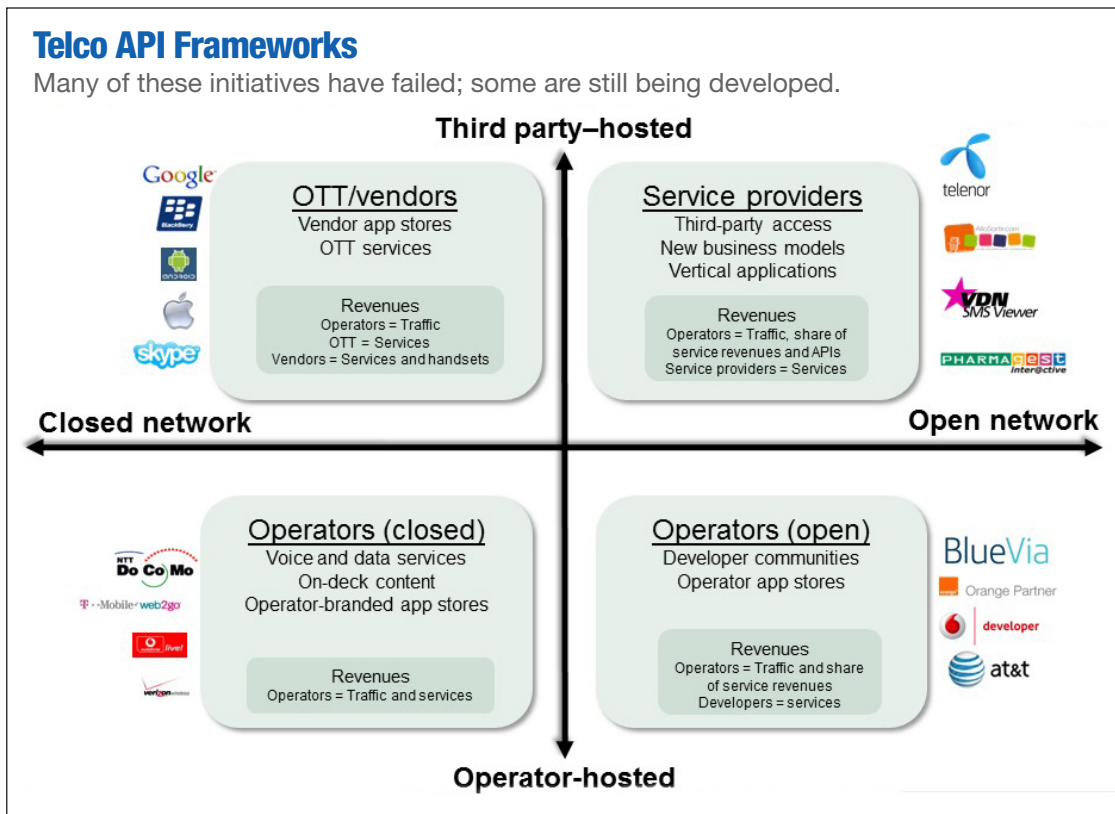
As a result, McGloin adds, APIs play an increasingly critical role in mobile application development.

Let's look at some examples of successful API-enabled mobile projects.

Telecommunications: SMS & Voice APIs

"APIs have been heavily disruptive through many sectors, including telecommunications," Martinez says. "For example SMS and voice APIs from providers like Twilio have enabled many startups, including the now ubiquitous Uber, to deploy communications in their mobile apps without investing in building their own infrastructure, and scaling as demand required. Almost any mobile communications can now be enabled easily via API."

Twilio, to dig into Martinez's example, offers a wealth of case studies and examples for API-enabled voice and text, as well as other features. For instance, how in-app appointment reminders via text messaging can cut down on costly no-shows: Arkansas Children's Hospital saved $250,000 and dropped its no-show rate from 20 percent to 2 percent with API-enabled text reminders for patients. Twilio is one of the big names in this space at the moment, but there are others, too, if you want to explore your options.

Telco API Frameworks

Many of these initiatives have failed; some are still being developed.

