# BUILDING A DIGITAL PLATFORM TO LEAD IN THE API ECONOMY

MuleSoft

# 01 Introduction

Economic theory suggests that pursuing economies of scale and scope is a dominant competitive strategy: that organizations win by virtue of their scale driving down production costs, or by virtue of their scope driving efficiencies across business activities.
For example, Walmart, the world's largest retailer, is able to out-compete others on 'everyday, low prices' by virtue of the purchasing power that its size affords. And Johnson & Johnson, the world's largest pharmaceutical company, is able to leverage the same production, distribution and sales and marketing capabilities across its portfolio of brands, thus lowering the cost of bringing products to market.

Do these principles still hold true in today's digital age? As we enter the 'Fourth Industrial Revolution', SaaS platforms afford a startup founder access to the same infrastructure, at the same cost, as the largest multinational enterprise. Whereas previously, a small business may not have been able to afford the up-front capital investment that a Siebel CRM, or a SAP ERP system would require, the advent of SaaS platforms affords every company access to Salesforce.com CRM or Netsuite ERP at the same price.

Source: http://fortune.com/2017/01/04/amazon-marketplace-sales/

Not only that, Internet and Mobile provide that very same startup with access to a global audience. In this digital marketplace where the world's largest and smallest companies have access to the same resources, are traditional economic theories of scale and scope still relevant?

This article argues that not only are these competitive tenets as relevant as ever, but that today's market leaders are winning precisely because they are able to drive these economies at unprecedented scale. The companies that are winning are able to drive economies of scale and scope not just within their immediate organizational boundaries, but beyond them, by leveraging digital channels to build an ecosystem of buyers, partners and suppliers. In addition, it argues that the key to their success has been the ability to transform their business into a digital platform, and then leveraging that platform to build the surrounding ecosystem necessary to win.

# 02 Competing in a Digital Age:
## From '1-sided' markets to 'N-sided' ecosystems

In today's competitive environment, winning companies have upended their respective industries by leveraging economies of scale and scope in unprecedented ways. The companies that are winning are those that are able to drive these economies not just within their immediate organizational boundaries, but beyond them, by leveraging digital channels to build a surrounding ecosystem of buyers, partners and suppliers.

For example, Amazon's success as a retailer does not come from simply selling goods online. Rather, it also comes from allowing other retailers to sell their goods through Amazon's platform and leverage the same marketing activities that drive visitors to Amazon's site (*Sell* on Amazon), and to leverage the same warehousing, distribution and logistics capabilities that Amazon uses for its own products (*Fulfillment* by Amazon).

Through exposing these capabilities, Amazon has built an ecosystem of retailers around it - that now account for some 50% of products sold through Amazon.com - that allow it to leverage *hyper*economies of scale and scope. Hypereconomies of scale in that Amazon is able to broaden its retail offerings and increase value to the customer, and hypereconomies of scope in that all of these sellers are using the same Amazon retail services, helping to

drive additional Amazon revenue streams and lower operating costs for all. By thinking of itself not as a retailer, but rather as a digital retail platform, Amazon has been able to effectively build a surrounding ecosystem that is driving its continued success.

This imperative for leaders to think of their organizations as platforms stems from an increasing complexity in competition (See Figure 1). The traditional market model that brings together consumers and suppliers in a 1-sided transaction i.e. a single party on either side of the transaction, has been superseded by ecosystem models in which organizations compete and collaborate across multiple fronts through monetizing digital platforms directly (Sell on Amazon), through partnering to leverage and embed those capabilities in third party offerings (Fulfillment by Amazon) or to expand into adjacent markets (Amazon Pay).

In this complex N-sided model with parties on either side of the transaction, organizations must compete across multiple dimensions, leveraging core capabilities across each dimension of competition. For example, an organization may be both a customer and a competitor to Amazon, leveraging Amazon's fulfillment capabilities to sell products that compete with those on Amazon.com. In either case, Amazon is able to capture value because it has delivered on a platform a vision that makes available these core capabilities to multiple stakeholders.
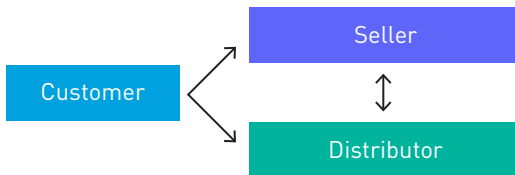
# Figure 1:

