MIT PLATFORM STRATEGY SUMMIT 2019

Don't look back.

Think like it's 2024.

M DIGI TAL

MIT INITIATIVE ON THE DIGITAL ECONOMY

THE PLATFORM ERA UNFOLDS

A new question to ask about giant platforms: What is the harm?

“The five most valuable companies on Earth today are platform companies.”

ERIK BRYNJOLFSSON
MIT IDE

“These behemoths of the digital economy are not the only ones driving the platform revolution,” says Erik Brynjolfsson (right). “A myriad of startups and smaller companies are also thriving thanks to network effects and platform ecosystems.”

A decade ago, platform challenges seemed straightforward and the possibilities seemed endless. Strategists focused primarily on reducing transaction costs and on solving basic business problems, explained Summit co-chair, Peter Evans. After that, they could drive scale and develop a revenue model. The mantra was: Get big fast!

Now that platforms are sprawling and prolific businesses, a host of complex and far-reaching concerns are on the rise. Governance and regulation are top-of-mind for market leaders—including the group that MIT IDE Director Erik Brynjolfsson referred to as MAAF: Microsoft, Apple, Alphabet, and Facebook. Increasingly, providers worry about fraud, hate speech, privacy, security, and trolls.

Speakers throughout the day painted a platform market that’s rapidly changing—and giving rise to at least four critical issues: Regulatory constraints, growth pressures, a shift to enterprise markets, and technology disruptions.

On July 12, 2019, more than 300 attendees descended on MIT’s campus for the 2019 Platform Strategy Summit. The seventh annual summit was hosted by the MIT Initiative on the Digital Economy (IDE).

The MIT Platform Strategy Summit was launched in 2013 by Geoffrey Parker and Marshall Van Alstyne to explore the phenomenon of platforms in public and private organizations, and to better understand how to manage, govern, and regulate platforms. The Summit brings together thought leaders from industry and academia to share their experiences, engage in robust discussion, and to help chart a path forward for private and public-sector leaders who seek better understanding and more efficient regulation.

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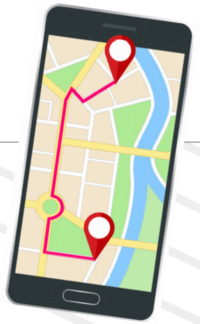
The platforms of today don’t fit into traditional monopoly categories.

PLATFORM REVIEW AND FORECAST

MARSHALL VAN ALSTYNE
BOSTON UNIVERSITY

GEOFFREY PARKER
DARTMOUTH COLLEGE
MIT IDE

PETER EVANS
PLATFORM STRATEGY INSTITUTE



Platforms are plastered all over the news. From protests at Amazon to breaking up Facebook to sweeping regulations in the EU, the conversation about platforms is front and center. Emerging technologies, such as 5G networks and AI are also making headlines.

Three hot-button summit topics: Regulation, firm inversion and the move from B2C to B2C, and the impact of new technologies.

(L-R) Marshall Van Alstyne, Peter Evans, and Geoffrey Parker discuss the current state of platform markets.

REGULATORY UNREST

Platform markets are at the epicenter of many challenges today including "the push-pull between the new 1099 economy and the traditional W2 economy," Geoffrey Parker notes." In the U.S., this means independent contractors (1099 tax filers) are on the rise, antitrust rumblings can be heard, and regulators are trying to determine when and how to protect consumers and workers. Clearly, platforms such as Facebook, Amazon, and Google have vast data resources to mine and monetize, fueling much of the regulatory scrutiny.

Nevertheless, Parker emphasizes how platforms differ from giant firms of the past. "Tech firms don't fit the model of a traditional monopolist," he says, because they "internalize network effects." They provide free products and services to one market because they capture profits or revenue from another market connected by network effects.

That difference is important to understand. "Traditional tests of monopoly power consider issues like the ability to fix prices, the ability to exclude competition, willful acquisition, or maintenance of power—issues that don't apply to many of today's platform models."