Third party–hosted

Google / BlackBerry / android / Apple / skype

OTT/vendors
Vendor app stores
OTT services

Revenues
Operators = Traffic
OTT = Services
Vendors = Services and handsets

Service providers
Third-party access
New business models
Vertical applications

Revenues
Operators = Traffic, share of
service revenues and APIs
Service providers = Services

telenor / AlloSorte.com / VDN SMS Viewer / PHARMAGEST Inter@ctive

Closed network ← → **Open network**

NTT DoCoMo / T-Mobile web2go / O2 liver! / verizon wireless

Operators (closed)
Voice and data services
On-deck content
Operator-branded app stores

Revenues
Operators = Traffic and services

Operators (open)
Developer communities
Operator app stores

Revenues
Operators = Traffic and share
of service revenues
Developers = services

BlueVia / Orange Partner / developer / at&t

Operator-hosted

Source: Ovum

Field Service & Field Sales Teams

Sales and service personnel are the original mobile workforce: They have always needed to be productive outside of the office.

"While these workers traditionally used hand-held mobile devices in the field, modern smartphone and tablet mobile devices have transformed workflows and operational processes," says McGloin.

Indeed, mobile technology advances have unleashed a wealth of new opportunities in the field. The combination of modern mobile device features (including cameras, geolocation, scanning and so forth — features that increasingly integrate with sensors and other IoT devices, too) with data from third-party sources (such as weather, push notification, messaging and so on) is "a powerful force that is transforming field workforce management," McGloin says. "In building these solutions, APIs are essential in exposing the data from back-end systems — often these can be legacy systems — and any third-party service so that it can be consumed in a mobile-friendly way."

She shares two specific real-world examples in the field:

Rapid response in disaster scenarios. McGloin notes that severe storms in Europe in 2015 caused significant infrastructure damage and disrupted rail service there, creating an urgent need for the field teams deployed to respond and get trains running again:

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"Field engineers needed a way to more quickly and accurately report incidences so that repairs could be prioritized and the correct maintenance teams dispatched to the right location with the necessary equipment," she explains. "A simple mobile app was created and deployed to field maintenance workers within two days. The app allowed them to capture images and information regarding the status of damage and to prioritize the most urgent incidences that needed quick resolution. Integration of the mobile app with back-end workforce management systems, via APIs, meant teams could be scheduled and dispatched immediately, helping to get rail services operational and people on the move again."

API Standardization

Theoretical: API standardization ensures bigger volumes of developer and operation interaction.
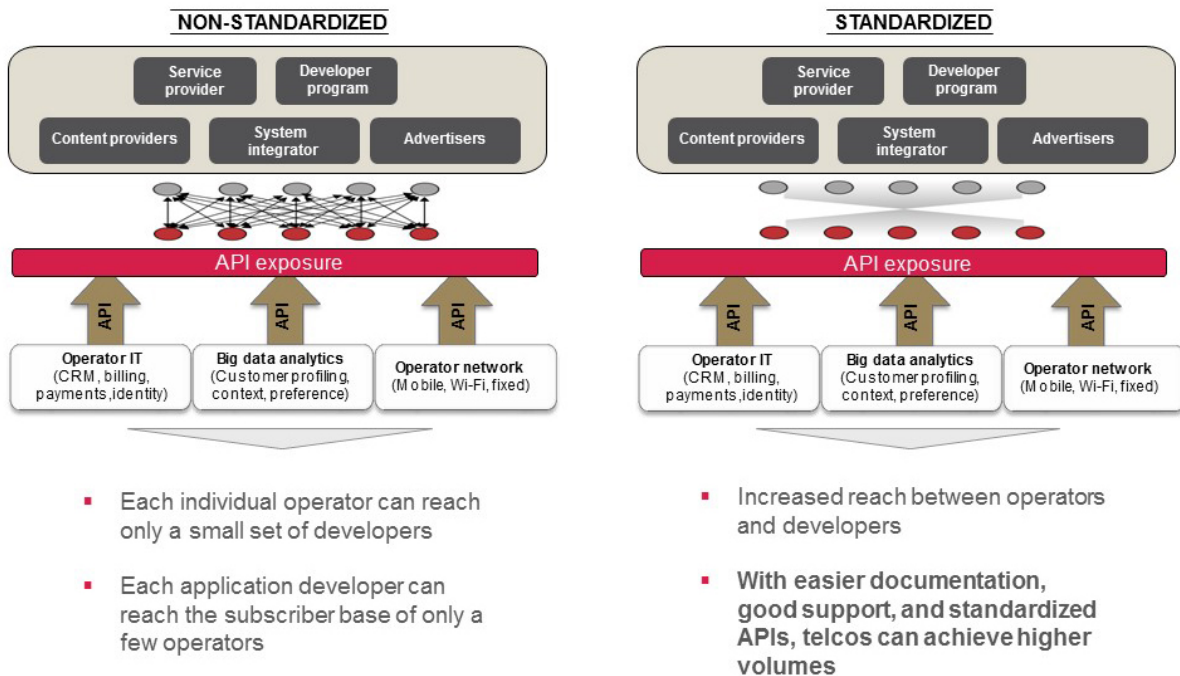
Source: Ovum

