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Harnessing the Power of Digital Services:

How Manufacturers Can Win Developers and Create Thriving Ecosystems

AppDirect

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Introduction

In 2011, technology investor Marc Andreessen famously said that "software is eating the world." His observation is as true today as it was a decade ago, but with a new twist: It's not just software that's taking over, but digital platforms that connect software developers and customers in entirely new ways.

For manufacturers, platforms present tantalizing possibilities to get more value out of traditional products while accelerating digital innovation, driving both revenue and competitive advantage. In fact, IDC predicts that by 2022, 70 percent of manufacturers will use cloud-based innovation platforms and marketplaces to create 50 percent of new products and service ideas.[1]

The number of manufacturing companies with platform strategies is on the rise. However, many of these organizations are poised to stumble because they are overlooking one of the most important aspects of a thriving platform: an ecosystem of third-party products and services that offers developers a clear path to monetization.

This white paper explores why developer ecosystems are so critical to manufacturers, the challenges associated with developer recruitment, the barriers to monetization, and strategies on how to overcome them.

KEY TAKEAWAYS

- An increasing number of manufacturers are adopting platform strategies.
- Developer ecosystems are the core of every successful platform, but recruiting developers is increasingly difficult.
- Providing a clear path to ecosystem monetization is one of the most important factors in attracting developers.
- An integration layer that connects existing systems to third-party commerce solutions is the least disruptive, most cost-effective way to create and monetize ecosystems.

[1] "IDC FutureScape: Worldwide Manufacturing 2020 Predictions," IDC, November, 2019

The Power of Platforms

Today's multi-sided, cloud-based technology platforms are relatively new, but the business model behind them is anything but a fad. By 2023, 60 percent of Global 2000 companies will have a digital developer ecosystem with thousands of developers. Of these enterprises, half will generate upwards of 20 percent of digital revenue through their digital platforms.[2] Moreover, zeroing in on the manufacturing sector, 81 percent of industry executives say platforms are the key differentiator for digital success.[3]

"Developers are one of the most valuable constituencies in business today, regardless of industry. A platform company's developer ecosystem can make or break its success."

—Accenture[4]

Looking across the global market, there are already numerous examples of platform company success. Today, the top five platform companies represent more than $4 trillion in market capitalization[5], while there have been more than a hundred startups—mostly driven by platform strategies—with a total valuation of more than $500 billion.[6]

Not every platform is a technology company; there are healthcare systems (Kaiser Permanente), financial services providers (Goldman Sachs), publishers (Houghton Mifflin Harcourt), and many others. However, given their product offerings and customer base, manufacturers are ideally positioned to become platforms and reap the wide range of benefits they can deliver.

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The Core of Every Successful Software Platform: A Developer Ecosystem

One of the best examples of a successful business-focused platform is Salesforce.com, and manufacturers can draw valuable lessons from this software industry pioneer. When Salesforce.com launched in 1999, it was one of a handful that offered business software as a service, a revolutionary product at the time. Less than 20 years later, Salesforce.com announced that it had reached a $10 billion revenue run rate faster than any enterprise software company in history.[7]

2 "IDC FutureScape Outlines the Impact 'Digital Supremacy' Will Have on Enterprise Transformation and the IT Industry," Press Release, IDC, October 29, 2019

3 "The 2019 Digital Economy Report: Benchmarking Digital Transformation Trends," AppDirect, 2019

4 "Inspire & Grow Your Developer Ecosystem," Accenture, 2018

5 "Market capitalization of the biggest internet companies worldwide as of June 2019," Statista.com

6 "People First: The Primacy of People in a Digital Age," Accenture, Technology Vision, 2016

7 "Salesforce Announces Record Q2 Earnings, Surpasses $10B Run Rate Milestone Faster Than Any Enterprise Software Company in History," Press release, Salesforce.com

One of the main reasons for Salesforce.com's success is that it recognized the importance of developer ecosystems early on. In 2005, the company launched its AppExchange, a marketplace for business applications purpose-built for the Salesforce.com platform. Today, the AppExchange offers more than 3,000 applications and components that extend and add value to Salesforce.com's core products.

The AppExchange has been so successful that an entire economy has sprung up around the ecosystem. In fact, by 2024, IDC predicts that the "Salesforce.com economy" will generate $1.2 trillion in new revenue and 4.2 million new jobs. In a testament to the power and reach of this ecosystem, IDC forecasts that it will create more than 765,000 new jobs in the manufacturing sector alone.[8]

"Platforms beat products every time."

— Marshall Van Alstyne, MIT Initiative on the Digital Economy

Even more impressive, Salesforce.com has created a viable path to monetization for its ecosystem (while generating its own sizable revenue streams). By 2024, the Salesforce ecosystem will be six times bigger than the company itself, meaning that for every dollar Salesforce.com will make, its ecosystem will make $5.80.[9]

Salesforce.com is probably the most well-known B2B software platform and developer ecosystem, but there are numerous examples of manufacturing companies that are testing the platform waters, or are rapidly scaling their developer ecosystems.