Parker concludes that a new question to ask is: What is the harm created by platforms? This is critical since many answers offered are hypothetical and counterfactual. There is also suspicion that some of the clamor is not about economic harm, but reflects a desire by firms or countries to engage in digital industrial policy that keeps innovation within their own borders. A better path, says Parker, is to focus on data ownership, data sharing, and how to fairly share the value created from data.

AI, 5G POTENTIAL

Peter Evans discussed the transition to the next wave of technologies and their potential implications on platform ecosystems. For instance, "Uber wouldn't have existed in a 1G or 2G world." As 5G gains traction it appears to offer much greater capacity and a dramatic expansion of data that can flow through the network while removing latency. These capabilities will open new opportunities.

Evans believes that "5G allows for data on steroids." It's bound to have a huge impact—from manufacturing to healthcare, and financial services to the energy sector. High-speed networks can enable smart buildings and redefine the entertainment and media sectors, too. Augmented Reality and Virtual Reality have stalled because of latency issues which will disappear with 5G.

Extending AI's benefits to customers and stakeholders will take more work. Platform providers own the data and they're building a layer of data tools, but they need to create demand to activate it. The platform shift, from consumer to enterprise markets, holds huge potential, considering that the largest 200 companies in the world post aggregate revenue of $17 trillion.

AI services and micro services will be fueled by platform structures in the future, too. This market is immature, but over the next three years Evans expects it to blossom. "More than $100 billion has been invested so far in AI startups, and we're going to see them turn into services that large enterprises will consume."

Evans and others challenged attendees to think ahead and ask if they are doing enough today to prepare for the future. "You need to be ready to create value on top of these new infrastructures."

INVERTING THE FIRM FOR VALUE

Marshall Van Alstyne anticipates many promises and also challenges as the Inverted Firm rises. He also described what it will take to move platforms from B2C to B2B markets.

Value for an inverted firm is created by partners and users, rather than by the firm itself. "You and I create the value on Facebook and Twitter," he says. "We offer rooms on Airbnb and rides on Uber. The companies don't own or author any of these things."

Platforms are driven by network effects, not by products, and the biggest performance boosts come as partners create value for each other. Boosts can also happen when firms expand into adjacent markets and expand their ecosystems—as when Microsoft bought LinkedIn, and Google bought Kaggle. Even failed experiments yield valuable lessons: "Amazon's Fire phone lost money but its voice technology later led to Alexa and an ecosystem of developers who extend the Alexa interface."

The lesson? Create constellations of complementary partners. A platform appreciates in value as people use it, whereas, products depreciate when used, Van Alstyne says. Of course, governance is needed to motivate third-parties to create and capture value and to understand what the rules of engagement are on a given platform.

> "Uber would not have existed in a 1G or 2G world."

PETER EVANS
PLATFORM STRATEGY INSTITUTE

amazon

Amazon processes 44% of all e-commerce sales, including 83% of e-book transactions and 90% of print online sales.

Google

Facebook and Google control 84% of global online advertising.

PLATFORM FORECAST

Today's platforms don't fit into traditional monopoly categories.

Drastic remedies, such as breaking up providers, would hurt the ecosystem.

Create more competition and allow third-parties to create links and spillovers.

5G will bring 'data on steroids' to many sectors.

Don't look backwards. Anchor your thinking to 2024.

More of a platform's value is created by external users and less by internal employees.

Thinkers50 identifies, examines, and ranks the leading management ideas from experts around the world. It creates a platform for sharing the most innovative solutions and discoveries from both industry and academia.

PIVOTING TO PLATFORMS AT BARCLAYS

JES STALEY
BARCLAYS PLC

GEOFFREY PARKER
DARTMOUTH COLLEGE
MIT IDE

To be an industry leader, you must clear three key hurdles before adopting a platform strategy: (1) embrace your value proposition; (2) disrupt traditional business practices; and (3) map your strengths to your peers and partners.

