



Evolution in Efficiency

How to utilize API innovation as a part of digital transformation



APIs at the Center

Repositioning APIs for the new digital enterprise

To future-proof their products and services, accelerate innovation, and drive bottom-line success, an increasing number of organizations have embraced the concept of digital transformation. For many businesses, understanding and using the power of APIs (Application Programming Interfaces) has provided the foundation for digital transformation and continued innovation, driving brand-new business value and allowing them to gain an edge on competitors.

Historically, device APIs have been essential to connect devices to on-premise servers and middleware. But what if you put the power into the API, rather than into the product? What if the API became the product?

This white paper explores the potential of treating an API as a product, rather than as a by-product of device or solution development.

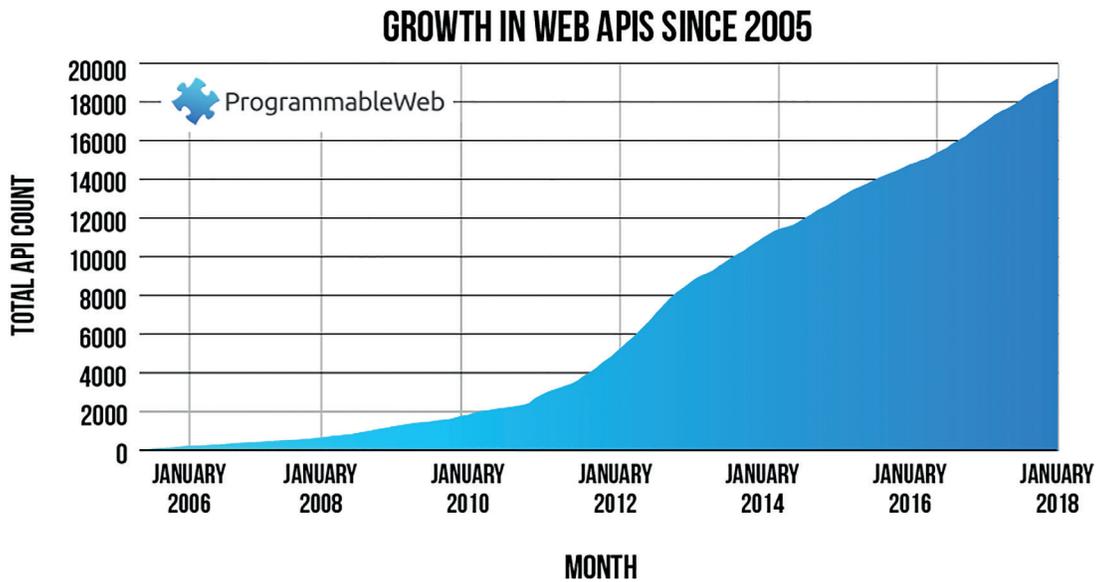
At Zebra, as we cloud-enable our portfolio and support the digital transformation journey for our customers, ISVs, developers and greater channel partner ecosystem, we open up new opportunities to optimize data utilization, transform business models and improve or streamline processes. Adopting an API-driven strategy helps to drive transformation, supports more flexible and efficient operations and drives bottom-line success.



The Case for APIs

It's no coincidence that organizations which have taken a dynamic approach to API development and deployments have experienced significant success. In 2015, Harvard Business Review reported that Salesforce.com generated 50% of its revenue through APIs, Expedia.com generated 90%, and eBay, 60%.¹

According to ProgrammableWeb, their API Directory showed a 126% growth, as the number of APIs jumped from 8400 in 2013 to over 19,000 in January 2018. Data (201), cloud (99), platform-as-a-service (69), analytics (64) and AI (55) were among the highest number of new APIs added to the directory during the year.



There are a number of trends driving the adoption of APIs. As organizations have adopted the internet as the primary network for systems integration and communications, APIs have become a vital means of connecting IT assets to online portals and mobile apps.

Developers utilize shared assets to build their own software, with the API acting as gateway and gatekeeper, only making available the code, or software, or services that companies see a value in sharing.

