

The Business Value of Kinvey

Achieve your mobile goals faster by focusing on innovation rather than infrastructure



Audience

- CIOs
- Vice President of Application Delivery
- Mobile Strategists
- Line of Business Managers

Executive Summary

Increasingly, businesses have seen that having a mobile presence is a core element to remaining relevant and competitive, and most organizations have established a mobile presence in one way or another. Whether that presence is a mobile enabled website or a mobile app seems to depend on varying factors such as budget, skillset, prioritization, and an understanding of customer needs. Some of the key initiatives driving the mobile economy have been extending or replacing customer service via self-service, increasing field worker productivity, going paperless, quicker issue resolution at a lower cost, and increased customer engagement and loyalty. Many enterprises' initial attempts at mobile presence have fallen short of both business and customer expectations, and have failed to deliver the planned business value or help achieve digital business goals.

During the research process for this paper, it was discovered that four out of five organizations had previously released first-generation mobile applications to address mission critical business functions. Although these early pioneers of mobile engagement strategies had high hopes of success, in actual practice they all experienced similar outcomes: technology obstacles abounded, firefighting was the norm, features were more complicated to deliver than originally thought, everything took too long to do, and the apps fell short of user and business expectations. Strategic wins seemed elusive due to various factors in the mobile development life cycle.

It wasn't until these organizations had tried and failed that they understood that creating a successful mobile app experience required two distinctly different development competencies: frontend and backend development skills. This discovery drove them to explore different options for achieving their digital business goals via their mobile apps. They evaluated several approaches and the solution became clear: "decouple" the frontend and backend development process and build the mobile app on Kinvey, a Backend as a Service (BaaS) provider.

By using Kinvey, each company gained new levels of agility despite the complexities of integrating to enterprise systems and lack of in-house mobile development skills. This new-found agility enabled each company to launch their Minimum Viable Product (MVP) app in record time (between 3 to 6 months), and by responding quickly to user feedback, they were able to drive high levels of user adoption and app ratings - an average of 4.8 stars across all companies interviewed.

The business value of Kinvey had several highlights:

- Each organization delivered visible business wins via exceptional apps that were delivered in record time and within budget.
- They experienced high levels of user adoption and satisfaction due to expedient delivery of useful features, especially user requested features.
- They gained dramatically high levels of developer productivity via use of a fully integrated cloud platform, pre-built app accelerators and decoupled development.

They are now spending an average of 90% of their development time on innovation, have 86% faster development cycles (from 12 months to 6 weeks) and are able to deliver twice as many features per release – regardless of using in-house or outsourced development. All of these combine to enable them to deliver the features and capabilities needed to gain high levels of user adoption and satisfaction and, in turn, achieve previously elusive app business goals.

Executives needing to turn failing mobile programs around can learn from these early pioneers. Follow the four tenets practiced by these successful organizations:

- Lead from the top
- Demand quick results
- Require a consumer-grade user experience
- Do great marketing with an emphasis on user engagement

SVP Global Business Services, Manufacturing Company

“We would not have been able to accomplish our goals without Kinvey. It would have taken us years. It has been one of the smoothest application implementations that we’ve ever had for something so large and so critical to us. All I hear is how great it is now.”

| DEMOGRAPHICS OF INTERVIEWED ORGANIZATIONS | | | | | |
|---|--------------------------------|-----------------------------|----------------------------|-------------------------------|--------------------------|
| Industry | Insurance | Construction | Manufacturing | Energy | Healthcare ACO |
| Annual Revenue | \$13B | \$2.1B | \$375M (estimated) | \$28B | Not Available |
| App Use Case | B2C | B2B | B2B & B2C | B2C | B2C |
| | Consumer insurance application | Worksite project management | Field service productivity | Self-service customer support | Patient centric services |

Summary of challenges

Prior to engaging with Kinvey, four out of the five customers were living in perpetual MVP mode. They lacked developer bandwidth to keep up with feature requests, fixes and enhancements, and were never able to build out a feature rich app experience with the tools, teams and infrastructure on-hand. Users got frustrated and abandoned the apps, and they fell short of their business goals for the app.

In all cases, there was not enough budget and resources to rewrite the app and build & maintain new mobile infrastructure, but there would be consequences if they didn't find a new way of doing things:

- Complex legacy systems would continue to cause updates to be slow and high risk;
- Slow time to market for new features, enhancements and fixes would continue to be the norm;
- Poor user adoption, dissatisfaction and defection would continue to occur.