This is the process under way at Barclays, the 328-year-old British banking giant that boasted 2018 revenue of $26 billion. Jes Staley, who joined Barclays as CEO in 2015, discusses the challenges the company faces.

Barclays CEO Jes Staley (left), makes his point to Summit co-chair Geoffrey Parker.

> **"It's a total reversal from fearing competition to embracing it."**

JES STALEY
BARCLAYS PLC

Warning signs from China

Big tech in China has made banking irrelevant, Staley says, reminding Barclays it must adapt to change.

Geoff Parker: How do you prepare an organization used to a slower pace of change for enormous transformation?

Jes Staley: Barclays has always been an innovation leader, but in my 40-year career, I haven't been as concerned by what I don't know about banking as I am today.

We continue to look at traditional competitors, such as Lloyds UK and JPMorgan Chase, but we're also paying an enormous amount of attention to companies beyond the realm of banking, like Amazon and Stripe. And just a couple of weeks ago, Facebook said it's creating a cryptocurrency, Libra, based in Switzerland. There is tremendous uncertainty.

We can't avoid the reality that Barclays is massively regulated and Amazon is not.

Parker: We've heard that Barclays has embarked upon an ambitious agenda around platforms. How are you changing operations as a result?

Staley: My management team told me that I needed to pay attention to platforms, but it took me a while to understand the opportunities and risks of ***not*** trying these new models. When I finally understood what a platform could do to transform Barclays, I realized that our scale and scope are our biggest assets.

The executive team has pivoted toward transformation from within. We are building a platform on our mobile banking app, which is the most widely used of its kind in the UK. We currently have eight million consumers, and we're adding 80,000 consumers every month.

We also have the biggest platform of merchants and small businesses. If we can bring the consumers, merchants, and small businesses of the UK together, we can build a platform and create network effects.

Where we don't have data, we are partnering with firms like Salesforce to get information that can help us understand our clients' plans for the future.

Of course, regulation is a big worry. With PSD2, the EU's Payment Services Directive, we have to share our data—our corporate treasure. But we changed the paradigm to make PSD2 a huge win for us, since we have the client base and we have the scale. Barclays was the first bank to use PSD2 in APIs to get data from other banks.

Thanks to our two APIs, you can go onto our mobile app and make a payment from your Lloyd's account. It's a total reversal from fearing competition to embracing it.

And the stakes are high. We can't afford to fail, since roughly a third of the UK's GDP passes through our payment systems every day. We must keep the system safe and embrace advancements in cybersecurity.

Our biggest online banking competitor in the UK is Monzo, a digital, mobile-only bank. It downloads a new version of its banking app two to three times a week. At this time last year, we could safely download a new version of our banking app once a month. We now have it down to once a week.

Parker: What are some of your future growth paths?

Staley: We're focused on three paths. First, we pivoted the bank from being product-centric to completely consumer-focused.

Second, we experienced a massive organizational shift. We turned the organization on its side and moved 55,000 employees away from servicing a product area to managing services.

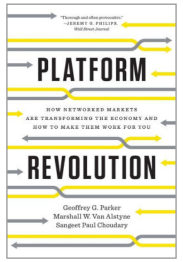
And third, which is completely novel, is that almost everyone we compete with now is a partner, and almost every partner we have is a competitor.

Parker: What's next in global markets and what are the implications for the industry?

Staley: There's a lot to learn from China and India.The big tech companies in China have basically relegated the banking industry to irrelevance. Visa and MasterCard effectively have no footprint in China. The second largest economy in the world is a great example of what could happen to Barclays if we don't adapt to this pace of change—particularly around payments.

Barclays' obligation to deliver a high level of profitability creates pressure, since we are massively regulated and are competing against firms that don't need to make money, have a much lower cost of capital, and have no regulatory oversight.

Nevertheless, we've built 328 years of trust. We have an enormous, loyal consumer and corporate franchise around the world. We have a scale advantage. We need to make sure we don't lose on the innovation side.



The issues raised in *Platform Revolution* are a principle focus of the executive team of Barclays.