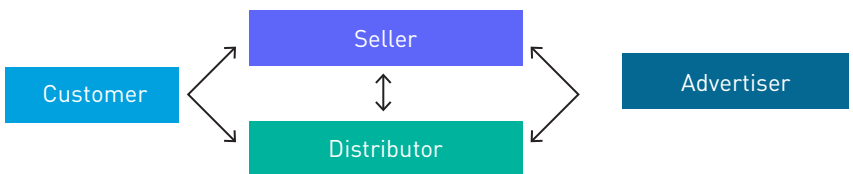From 1-sided markets to N-sided ecosystems
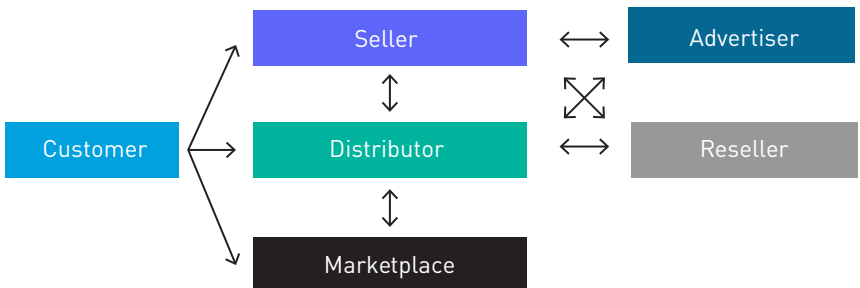
One-Sided Platform (for example, buyer and seller)

| Customer | → | Seller |

Two-Sided Platform (buyer, seller, and broker)

Customer → Seller ↕ Distributor

Three-Sided Platform (buyer, seller, broker and third party)

Customer → Seller ↕ Distributor → Advertiser

N-Sided Platform (buyer, seller, broker, advertiser, aggregator)

Customer → Seller ↕ Distributor ↕ Marketplace
Seller ↔ Advertiser
Distributor ↔ Reseller

# 03 From Digital Business Models to Digital Platforms and Ecosystems

How then can organizations move towards building a digital platform? In our work serving digital leaders such as AirBnB, Netflix and Spotify, we see organizations closely follow the path below:

**EXPLORE**

As a first step, Business and IT leaders must come together and critically self-assess the core capabilities through which they wish to compete; they must objectively consider their unique advantages that will serve as the source of competitive differentiation.

Business and IT Leadership must also align around a common set of business outcomes that these core capabilities will support, to agree on the quantitative metrics that will define success, and to bring together the right organizational leaders.

See Table 1 below for examples of the types of thinking that MuleSoft's customers have engaged in to support their transformation to a digital platform.

## Table 1: Examples of Digital Platforms

| Company | Business Model From: | Business Model To: | Platform | Ecosystem |
|---|---|---|---|---|
| **NZ Post** | Monetize postal deliveries | Monetize end-to-end supply chain / logistics capabilities | Postal platform (Address lookup, Postal delivery rate finder, Parcel tracker etc.) | From postal branch only to any B2B or B2C company |
| **Addison Lee** | Monetize passenger trips via premium car service in UK | Monetize passenger allocation and dispatch capability in 20 countries globally | Taxi reservation platform | From UK only to EMEA-wide ecosystem |
| **Wells Fargo** | Monetize financial services through Wells Fargo channels | Monetize financial capabilities through non-Wells Fargo channels | Digital financial services platform | From direct Wells Fargo customers to consumers of financial services |

**PLAN**

Once a company's core capabilities have been identified, they must then be 'packaged' so that they can easily be accessed, and monetized, by consumers. Consistent with the overarching construct of 'N-sided ecosystems', these capabilities may be leveraged by multiple parties and packaged and repackaged in different ways, and it is by bringing multiple capabilities together that a common platform emerges.

Increasingly, organizations are using Application Programming Interfaces (APIs) as digital interfaces that provide a common means to access these capabilities. As products and services are consumed through digital channels e.g. mobile, or digital means within a physical channel e.g. a tablet within a store, APIs have become instrumental as the channel for products and services to be consumed in a digital age. For example, Salesforce generates nearly 50 percent of its annual $3 billion in revenue through APIs; for Expedia that figure is closer to 90 percent and for eBay it's 60 percent.

It's worth noting that businesses who use APIs as part of their digital platforms see a strong improvement in business performance; according to MIT and Boston University economist Marshall van Alstyne, econometric evidence shows that organizations that adopt APIs "show a 2-10% gain in market capitalization". In addition, organizations that use APIs also report lower maintenance costs, more innovation, and greater customer satisfaction.