These organizations were pioneers, they learned valuable lessons the hard way; this time, they wanted to get it right and deliver the business impact required for their organization.

Arrival of Kinvey BaaS

Each of these organizations actively sought a better way to achieve their digital business strategy via their mobile apps. They evaluated several approaches and chose Kinvey's Backend as a Service (BaaS).

Kinvey is a pioneer in mobile Backend as a Service (mBaaS), inventing the category more than six years ago. It uses unified application programming interfaces (APIs) and software developer's kits (SDKs) to connect mobile, web, and IoT apps to backend resources in the cloud. Kinvey BaaS can also be used to federate enterprise and cloud services and provides common app features such as data mashups, push notifications, business logic, identity management, social networking, integration and location services.

Kinvey BaaS empowers developers by completely decoupling and abstracting the server-side infrastructure. Frontend developers have a single protocol, data format, and query language to access any enterprise or cloud system. This is a departure from the traditional, first-generation mobile application development approaches referenced earlier, which required developers to know and incorporate the APIs of each backend service individually.



SVP Global Business Services, Manufacturing Company

“Kinvey abstracts a lot of the tedious mundane development work so our developers no longer need to do those time-consuming tasks, focusing on user-facing features instead.”

Security Is Essential

Security is its own unique concern and in typical mobile ecosystems, security protocols can make it difficult to deliver certain types of functionality or to integrate it with enterprise systems. Securing data, providing encryption, role-based security, compliance, and addressing privacy concerns in general are essential to gaining and keeping the confidence of user bases and partnering companies as well.

Not only does Kinvey provide enterprise security and HIPAA compliance, they handle every part of the security infrastructure. This includes patches and maintenance, which greatly simplifies support, reduces maintenance, offloads tasks from operations teams and opens entirely new possibilities in feature provision.

In addition to accelerating development, Kinvey provides a fully-managed app delivery platform that scales as needed, ensures end-to-end security and compliance, and is kept up to date with patches, updates, and new technology releases. Operational intelligence gives IT teams the actionable insights they need to deliver end-user support and report on end-to-end app performance and compliance. This level of insight is unique in the industry, plugging critical holes in today’s mobile app support tools to enable Level 1 and Level 2 IT support to quickly troubleshoot and fix app problems and delight customers.

SVP Global Business Services, Manufacturing Company

“Advanced mobile app features are no longer out of reach for us. In the past, our tech support teams were forced to try to talk the call center through repairs in the field without any visibility. Now they can share live video to show what they are seeing and vice versa. This was a top priority item that techs felt made their lives better. We could not have delivered it without Kinvey.”

Director SAP Systems, Manufacturing Company

“We chose Kinvey for our mission critical field service application because of their platform maturity, seamless SAP integration and performance acceleration, and the operational insight they gave us to support the app after go-live. It’s critical that our app stays up and running and if there is a problem, we need the ability to address it quickly.”

What Kinvey users say about the platform

EASY **Mobile** **Simple** **Superior** **CLOUD**
ENJOYABLE **Speedy** **WEB** **Lifesaver** **DELIVER**
DATA **Dependable** **PHENOMENAL**

Benefits of Kinvey BaaS

By using Kinvey, each company gained new levels of agility despite the complexities of integrating to enterprise systems and their lack of in-house mobile development skills. This new-found agility enabled each company to launch their MVP app in record time (between 3 to 6 months), and by responding quickly to user feedback, they were able to drive high levels of user adoption and app ratings - an average of 4.8 stars across all companies interviewed.

In each case, within six months of launch, the apps were seen as highly successful, providing significant positive impact to the business.

Mobile Product Manager, Insurance Company

“Kinvey allowed us to reduce our spending by \$2M per year and still deliver at higher levels than before because there is less development. The money we spend can now be focused on innovation.”

SVP Global Business Services, Manufacturing Company

“The biggest thing that Kinvey has given us is the speed at which our technicians can communicate and connect with our systems. This has been tremendous for their productivity. In the past, they would get upset that they were standing around waiting for things to happen. It literally used to take 40 seconds to transfer data when they had to connect, and now it’s less than a second. It improves the tech’s day and they have a better attitude and therefore, deliver better service.”

Each company was able to achieve their business goals faster by focusing their efforts on value-added activities.