SECURITY IN A HYPERCONNECTED WORLD

EDNA CONWAY
CISCO SYSTEMS

JENNIFER BISCEGLIE
INTEROS INC.

CHRISTOPHER KREBS
DEPARTMENT OF HOMELAND SECURITY

KARL WAGNER
EASTERN SKY TECHNOLOGIES

Karl Wagner, Christopher Krebs, Jennifer Bisceglie, and Edna Conway explain the advances and pitfalls in platform security.

Data manipulation, espionage, and disruption—these are three fundamental risks Edna Conway of Cisco Systems says platforms should worry about. The third party ecosystem is becoming a more critical security threat. "With every connection we make," she notes, "we're expanding that ecosystem exponentially."

Jennifer Bisceglie: When business is conducted digitally, there are new levels of vulnerability and threat compared to when your partner makes a widget. We have no idea who we're connected to globally. It may be malicious or it may be unintended, but your network can be interrupted or impacted by people you don't even know.

Christopher Krebs: At the Department of Homeland Security, we are the federal and civilian lead for cybersecurity and critical infrastructure protection. The department was originally established as a counterterrorism organization. Cybersecurity was an afterthought that became baked into the legislation.

Over the past 15 years, our responsibilities have grown. I now engage on a regular basis with our private sector partners, our federal government partners, and our state and local government partners.

Currently, the greatest example of our work is in election security. DHS has provided security clearances, briefings, and technical support in vulnerability management, risk assessments, and incident response.

Karl Wagner: My worldview is informed by 29 years at the CIA. The key for me is taking a layered approach in engaging with private industry. It's true that the more networked you are, the more vulnerabilities you need to mitigate. But if you stay too closed, you'll miss opportunities. I'm trying to be a bridge between the federal government and Silicon Valley, Austin, Texas—wherever the industry may be.

Openness and security: Are they mutually exclusive?

Krebs: We ask our partners "What are the most critical services and functions that if disrupted, corrupted, or degraded, would impact the national economy, national security, public health, and safety?"

We're developing risk architecture. If an ATM network in a city goes down, there are ways to get cash. In Puerto Rico after Hurricane Maria, pallets of cash were flown on planes to the island. This wasn't the government saying these are the five things that we think are most important in your sector; it was demand-driven. Government must get ahead of risk and know what those on the ground are worried about.

Bisceglie: Platforms change the risk discussion. We're so hyper-connected that even partners don't understand what's coming at them directly or indirectly. The vulnerability may be three hops away.

The risk discussion is changing, and so is how we're looking at uninterrupted operations. People are less concerned with how much I spend with my supplier base or who I am connected with, compared to the consequence of our transactions. That's a huge shift in thinking. We need to ask 'how a transaction could impact me and what do I have in place to protect me?' If there's a red flag, we stop the transaction or figure out other ways to mitigate the risk.

Conway: I think of my customers and their risk. What is their risk-tolerance level? How do I protect them?

Krebs: When it comes to risk, DHS looks at three critical elements: technical, legal, and the relationship. At the highest levels, we're seeing a rise in autocratic states that are weaponizing their tech sector. Ultimately, what we're talking about is truly protecting democracy. It manifests in elections, but it's also manifesting in supply chain conversations.

Wagner: Risk versus gain analysis must permeate our work continuously. Security as we now do it doesn't work. Everything is online and there are conflicts of interest. For instance, we want China and Russia as business partners, yet we don't want to share everything, and we don't want them to dictate the terms of the relationship. We have to push back on giving other nations the advantage and the ability to dictate the cultural values of our international systems.

Customers first

Cisco's Edna Conway says she now focuses on how to protect customers from risk.

> "Platforms change the risk discussion."

JENNIFER BISCEGLIE
INTEROS INC.

> "Before 2016, no one in the U.S. government was thinking about providing security assistance against the Russians, the Chinese, and the Iranians—whatsoever."