Van Alstyne, Marshall. The Platform Revolution. Presentation, CONNECT 2017

## DELIVER

Once the plan is in place, leaders must then consider how to bring this vision to life. While the focus is typically on technology, and this is clearly important, successfully building a digital platform also requires changes in people and process, as well as technology. People in that how teams are structured and enabled may change to leverage the platform capabilities that have been created, and process in that how an IT organization thinks about software development may need to change, again to take advantage of the platform capabilities that have been built. For the platform to take hold, developers must look to leverage existing capabilities rather than duplicate efforts. Ideally, each existing capability that's a candidate for re-use should then be leveraged through a services-oriented approach like an API.

Typically, organizations may consider building out a central team that incubates the initial platform capabilities and then enables others, both inside and outside the organization, to consume these capabilities. Such a 'center for enablement' may also be charged with publishing self-serve materials and providing training and support.

One important point to highlight is that delivery of a digital platform should not be 'big bang' i.e. Business and IT leaders should not look to build a separate and distinct platform that the organization migrates to, but rather, take a blended approach in which delivery is in incremental phases.
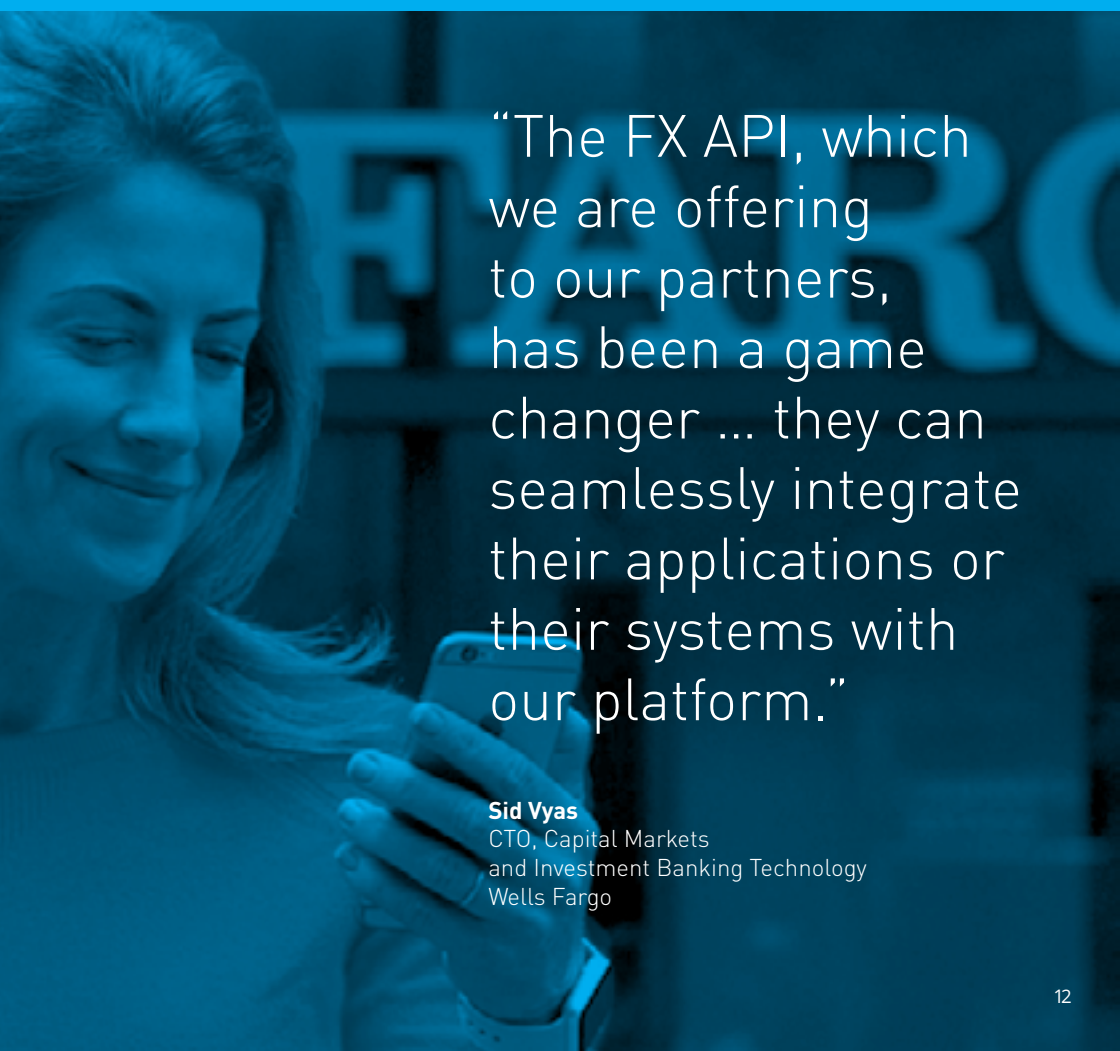
In this way, organizations can move towards a long-term goal, yet still hit short-term business goals. The most pragmatic way of doing this is leveraging the joint business and IT dialogue to have an open conversation and find the balance between where platform capabilities would bring the greatest opportunity, and where the organizational investment would be greatest.