The business value of Kinvey can be distilled down to three main business outcomes that were common across all companies interviewed:

- Visible wins via exceptional apps that were delivered in record time and within budget.
- High levels of user adoption and satisfaction from expedient delivery of useful features, especially user requested ones.
- Dramatically higher levels of developer productivity via use of a fully integrated cloud platform, pre-built app accelerators and decoupled development.

The chart below outlines these outcomes and the business benefits and technical efficiencies gained by using Kinvey.

| BUSINESS OUTCOME | BUSINESS BENEFITS | TECHNICAL EFFICIENCIES |
|---|--|--|
| <p>Visible wins via exceptional apps delivered in record time and within budget.</p> | <ul style="list-style-type: none"> • Deliver the features and capabilities needed to achieve your business goals, faster • Deliver whatever you can imagine without technology or resource constraints • Ensure confidence that you will meet your time to market goals | <ul style="list-style-type: none"> • Handles complexity of backend allowing developers to focus on UX • Eliminates legacy system latency issues • No infrastructure or middleware to buy, install, manage and maintain • Up-to-date with the latest technology and features |
| <p>High levels of user adoption and satisfaction because of expedient delivery of useful features, especially user requested ones.</p> | <ul style="list-style-type: none"> • Shorter time from ideation to delivery • More enhancements per release • More frequent releases • Deliver the features users want | <ul style="list-style-type: none"> • High performing online/offline user experiences • Less code to write, test, and maintain • Simplifies working with data and identity sources • Reduced backlog • Operational insights for end user support |
| <p>Dramatically higher developer productivity via decoupled development, self-service integrated platform, pre-built app accelerators, tools of your choice, and no-code/low code, secure enterprise integrations.</p> | <ul style="list-style-type: none"> • Flexibility to use any development resources • No delay in getting your project started • Access data from any application or data source from within mobile apps • User data is safely secured | <ul style="list-style-type: none"> • Build apps with the teams and tools you have • Common code languages and methods for short, simple learning curve • Client app developers don't need to know nuances of enterprise systems • Thoroughly handles security of data and HIPAA compliance |

Digital Customer Experience Program Lead, Energy Company

“For something very simple in the past, it took a month’s work for us to deliver it for both the iOS or Android apps, and now it only takes 1 week with Kinvey meaning that 75% of development work has gone away. By freeing up our developer’s time, they can now focus on the features our customers want and therefore, provide a much more enriched experience.”

Achieving the business goals for your mobile apps can be greatly improved with three core capabilities:

- More frequent and more quickly delivered UX improvements through increased development bandwidth.
- Reduction in development complexity by decoupling application development from enterprise system data access complexities and performance issues.
- Ability to use the development team and the tools available at hand with very short learning curve.

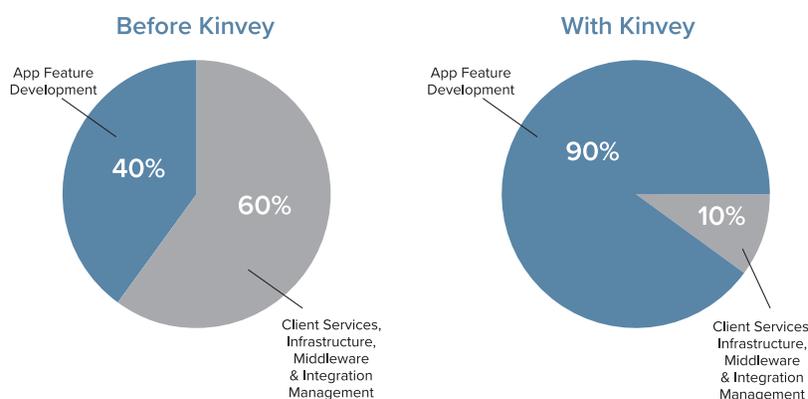
When development teams leverage the capabilities of the Kinvey platform, the core roadblocks to development agility are cleared and you can reap the benefits of agile development processes, including the power of responding to user feedback quickly and effectively. With the use of Kinvey, organizations can significantly shorten their development release cycles. Prior to using Kinvey, the longest development cycle among the companies interviewed for this paper was 18 months. For comparison, the shortest pre-Kinvey release cycle among those interviewed was 26 weeks. After implementing Kinvey, each organization significantly reduced the length of their agile sprint cycles with the new average length coming in at six weeks. The longest cycle post Kinvey was 13 weeks and the shortest was two weeks. However, the company reducing their sprints to two weeks had to return to four weeks since the end user feedback was that two-week releases were too frequent.