In 2019, global conglomerate Honeywell launched an online marketplace featuring a growing ecosystem of more than 50 applications created by third-party developers. As Lori Haggart, director of software innovation at Honeywell, explains: "[The marketplace] gives us an opportunity not only to broaden our reach globally, but also the reach of third-party providers who may or may not have Honeywell's global recognition."[10]

8 "The Salesforce Economic Impact: 4.2 Million New Jobs, $1.2 Trillion of New Business Revenues from 2019 to 2024," IDC, October, 2019

9 Ibid.

10 "Honeywell launches marketplace for enterprise apps," by Stephanie Condon, ZDNet.com, March 5, 2019

ABB, a multinational manufacturing company based in Zurich, Switzerland, has also put platforms and ecosystems at the forefront of its digital strategy. The company recently launched the ABB Ability Marketplace, a central location for users to find, purchase, and manage applications developed for its ABB Ability platform. With an ecosystem, ABB's "customers can adapt even faster to changing market conditions or production dynamics," as Guido Jouret, the company's Chief Digital Officer, says. He adds that the ecosystem enables "a lively exchange of innovative ideas and solutions by an entire ecosystem of external developers."[11]

The Race to Recruit Developers to Ecosystems

A growing number of executives see applications as critical to their businesses. In fact, by 2023, over 500 million digital apps and services will be developed and deployed using cloud-native approaches. To put that figure in perspective, that's the the same number of apps that have been developed over the last 40 years.[12] With demand at an all-time high, demand for business application developers is also at an all-time high, which means manufacturers must recruit from a shrinking talent pool.

"By 2023, over 500 million digital apps and services will be developed and deployed using cloud-native approaches—the same number developed in the last 40 years."

—IDC

There are many ways to attract developers to your platform—providing opportunities for skills-building and certification, for example—but one of the most effective ways is to give developers a clear path to monetizing their products. In a survey by Accenture, 69 percent of developers said return on their investment is the most important factor when choosing a developer ecosystem.[13] As the analyst firm explained, "a bedrock for developers is to monetize their development investment."

Turning back to Salesforce.com, one of the reasons the AppExchange ecosystem is so successful is that it gives developers tangible ROI for their investment in the platform. For example, Salesforce.com gives its developers tools that enable them to cut development time by 40 percent compared to traditional methods. Moreover, the platform allows developers to cut the cost of quality assurance by 45 percent, and time to market by 39 percent. Once on the AppExchange, developers are able to increase market reach by 13 percent and improve their sales close rate by 39 percent.[14]

[11] "ABB launches ABB Ability™ Marketplace, the one-stop online portal for software services," Press Release, ABB, September 26, 2018

[12] "IDC FutureScape Outlines the Impact 'Digital Supremacy' Will Have on Enterprise Transformation and the IT Industry," Press Release, IDC, October 29, 2019

[13] "Engaging the Developer Community: What Developer Ecosystems Need to Know," Accenture, 2018

[14] "The Salesforce Economy Forecast: 3.3 Million New Jobs and $859 Billion New Business Revenue to Be Created from 2016 to 2022," IDC, October 2017

Barriers to Creating a Path to Monetization

If building a solution like the AppExchange was easy, then every manufacturer would already have a thriving developer ecosystem. However, there are real barriers to pursuing a platform-based, ecosystem-powered business. Some have to do with company culture and reorienting to an open, API-based model. More often than not, though, the biggest obstacles to launching or scaling a developer ecosystem are manufacturers' existing technology and processes.

Here's the crux of the problem: Manufacturers often have established lines of business selling software, but almost all of their internal systems and processes are geared toward direct, first-party sales. Indirect third-party sales—transactions where manufacturers may have little to no involvement with the buyer—are the fuel for ecosystem monetization, but the solutions that many manufacturing companies have in place are simply not built for third-party commerce.

Some manufacturers have tried to put a band-aid on the issue by providing a directory or listing of third-party applications that integrate with their core hardware and services. However, without true third-party commerce systems, manufacturing companies can't bill for or accurately pay out for transactions, or ensure a superior customer experience with on-demand provisioning. For developers, this approach turns an ecosystem from an innovative, revenue-driving opportunity into the one thing that no manufacturer or developer wants—a major hassle.

Removing the Obstacles to Ecosystem Monetization

To become successful platforms, manufacturing companies must find a way to remove the technology and process barriers to ecosystem monetization. In practice, this means delivering a fully featured developer solution that can power multi-sided omnichannel commerce for every party across the ecosystem.

Since it's nearly impossible to retool first-party commerce systems to handle a third-party model they were not built to handle, there are two approaches that manufacturers can pursue. The first is to rip, replace, and rebuild commerce systems with solutions that can power both first- and third-party transactions.