APIs constitute the digital building blocks that enable interoperability for business platforms on the Web. From a consumer perspective, they support everything from weather forecasting and route-finding to payment solutions and pizza delivery.

Where businesses are concerned, this interoperability eases the integration of legacy and new systems. Just as importantly, developers are using APIs to make the whole greater than the sum of its parts. With APIs, assets, services or data can be joined together and utilized in wholly new ways that add functionality, performance and business value where there was none before.

With cloud connectivity at the heart of digital transformation, externally-hosted APIs offer significant benefits over the device-driven alternative. Cloud service providers can offer scalable capacity to handle transaction loads and spikes in traffic, while mobile platforms put application reach on millions of devices, all having access to back-end APIs via the internet.

¹ <https://hbr.org/2015/01/the-strategic-value-of-apis>

APIs as Products

Invisible but invaluable, and hugely influential, APIs have become the go-to option for the most disruptive and successful business innovators and developers worldwide. This is what's behind their potential to be treated as products in their own right, rather than as by-products of services, systems or devices.

APIs create a seamless flow of data between apps and devices in real-time. This enables developers to create apps for mobile, wearable, or website, and for those apps to communicate, which in turn enriches the user experience.

With well-designed APIs, developers can quickly connect assets or data from diverse sources into new products and services. Enterprises and start-ups alike can differentiate their product offerings while taking advantage of existing technologies and tapping into other ecosystems.

This puts the emphasis on the API provider to design API products that are easy to understand, easy to use, and that can be accessed repeatedly and in an agile, responsive way. This makes the development process simpler and enables developers to incorporate reusable software components that avoid the repetition of tasks.

In this respect, APIs as products are the enablers of collaboration, innovation and new business development. They encourage third parties to engage with an organization and its assets, giving them the freedom to personalize or customize these assets as they require. This clearly benefits both parties—and adds value where it did not necessarily exist before.



Zebra Data Services

APIs that drive digital transformation

When APIs become central instead of peripheral, when they're developed and delivered as products, they become incredibly powerful tools. Conventional wisdom, as we have seen, has them as by-products of hand-held scanners, printers and readers. As such they are tied to the device and constrained by device needs and functionality.

Moved to the cloud, they deliver a valuable step-change in performance and potential. For example, with a printer, the print API is now in the cloud as opposed to on the printer. The difference is technically subtle, but business-wide, the effect is transformational.

With RFID, rather than having a protocol that has historically required on-premise servers and middleware, the readers can talk directly to the cloud. As a result, building, supporting and managing not just the hardware infrastructure, but the full solution, are dramatically changed. Cloud computing with APIs not only saves time and money, but also improves business agility and scalability. Capital expenditure is vastly reduced, and data can be backed up regularly and securely. For companies with a global profile, it affords the opportunity to connect with customers, suppliers and partners seamlessly and in real-time.

What does this mean in practice?

Revolutionary in Thermal Printing

At a trade show, for example, printing badges would conventionally require installing a server and connecting it to a number of printers. Using cloud-based software-as-a-service, printing software can be managed on one cloud application, with all the printers operating from the cloud. It's simply a matter of plugging in printers that are automatically connected to the cloud, logging into their application and then sending print jobs directly. Eliminating the need to configure printers with computers and drivers, it's fast, simple and convenient.



Simplified RFID Management

Cloud-connected RFID readers can now have both power and internet connectivity through ethernet. This means that users can access and manage all the readers in their organizations and across sites, in or near real-time, from one location.

To make scenarios like these a reality, Zebra has introduced Zebra Data Services™, part of a breakthrough data intelligence platform that helps to turn raw data from devices and sensors into actionable information.

Zebra Data Services features cloud-based, unified APIs and developer tools to empower you to build secure, scalable digital services with ease and speed. Easily and conveniently accessible through our self-service developer portal, these APIs are invaluable in helping you to innovate, design and deploy customer applications for your customers.

Learn more about new Zebra Data Services and using cloud-based software-as-a-service via APIs at Developer.Zebra.com/apis





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