Kinvey’s decoupled development and comprehensive platform (SDKs, platform, integrations, maintenance and operational intelligence) means the move to agile development and ongoing app evolution can be greatly accelerated and includes the ability to quickly incorporate user feedback to improve the application and the user experience, driving up ratings, positive reviews, and adoption. It was discovered during the Kinvey client interviews that it was not uncommon to see a 10x user base increase due to the improved UX and review ratings generated because of it.



Kinvey Frees Developers to Focus on Differentiation

Kinvey provides a fully managed service with pre-built frontend and backend mobile application development accelerators and built-in operational intelligence for rapid troubleshooting of user issues. There is no need for customers to develop their own mobile app delivery foundation, since Kinvey provides all of the services that enable customers to focus on what is important: value added features and rapid response to user issues. On average, customers interviewed were able to flip the equation from spending only 40% of their time on value added features to spending 90% of their time on new features and enhancements. This allowed them to respond to user feedback quickly and deliver features suggested and appreciated by their users.



CIO, Construction Company

“For the prior version of the app, we literally spent 60 percent of our time worrying about the infrastructure and so, we were only spending about 40 percent of our time actually addressing our users’ needs. With Kinvey, we now spend 10 percent of our time on the backend and 90 percent focused on features and what our users need.”

Decoupled development abstracts complexity

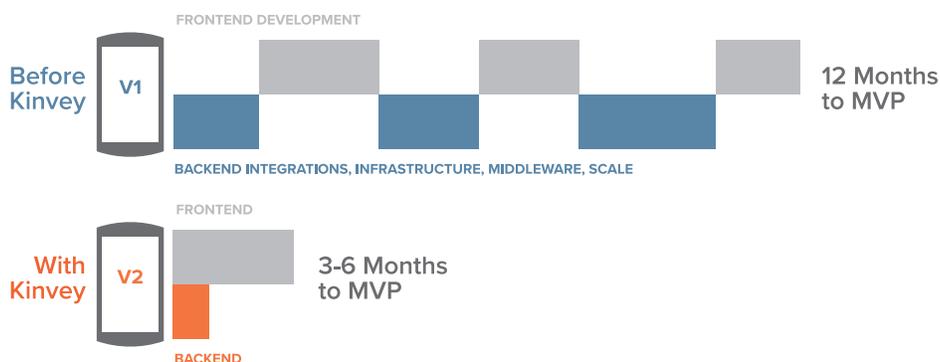
The Kinvey platform enables decoupled development and cloud caching that abstracts complexity of backend connectivity and poor performance. Kinvey reduces the work for developers, improves performance for end users, and ensures the overall stability of the mobile app even when backend systems experience stability issues. By abstracting future backend system changes through the Kinvey platform, development teams will no longer need to know the nuances of enterprise systems data access paradigms, allowing them to focus 100% of their time on frontend work. Backend engineers provide controlled access to enterprise systems via a reusable service catalog that they set up once.

Typically, you would need an extensive and complex data access layer to absorb this complexity and allow frontend developers to easily work with backend systems with minimal learning curve. Essentially, Kinvey provides all functionality found in a custom data access layer without the complex development effort and without the support and maintenance burden.

Digital Customer Experience Project Lead, Energy Company

“Prior to using Kinvey, we had our app talking directly to our backend web services and it was extremely slow and fragile and the mobile app had to manage all of the complexities. If something changed in one of these web services, we had to push a new release to our customers. Without Kinvey we had a high risk of something breaking from one day to another. Kinvey has abstracted all of these complexities for our new application and has hidden the latency problems of accessing our web services.”

As shown in the following diagram, frontend app developers before Kinvey either had to learn how to integrate with enterprise systems or wait for backend engineers to create the integrations for them.