Christopher Krebs

ALL IN ON 5G NETWORKS

ALEX HOLT KMPG INTERNATIONAL

COLONEL RANDOLPH S. WARDLE DEPARTMENT OF U.S. ARMY

NICOLA PALMER VERIZON

TERRY HALVORSEN SAMSUNG ELECTRONICS

QUINN BOTTUM SWOOP SEARCH

Network technology experts debate the merits of 5G for platforms and beyond.

> "I'm starting to believe that 5G is the real deal. It will genuinely change the world."

ALEX HOLT
KMPG INTERNATIONAL

The future is here. It just hasn't scaled yet.

Nicki Palmer talks about Verizon's $18 billion annual investment in building its 5G network.

Is 5G all hype? The consensus from this group of experts: There's more reality than hype from this next-gen networking technology.

Nicola (Nicki) Palmer of Verizon is an emphatic advocate of 5G. "If we didn't think it was real, we wouldn't be investing $1 billion in fiber or $18 billion annually to build out the next gen network. We're all in."

Big advances in networks—from 2G to 4G—occurred in a relatively short time, and the same will be true for 5G, notes Palmer. The technology promises gigabit-per-second access rates and latency that will decrease to the single-digit millisecond range. 5G will allow a million connected devices in a square kilometer. "We're imagining the ancillary technologies that 5G may fuel, such as AI and XR (mixed or crossed-reality environments)," she says. "As an engineer, the term 'fourth industrial revolution' may sound dramatic, but when you think of 5G that way, it is dramatic."

FUELING IoT

Terry Halvorsen of Samsung is eager to see the Internet of Things (IoT) come to fruition with 5G. "We've been hearing about IoT for 20 years, but it's not there yet," he says. "If 5G is going to enable IoT, one prerequisite is massive computing and storage at the edge of the network. You can't be wasting time sending data back and forth to a central point."

IoT is already available in agriculture and tracking mechanisms, yet it hasn't scaled for larger applications due to high costs, low bandwidth utilization, and poor connectivity—all constraints that 5G will address.

FROM FOX HOLE TO THE PENTAGON

Colonel Randolph S. Wardle of the Department of the Army views 5G as another boost for connected combat systems "that can go from the fox hole to the Pentagon." 5G can serve as a transport mechanism right now, yet in the future it will connect sensors, computers, and communication devices to vehicles, tanks, drones, helicopters, and jets. If a soldier is hurt, the systems will transmit the nature of the injury, and ultimately increase the chances of survival.

The U.S. Army, one of the largest organizations in the world, will need at least five years to incorporate 5G into its infrastructure, which includes smart depots, mobility, and training. Wardle is already looking ahead: "What will 6G and 7G be like? By the time I get everything in place, I'm already cycling out the old technology."

Quinn Bottum of Swoop Search notes that his company began in government service and has spread to enterprise customers. The company's cognitive search engine collects global sensor data from various networks. As for 5G, he is positive the technology is real, but is less impressed on the implementation side.

Bottum thinks that connecting sensors to the network will be key, yet he has concern about spectrum issues and the ability to build apps on a 5G platform. "How do you create an App Store on the 5G network that produces something meaningful?" he asks.

BEYOND TRIALS

Palmer notes that Verizon is well beyond 5G trials. Five years ago, the company assembled a 5G technology forum with international carriers, VCs, investors, and tech firms to learn about 5G efforts. "Since then, the chipsets and the equipment manufacturers have something to build on," she says, "which is why we were early out of the gates with our 5G network."

Verizon knew that the spectrum is a building block in wireless networks. The low-band and mid-band spectrum weren't transformative enough for what 5G offers, so it acquired heightened frequency levels. "When we launched 4G LTE in 2010, it was on 20 megahertz," explains Palmer. "Today, as we launch 5G, it is at 800 to 900 megahertz of spectrum. That's where the speed comes from."

SECURITY STILL TOP OF MIND

Colonel Wardle says he is constantly aware of threats since the risks to crypto security increase as sensors and quantum computing are introduced.