**EVOLVE**  Once the platform has been built, organizations must drive awareness, adoption and engagement with the platform to form the surrounding ecosystem. As the digital platform gains traction, what naturally evolves is an application network: a network of an organization's data assets that overlay and pull from an organization's IT systems. It is this application network that forms the digital platform that companies are looking to build.

## Building a Digital Platform: Wells Fargo

Wells Fargo, one of the largest banks in the world, is driving a digital transformation journey to deliver an unified customer experience (CX). As part of this journey they built Wells Fargo Gateway, a Banking-as-a-Service (BaaS) platform that provides key services – such as account servicing, payments, and foreign exchange – through exposing APIs to Wells Fargo's partners and developers. This platform was foundational to One Wells Fargo, the bank's transformation program aimed at unifying customers' experience around any interactions with the bank - be it over phone, web or mobile. Through API-led connectivity, services from all partners and applications are seamlessly integrated into the Wells Fargo experience and consistently rendered on any channel.

"The FX API, which we are offering to our partners, has been a game changer … they can seamlessly integrate their applications or their systems with our platform."

**Sid Vyas**
CTO, Capital Markets
and Investment Banking Technology
Wells Fargo

# 04 3 Keys to Successful Digital Platforms

In MuleSoft's work supporting organizations building digital platforms, we see a number of characteristics for those digital platforms that are successful and sustaining:

**DRIVE REUSE**

Platforms by their nature provide capabilities that can be accessed by multiple stakeholders. Digital platforms provide the ability to access the same capability in multiple ways. For example, Wells Fargo enables their corporate customers to access their foreign exchange capabilities through a banking relationship manager, online, or direct via an API.
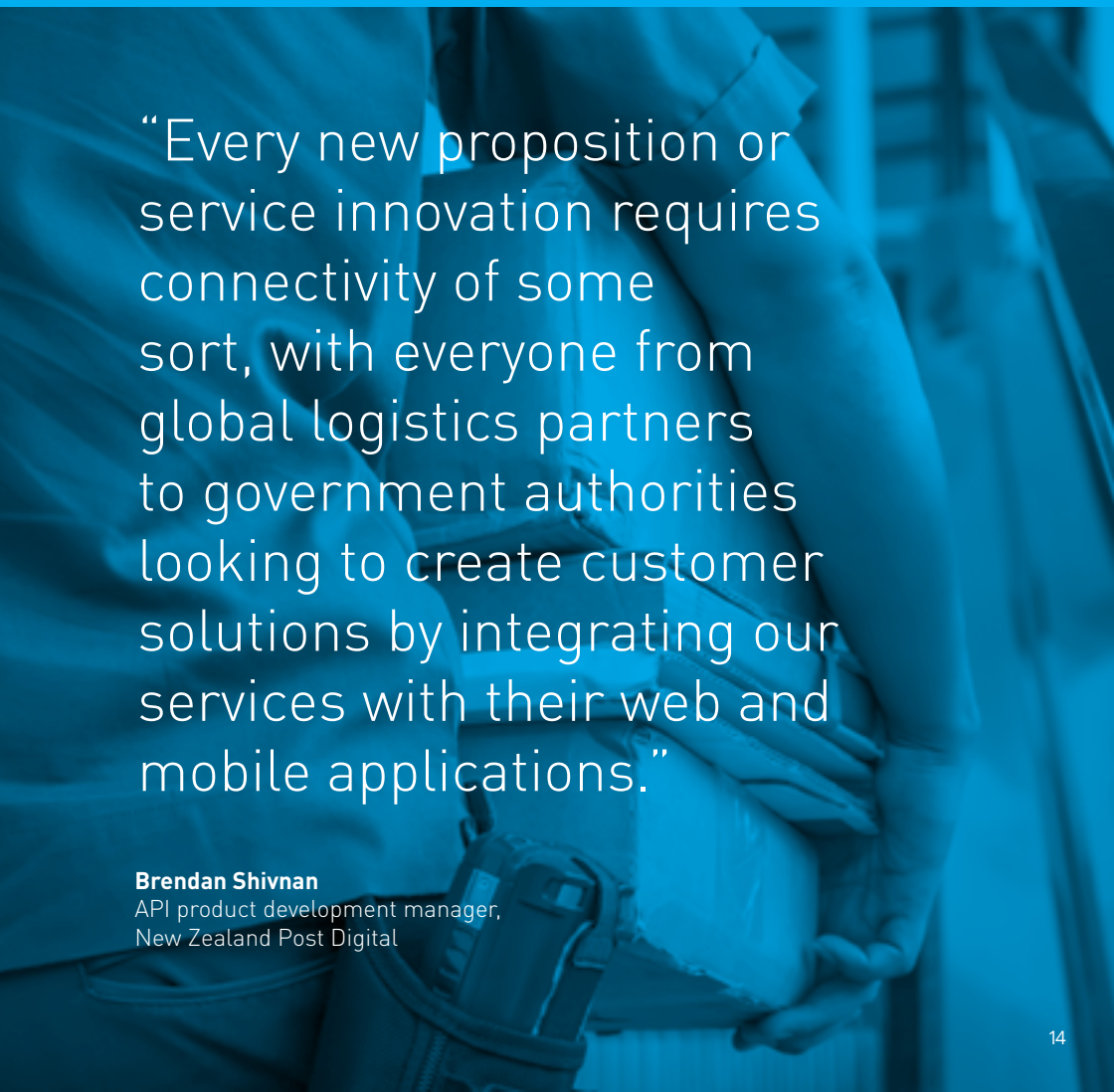
**SELF SERVE**