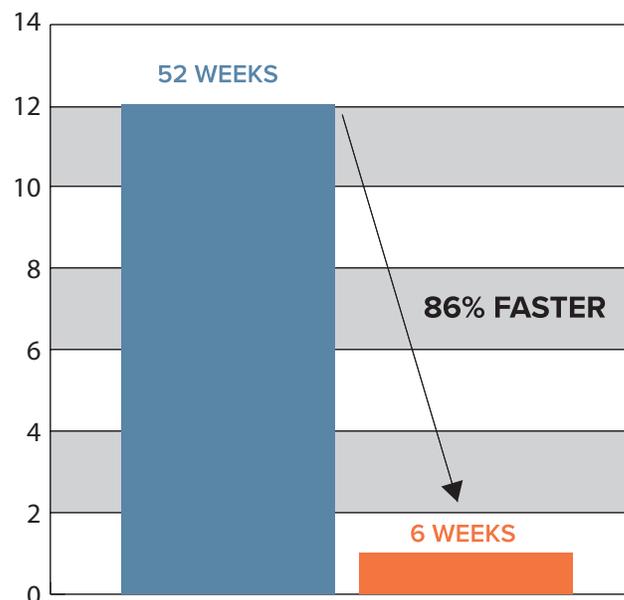


Both approaches led to a highly interdependent development cycle. Four out of the five companies interviewed used this approach for their first generation apps causing protracted development and 12 month app release cycles. With Kinvey, they were able to use the decoupled development and pre-built frontend and backend accelerators to reduce app release time from 12 months to 3 to 6 months.

Director of SAP Applications, Manufacturing Company

“If you’ve worked with SAP systems as long as I have, you know that it’s no simple thing to extend an ERP system with mobility. With Kinvey, we’ve been able to extend our SAP landscape for new use cases, and the performance has been unbelievable. I went from 14-second SAP data access down to 400-millisecond mobile- friendly data access using outsourced developers who didn’t need to know SAP RFC’s because of Kinvey’s decoupled architecture.”

Kinvey allowed these customers to significantly reduce the time to market for their initial app release as well as accelerating their ongoing agile development process an average of 86% faster for new features, fixes, and enhancements.



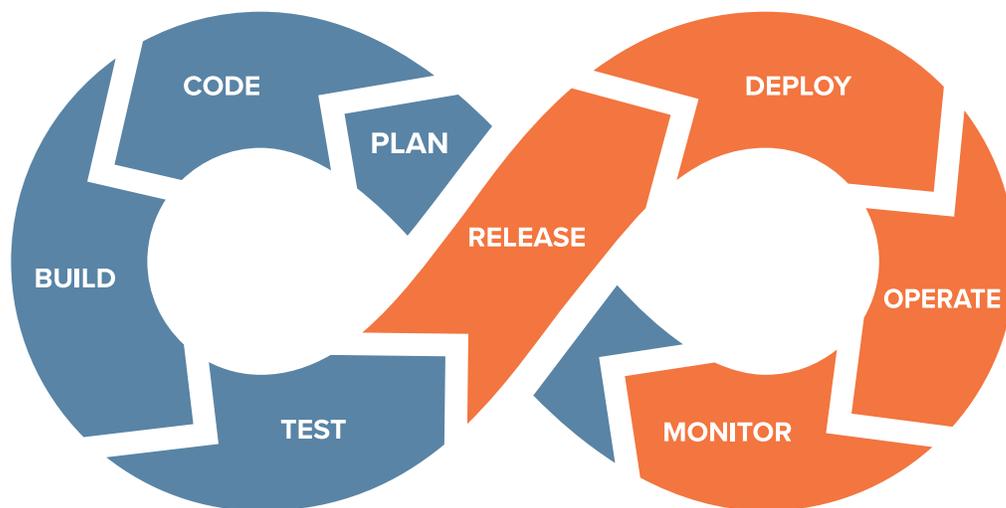
Digital Customer Experience Project Lead, Energy Company

“When they do need to do things, they can move faster since Kinvey has set it up so well. We are writing 5-6 lines of code instead of 1000s of lines of code in some cases.”

Use the tools at hand with a very short learning curve

Without development agility, user stories require protracted development cycles disallowing the clearing of a backlog of UX focused stories. Kinvey provides a rich set of SDKs and other pre-built acceleration services. Fewer lines of code need to be written, tested and maintained with Kinvey. In some cases, five or six lines of code in Kinvey can do the same thing as hundreds of lines of code in non-BaaS approaches. This saving of time allows developers to close out stories quicker and move on to other enhancements resulting in quicker story completion, a greater number of stories completed, and faster releases.

Completing more stories allows your team to move beyond a perpetual Minimum Viable Product (MVP) mode of development and fully integrate end-user feedback into the agile development life cycle.