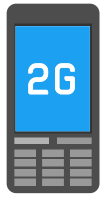
"I absolutely expect 5G will change the entire security model for the better," says Halvorsen. "The model is going to flip from a focus on endpoint protection to protection of the full system." Data will be protected while it's moving and processing, which will radically change the way companies implement security.

Halvorsen also notes that South Korea leads the world in 5G as a result of political, economic, and technology commitments. "It's a smaller country, so it's a lot easier to achieve."

Palmer closed the panel with this insight: "The future is here, it just hasn't scaled yet."

THE EVOLUTION OF NETWORKS

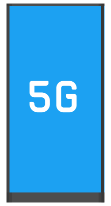
The emergence of 5G follows a steady evolution in network innovation and capabilities.



Interoperability + SMS messaging

Internet access + curated apps

Improved speed + latency decreases



Enable IoT + AI and XR

CASE STUDY

INSIDE LOOK AT A CHINESE WORKPLACE PLATFORM

MENG YE
ZBJ NETWORK

MARSHALL VAN ALSTYNE
BOSTON UNIVERSITY

Marshall Van Alstyne introduces the comprehensive offerings of ZBJ—from providing freelance workers access to employment opportunities to B2C e-commerce and fulfillment.

THE ZBJ MARKETPLACE

VOLUME	ZBJ VALUE	SMB PAIN POINTS	ZBJ PAIN POINTS
100M MARKET SUBJECTS IN CHINA: 90% IS SMBs & INDIVIDUAL CONTRIBUTING 60% GDP, 50% TAX, 80% EMPLOYMENT, ABOUT 70% IP	ZBJ HELPS MILLIONS OF FREELANCERS & SMBs A MASSIVE SCALE INCUBATOR: 100K+ COMPANIES GROWN ON ZBJ	HIRE PEOPLE FOR ROUTINE WORK AT HIGH EXPENSE OUTSOURCING IS EXPENSIVE & REDUCES BARGAINING POWER RISK OF UNQUALIFIED FREELANCERS	CUSTOMER ACQUISITION COST IS HIGH CUSTOMIZED REQUIREMENTS DISINTERMEDIATION

China's approach to the platform market isn't well-known in the West. Meng (Mark) Ye, CTO of Zhu Bajie, provided firsthand insights.

Meng (Mark) Ye oversees tech strategy, big data governance, and R&D at Zhu Bajie (ZBJ). With more than 17 million users and small business stakeholders, ZBJ is one of the largest online labor markets in the world.

The China-based platform allows businesses that need freelance contract workers to connect with website developers, register intellectual property, and find other work-related services. In addition to ZBJ's huge online labor marketplace, it's now branching into offline services.

In China, small and medium businesses (SMBs) comprise more than 50% of the country's GDP and 80% of employment. The typical channel for outsourcing can be expensive for SMBs. ZBJ offers a cost-effective way to help businesses identify high-quality workers—and for workers to find jobs.

Unlike ordinary B2C e-commerce, where the platform matches customers and goods, ZBJ matches needs and service providers, and is partially involved into service delivery. "Due to the customizable nature of services," says Ye, "it's very comprehensive, and more complex than traditional e-commerce platforms."

During the past 13 years, ZBJ has amassed more than 13 million subscribers as service providers, 7 million as service buyers, and incubated more than 100,000 companies. In the B2B arena, ZBJ links service buyers and service providers. "We are challenged if the service needs are infrequent or one-time only," says Ye. "This raises customer acquisition costs."

To meet these needs, ZBJ offers three online service markets: ZBJ market, a bazaar where people can bargain with service providers, Pick & Go Market, a portal that lists selected and self-operated services, and a solution market that reaches mid-sized and large enterprises.

In addition, ZBJ has an offline presence. "We offer physical co-working spaces, known as ZBJ Work, in more than 70 cities— a total of 40,000 seats," notes Ye. "By the end of 2019, the company will increase the number of cities to 100 and provide 100,000 seats." This is a natural extension of ZBJ's online services to the service providers who need office services, as well as a community environment.