Managing a large construction workforce. McGloin describes how a large construction services and property company that hires many contractors uses API-enabled mobile apps to keep everything running smoothly in an inherently chaotic environment:

"With a large field service workforce of over 10,000 workers, they are responsible for construction projects that include maintenance and repairs," she says. "Mobile apps on smart devices help streamline workflows, giving construction workers the necessary work order and scheduling information so they can easily locate work sites, take images and videos of infrastructure, add notes and messages to work orders and sign off on completed jobs through signature capture. The mobile app integrates securely with back-end systems via APIs, to deliver the necessary information directly to the device. This has greatly improved productivity as well as gaining buy-in from the workers."

Mobile Ownership Verification

In short, mobile ownership verification is an API-enabled method of helping to ensure that highly sensitive information traveling via mobile devices and apps is only reaching its intended destination. This is a vital need in many industries, and especially those that deal with sensitive data.

Martinez explains: "This API service allows companies such as financial institutions to ensure that they are sending highly sensitive and private information, such as account updates, only to mobile numbers still owned by the intended recipient. By first making a request to the verification API, to confirm the number is still owned by the correct party, they can ensure privacy and combat fraud in a low-cost and low-touch manner."

Industry-Specific Use Cases

We'll soon shift gears from example use cases to ideas and advice on how partners can capitalize on the powerful API economy, and here's a good transition point: industry-specific mobile projects, enabled by APIs, that illustrate the underlying power of APIs. Partners can leverage APIs to build powerful mobile apps and other mobility projects for specific customers or industry specialties without having to build everything from scratch or write oodles and oodles of code for each discrete project.

Navdeep Sidhu, vice president of platform marketing at Software AG, points to one of his company's customers, a retail business looking to boost its online presence. The retailer launched an API-fueled initiative, using Software AG's hybrid integration platform, to better integrate its various warehousing systems and in-store systems to provide accurate inventory within its mobile app — in part by storing millions of SKUs cached in-memory — so that its customers could either order for delivery or to pick up the order in a nearby store. Sidhu says usage of the retailer's mobile app increased, as did mobile revenues, while the customer experience also improved because of more accurate inventory data.

Sidhu shares another example of leveraging APIs for an industry or company-specific use case: "A large electric utility implemented an API-based mobile program to launch an app which provides its customers with up-to-date billing information and also push notifications which can inform them of outages and other maintenance activities planned in their area."

AT&T Opens IoT API Portfolio to Partners

Looking to spend less time on account management? That's one goal of the AT&T M2X API platform, says Sue Galvanek, vice president of marketing, pricing and product solutions for AT&T. But there's more to it. M2X APIs enable partners to:

- Pause or restart IoT service, manage billing, access reporting and inventory information, and manage customer plans
- Oversee hundreds of IoT device types on more than 40 platforms
- Gather real-time data from connected machines and translate it into information that enables businesses to make quick decisions

Unlocking the Potential of APIs

Sachin Vora, senior director of global business development at Concur, a cloud-based platform for managing travel, expenses and invoicing, says that APIs have become critical to unlocking the potential of our cloud-first, mobile-first business environment. Vora, who founded Concur's channel program, the Concur Solution Provider program, shares several tips for successful API-enabled mobile projects.

- Focus on APIs that deliver insights, not just data.