Achieving your mobile app goals is possible

As seen via these customer results, using Kinvey enables you to revamp and revitalize failing mobile projects, turning mobile initiatives from pain points to visible business wins. If executives and mobile architects follow these five guidelines, reversing the negative trends of a failing mobile application should be not only possible, but also easy.

- Lead from the top
- Demand quick results
- Require a consumer-grade user experience
- Do great marketing with an emphasis on user engagement

SVP Global Business Services, Manufacturing Company

“When they do need to do things, they can move faster since Kinvey has set it up so well. We are writing 5-6 lines of code instead of 1000s of lines of code in some cases.”

With Kinvey, customers have the flexibility to use the skills and tools they have in-house or can easily outsource app development to mobile development firms. Kinvey supports 12 client SDKs to jump start development without requiring a long learning curve. The chart below outlines the various approaches and tools used by the companies interviewed.

| COMPANY | DEVELOPMENT RESOURCES | DEVELOPMENT ENVIRONMENTS |
|--------------------------------------|-----------------------|--------------------------|
| Global Energy Product Company | Outsourced | Native iOS, Android |
| Top 10 Insurance Company | Outsourced | Native iOS, Android |
| Global Manufacturer | Outsourced | Xamarin |
| Large Healthcare ACO | Outsourced | Titanium, Angular |
| National Construction Company | In-House | iOS |

Additionally, Kinvey provides an easy-to-navigate knowledge base to provide deep information and further reduce learning curve time for any developer, new or experienced.

Digital Customer Experience Project Lead, Energy Company

“We have reduced the learning curve for new mobile developers from 3 weeks to an hour. Before Kinvey, developers had to learn all of the protocols, input/output methods, formats, tokens, etc. of our backend systems before they could get started. Now, with all of the backend complexity abstracted, there is very little ramp up time for new developers.”

Director of SAP Systems, Manufacturing Company

“Building on what Kinvey provides allows us to provide much more than we could if we built everything ourselves from the ground up. Kinvey allows us to leverage other tools with less effort on our part. Instead of us writing something, we depend on Kinvey’s SDKs. They are already ready to go.”

The following chart represents the before and after user ratings for mobile apps from the companies interviewed. These ratings are direct from the app stores except for the last item listed where the app was released for an internal audience only. For this case, the end-user attitude is what has been captured below with user sentiment improving from a feeling that ‘the app must be used by directive’ before Kinvey to a feeling that ‘we want to use the app’ after the Kinvey releases began to deploy to production.

| | BEFORE KINVEY | WITH KINVEY |
|-------------------------------|-----------------|-----------------|
| Top 10 Insurance Company | ★ ★ | ★ ★ ★ ★ ★ |
| National Construction Company | ★ ★ ★ | ★ ★ ★ ★ ★ |
| Global Energy Product Company | ★ ★ | ★ ★ ★ ★ ★ |
| Global Manufacturing Company | Have to use it* | Want to use it* |

SVP Global Business Services, Manufacturing Company

“We used to shy away from adding new things because it would take too long to implement or cost too much, and now we don’t have to do that. Now we are constantly combing the field for information on what else end-users would like to see. We have a better attitude and therefore, deliver better service.”

Digital Customer Experience Project Lead, Energy Company

“With Kinvey, we are much more responsive to customer issues, with most hot fixes appearing to be instantaneous to users. What took 2 months to reach 80% of users with a new app release, now takes 20 minutes to reach 100% of the users because there is no release. They just get the updates next time they login.”

About Kinvey

With over 30,000 applications and 85,000 developers in their community, Kinvey is the leading application Backend as a Service (BaaS) for the digital enterprise. Kinvey powers business-critical digital experiences for global 2000 enterprises, SMBs, and startups across a wide range of industries including healthcare, energy, manufacturing, retail, and insurance. Their customers gain an agile delivery model enabling them to build successful and engaging apps and entire digital businesses fast. Kinvey’s patented platform is the top ranked current offering in The Forrester Wave™: Mobile Development Platforms, Q4 2016. As the number one platform, Kinvey provides comprehensive support for native, hybrid, mobile Web, and IoT applications for B2B and B2C use cases with out-of-the-box capabilities. Kinvey is available on multiple cloud platforms, and is offered via multi-tenant and dedicated cloud deployment models, including a HIPAA Compliant edition for life sciences and healthcare requirements.



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