If you want to participate on the ZBJ platform, you must be a member of ZBJ. The platform links service providers and service requesters and offers business opportunity distribution and access to a massive, on-demand service network. "This helps us cross-pollinate the platform and use it as a monetization plan."

ZBJ is one of the largest online labor markets in the world.

ZBJ charges members a fee, and then they can use the platform for free. "We also charge for the extended, value-added services such as online advertisement. ZBJ plans to include additional services, such as professional training, over time."

ZBJ is pursuing many technology areas such as blockchain as a trustworthy credit system and for copyright protection, and AI for better analytics. The combined marketing and technology expertise seem to be a winning formula.

During the past 13 years, ZBJ has attracted more than 13 million subscribers and has incubated over 100,000 companies.

Small and medium businesses comprise more than 50% of China's GDP— and 80% of its workforce.

AMAZON'S FORMULA FOR INNOVATION

DIRK DIDASCALOU
AMAZON WEB SERVICES

Dirk Didascalou of Amazon Web Services (AWS) outlined the overarching principles that guide Amazon.com and AWS: Continuous innovation, intense customer focus, and an open corporate culture.

> "No customer will ever say, 'I would like to pay more or wait longer.'"

DIRK DIDASCALOU
AMAZON WEB SERVICES

Dirk Didascalou shares the story of the genesis of AWS as an internal infrastructure service that executives realized could benefit other companies.

At Amazon, we don't strategize around platforms. In fact, we don't even use the term platform within AWS. We talk about innovation on behalf of our customers.

Organizationally, Amazon.com and AWS are two distinct companies, yet we share common principles, culture, and beliefs in how to use technology.

STICKING TO CORE PRINCIPLES

More than two decades ago, Amazon was founded on three big ideas, which still resonate today. First is our customer obsession. Second is our passion for building and experimenting, which requires the willingness to fail. The third principle is patience. Jeff Bezos said, "Put the customer first, invent and be patient."

It's critical to know what the customer values, so Amazon concentrates on price, selection,

> Put the customer first, invent and be patient.
>
> Jeff Bezos

availability, and convenience. No customer will ever say, "I would like to pay more" or "I would like to wait longer" or "It's okay if you don't have an item."

Amazon.com offers millions of items—more than half of physical gross merchandise sales are made by independent third-party sellers. This helps us offer a wide selection. We've created more than 600,000 jobs and independent third-party retail sales reached $160Bn in 2018. Perhaps that's the network effect of Amazon.

KEYS TO BUSINESS

Amazon approaches its business with these concepts in mind:

Make bold investment decisions. If you want to innovate, you must continuously experiment and take risks, measure relentlessly, then reflect on what has been learned. In 2006, people wondered why we entered the web services business. It was a risky bet, but we stuck to it because we believed the customer value would be worth it.

Innovation needs to be ingrained and applied. Amazon was created in 1994 and grew so rapidly that by 2000 we were limited because we couldn't update our website fast enough. The decision was made to use technology in a very different way: to build a service architecture for Amazon.com, without a monolithic stack.

In nine years, we went from monolithic to multi-services and micro services.

Cultivate the culture. Organizationally, we create small, empowered teams. We're a really big company, and those resources allow us to scale for our customers. At the same time, we would like to be as nimble as a startup. The only way to do that is to have small teams with full autonomy and a single leader. These teams own what they create, understand the pain points, and make fast decisions. There's no hand off of problems. It makes for a very flat and nonhierarchical organization, as well.

When we hire, we look for builders and let them build.

Work backwards from customer needs. That's how you get funded and how to learn from mistakes. We talk to customers to determine our end goals.

The first Kindle was not about creating a device, it was a vision. There had been E-readers before, but the idea was not the device, it was the value for the customer: Every book, everywhere in the world, in every language, in 60 seconds.