For platforms to rapidly scale, organizations must enable rapid adoption of their platform capabilities. This means that consumers of those capabilities must be able to drive on-ramp with minimal manual intervention - from setup, through documentation, tooling to ease consumption i.e. software development kits and support. For example, New Zealand Post provides a developer portal that allows companies to learn about the platform capabilities that they are exposing, read documentation and experiment with the APIs in a training environment.

**FEDERATE ACCESS**

At the same time as providing access, organizations must also maintain a certain level of governance, in order to ensure security. For example, for existing corporate assets to which users must authenticate and access via Active Directory, extending that existing security and governance framework into the API layer (a capability that's built-in to some enterprise grade API management solutions like MuleSoft's Anypoint Platform).

## Building a Digital Platform: NZ Post

APIs are seen as a key enabler to New Zealand Post's business strategy, allowing the organization to process digital impact on its traditional mail business while also keeping pace with the rapid growth in parcel delivery through e-commerce. Execution of its API strategy has effectively opened New Zealand Post's platform, providing a broader range of services and a fast and effective way of integrating with applications and other platforms. For example, e-commerce merchants can now provide integrated domestic and international delivery options, rate finding, tracking and delivery choices through New Zealand Post's new Shipping API.

"Every new proposition or service innovation requires connectivity of some sort, with everyone from global logistics partners to government authorities looking to create customer solutions by integrating our services with their web and mobile applications."

**Brendan Shivnan**
API product development manager,
New Zealand Post Digital

# 05 Building a Digital Platform
## The Digital Platform as an Application Network

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MuleSoft's mission is to help organizations change and innovate faster by making it easy to connect applications, data and devices. In our work helping organizations build digital platforms, we see the imperative to develop core capabilities as reusable building blocks that build on and complement one another. What emerges as a result of this approach is an application network whereby these capabilities can be recomposed and changed as necessary according to business needs. Underpinning the network is a set of reusable APIs that are the building blocks used to define how data is accessed, exposed and shared.  This modular, easily pluggable infrastructure enables the digital platform by making it easy to create, change, and monetize new capabilities. These capabilities, built on owned infrastructure, creates and attracts value and resources outside the platform, providing greater customer stickiness and more opportunities for revenue. Contact us today to learn more about how to build an application network and make your digital platform vision, a reality.

## Building a Digital Platform: Addison Lee

Addison Lee's iconic black cars transport more than 10 million passengers each year in London. Since it was founded in 1975, the company has harnessed technology innovations to stand apart from its competitors. To keep up with changing customer behavior and preferences shifting, Addison Lee had to react quickly with customer-centered innovations to stay competitive with new entrants. In fact, new revenue streams for Addison Lee have resulted from being able to seamlessly connect its mobile application users with its network of international fleets. A customer will be able to book a cab in 20 locations around the world using the Addison Lee app.

"API-led connectivity empowers us to be creative in how we connect our systems to deliver new digital products and offers."

**Peter Ingram**
CTO

# 06 About MuleSoft

MuleSoft makes it easy to connect the world's applications, data, and devices. With our market-leading Anypoint Platform™, companies are building application networks to fundamentally change the pace of innovation. MuleSoft's API-led approach to connectivity gives companies new ways to reach their customers, employees, and partners. Organizations in more than 60 countries, from emerging companies to Global 500 corporations, use MuleSoft to transform their businesses.