  "Customers are driven by outcomes rather than functions, and partners that deliver smart information create value for their customers," Vora says. "By delivering this value, partners become the customer's trusted technology adviser. Once that trust is built, partners can then assemble a custom bundle for each customer's needs, resulting in more loyal and successful customers over time."
- Use APIs to automate tasks that consume time and require manual effort.

  API-driven mobile apps that help users save time are gold. That's true in almost any business setting; mobile devices and apps should should make an employee's job better, not a burden.

  Vora shares an example from Concur's wheelhouse: "Customers love it when they can capture their receipt using their phone camera and the mobile API automatically writes to the user's expense report.
- Help customers understand why they should use the API rather than what the API does.

  As a partner, it's easy to forget a fundamental notion: It's *your* job to understand the underlying technologies, not your customer's job. They have their own business to worry about.

  "With line-of-business decision-makers as customers, it is important to position the API as a solution to business problems, rather going too deep and technical into how the technology works," Vora says. He advises investing in the ongoing training of your sales team as one strategy to ensure that you possess the requisite balance between in-house expertise and the right customer communication: "We've found success in equipping partners with training that ramps up their sales teams quickly and frequently using systems such as short training content, mobile delivery of training, gamified experience and emphasis on recall."

API Standards

While there is no one governing body for API development, developers are generally encouraged to follow one or more of the preferred standardization body guidelines to ensure interoperability, depending on the chosen platform.

Focus
(mobile and/or Web)

W3C – Among the many bodies that develop Web-related standards and specifications, Worldwide Web Consortium (W3C) is the predominant organization for global Web standards. Its work includes standards for both desktop PC and mobile use.

OMA – In the mobile arena, the Open Mobile Alliance (OMA) specifies mobile service enablers to ensure interoperability. For mobile browsing, it has developed a number of specifications and recommendations.

GSMA – Representing operators and mobile ecosystem providers, the GSMA (GSM Association) develops technical recommendations including OneAPI in collaboration with OMA, which will develop specifications for OneAPI. The GSMA also collaborates with OMTP BONDI.

Parlay, ETSI, 3GPP – The Parlay Group develops telecom APIs and has worked jointly with the European Telecommunications Standards Institute (ETSI), Parlay, and the Third Generation Partnership Program (3GPP) to develop the Parlay X 4.0 specifications, which define a wide range of telecom functions that entities can access using Web services. The Parlay X specifications are now managed by OMA.

OpenAjax – The OpenAjax Alliance has the goal of successful adoption of open and interoperable Ajax-based Web technologies. The alliance provides feedback on projects such as BONDI.

Source: Ovum

Identifying High-Value Mobile Initiatives

Red Hat's McGloin shares three ways of thinking about or identifying mobile initiatives that capitalize on APIs and drive the kinds of business outcomes that your customers place a high value on.

- **Generating new revenue streams.** Good luck finding a business or industry that's averse to finding new ways of making money. (Even nonprofits need to ensure a healthy bottom line, after all.) McGloin shares an example much like Sidhu's retail customer above: offering a mobile retail solution that helps a customer quickly find and purchase items from their mobile device.

- **Extending market reach and value.** Again, this should not be that tough of a sell to your clients. In this case, partners can help customers leverage APIs to build mobile solutions that better promote the organization's products and services or even extends their geographical reach, according to McGloin. Similarly, partners can help applicable customers create their own APIs to make available to developers and help create a new ecosystem around a particular product or service, again potentially extending its market reach and the value it's delivering to its own customers.

- **Stimulating the business' technical innovation.** McGloin notes that APIs make it easier to implement new ideas and experiments without changing back-end systems, a boon for companies with limited IT resources or who otherwise want to increase their agility and pursue new ideas without grinding the existing business to a halt.

No matter what specific use cases or projects might look like for you, the reality is that API-driven mobile projects offer tremendous potential and economies of scale. APIs are inherently repeatable, which can offer all manner of benefits to partners and their customers.

"In building mobile app solutions, well-designed **RESTful APIs** that are made accessible to developers help them to build more efficiently, integrate more consistently with back-end systems and services, and extend data from the backend to the mobile user," McGloin says. "The beauty of these APIs is that they can then be used across multiple mobile and web projects and by different developer teams, within and outside the organization."

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