To do this, a manufacturer would need to update every internal system related to sales, marketing, and customer management, including billing, accounting, CRM, ERP, and potentially many other mission-critical technologies. The cost, complexity, and near-certain disruption to the business make this approach a non-starter for all but the most ambitious manufacturing companies.

"The creation of open APIs—and developer ecosystems around them—will allow enterprises to massively scale distribution of their digital platforms and services through third-party digital innovators, accelerating adoption and revenue."

— IDC[15]

The second option is to create an integration layer that connects the first- and third-party commerce systems and acts as an interface for data flowing between them. Powered by APIs, a layer of this type is among the least disruptive and most cost-effective ways to transition to an ecosystem-centric platform model.

If a manufacturer decides on option two, the question then becomes: Should the manufacturing company build the integration layer itself or work with a third-party to implement one?

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Additional Ecosystems Must-Haves

In addition to omnichannel commerce, developers are more likely to develop for a platform if the ecosystem offers these specific elements:[16]

- 90% market relevance
- 78% opportunities to learn new technologies
- 53% a focus on the latest technology
- 44% future-looking solutions

[15] IDC Predictions Provide a Blueprint and Key Building Blocks for Becoming a Digital Native Enterprise," IDC, October 2017

[16] "Engaging the Developer Community: What Developer Ecosystems Need to Know," Accenture, 2018

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Build vs. Buy: The Commerce Integration Layer

No matter what the solution, the decision whether to build technology in house or work with a third-party provider often boils down to a set of familiar factors. Here are the elements that manufacturers should consider when making the build versus buy decision for the commerce integration layer:

COST:

Working with a third-party integration layer provider will often be more cost effective than building your own technology. Why? A proven, tested solution won't break when you launch, and working with an experienced provider can eliminate costly strategy and / or implementation mistakes.

TIME TO MARKET:

Working with a partner that offers both industry expertise and technology that is easy to configure and launch can accelerate time to market considerably. Planning, integration, and deployment can be achieved in far less time than building in house.

CONTROL:

Working with a partner does not mean you can't be in control of your solution. When researching providers, select one that allows you to have control over APIs, the integration layer, and every aspect of your developer ecosystem.

EXPERTISE:

A third-party provider spends every day focused on the technology and best practices needed to launch and scale developer ecosystems quickly and cost effectively.

SECURITY:

With the right third-party provider, the research, development, and management of enhanced security features is left to ecosystem specialists.

Key Questions to Align and Get Started

Before you can make the build versus buy decision, you need to understand your organization's current technologies and capabilities. Here are a few key steps to take before you get started:

- Assess every system involved in the order to cash process (CRM, billing, accounting, etc.)
- Determine if existing applications provide capabilities for third-party developers or resellers to login and manage their products, orders, etc.
- Establish requirements and scope to build support for third-party transactions outside of the existing order to cash process
- Determine requirements and scope to develop APIs to connect systems through the integration layer

Conclusion

Platforms are transforming the manufacturing industry. This new way of doing business offers unprecedented opportunities to innovate, scale, and drive more revenue faster than ever before.

Many companies, such as Salesforce.com, Honeywell, and ABB, are taking advantage and creating entire economies around their platforms. The secret to their success are strong software ecosystems, but with competition at an all time high, how can manufacturing companies attract developers?

Providing a clear path to monetization and return on investment are critical to creating a thriving developer ecosystem. However, many manufacturers have legacy technology that was not built to accommodate the third-party transactions that enable ecosystem monetization.

For these companies, implementing an API-based integration layer to connect existing systems to new monetization solutions is often the fastest, most cost-effective way for manufacturers to become platform leaders in the digital economy.

No Pressure Advice from Industry Experts

AppDirect is a trusted advisor to OEMs, automotive companies, and device manufacturers around the globe as they explore their options for launching or scaling developer ecosystems.

If you're interested in learning more, visit appdirect.com

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ABOUT APPDIRECT

AppDirect provides the only end-to-end cloud commerce platform for succeeding in the digital economy. The AppDirect ecosystem connects channels, developers, and customers through its platform to simplify the digital supply chain by enabling the onboarding and sale of products with third-party services, for any channel, on any device, with support. Powering millions of cloud subscriptions worldwide, AppDirect helps organizations, including Jaguar Land Rover, Comcast, ADP, and Deutsche Telekom, connect their customers to the solutions they need to reach their full potential in the digital economy.

AppDirect is headquartered in San Francisco, California with offices around the globe and works across vertical industries, including software, manufacturing, value-added resellers and financial services. J.P. Morgan, Foundry Group, iNovia Capital, StarVest Partners, Stingray Digital and Mithril Capital Management have invested in AppDirect.

For more information contact
info@appdirect.com
or visit **www.appdirect.com**.

650 California Street, 25th Floor
San Francisco, CA 94108
(877) 404-2777