Technology is important. At AWS, we started building infrastructure services for ourselves and we realized that we were pretty good at that because we were able to run really big data centers at very low cost. Then we realized that if this is good for us, it's most likely good for other companies that could benefit from the knowledge that we amassed internally.

Thirteen years later, we have millions of active customers using our services. AWS set out to monetize our internal services and turned into one of the broadest, deepest platforms for today's builders. That's not what we set out to do; but that's the outcome.

We empowered every startup to have the exact same tools as the Fortune 500, or even just the Fortune 30 companies. You don't need $1 billion to build a giant data center anymore. We give the same tools to everyone.

That means a small business can scale up to the biggest supercomputers in minutes, and scale it down afterwards to cut costs. That's enabled by the cloud, and we brought it forward. We are also accelerating our innovation even as we grow in 21 geographical regions.

KEYS TO AMAZON'S BUSINESS

Make bold investment decisions.

Innovation needs to be imagined and applied.

Cultivate the culture.

Work backwards from customer needs.

AMAZON'S BUSINESS PRINCIPLES

Customer obsession.

Passion for building and experimenting.

Invent and be patient.

PANEL

THE PLATFORMICATION OF INCUMBENTS

PETER EVANS
PLATFORM STRATEGY INSTITUTE

ADRIEN NUSSENBAUM
MIRAKL INC.

SIAMAK BAHARLOO
LABVIVA

JON FAHRNER
ALBERTSONS COMPANIES

Five of the largest market cap companies are platforms—nearly all are digital natives that developed platforms as part of their business plan or acquired other firms. It's a trend that worries incumbents, yet many see incumbents as growth engines for platforms in the future.

Siamak Baharloo explains how Labviva has enabled smaller manufacturers to gain access to large pharmaceutical companies.

Peter C. Evans: A lot of people think you must hire a bunch of coders to build a platform infrastructure. Yet third parties like Mirakl can offer that service to customers, much like AWS jump-started cloud services. Help us explain platforms as a service.

Adrien Nussenbaum: We help them recognize that digital completely disrupts the value chain and breaks down the boundaries of your business. In order to win in the platform world, you need to go beyond your existing businesses. You need to be willing to disrupt yourself.

Starting a digital-first business from scratch is easy. Our clients have more difficult challenges. In a platform world, you're serving two customers: the traditional buyer and the partners you bring into your ecosystem.

Evans: Albertsons still maintains its traditional model of an established brick-and-mortar retailer as it moves into an online market. Tell us more about its size and scale.

Jon Fahrner: Albertsons Companies consisted of 21 grocery banners across the country, with 2,500 stores serving groceries to local communities for generations. It includes the Albertsons, Safeway, Jewel-Osco, and Vons brands, as well as Plated, the meal kit company.

The marketplace was originally devised to develop the "endless aisle," building a platform that would offer more than what any store could stock in its inventory.

Organizationally, we operate very much like a startup within a huge company with small teams that can move fast.

Siamak Baharloo: In a complex business such as biopharmaceutical research,

> You must be willing to disrupt yourself.

results and products are developed jointly by government, universities, and often incumbents themselves. Each is hesitant to partner with other incumbents due to political, financial, and territorial issues. The only way to overcome and break these barriers was to create a new, multi-sided marketplace that expands across all of these incumbents and integrates their products.

There are huge opportunities—biopharmaceutical research is potentially an $80 billion (USD) market, and it's growing. There are a lot of adjacent markets, such as bio-manufacturing, diagnostics, and food safety we may explore, but right now our focus is exclusively in the life sciences sector.

Evans: So you are organizing a market in an area that's highly fragmented, but there is also a lot of unrealized transaction value.

Baharloo: I was fortunate to start this after 20 years in the industry.

Our revenue model is based on charging suppliers a small fee on transactions. There's no charge to our customers, whether they're online or part of the e-procurement integration at large key accounts. Thousands of smaller manufacturers gain access to the largest pharmaceutical companies in the world through Labviva. Before, they had to go through a distributor to get that access—and had to give up significant margins.

Nussenbaum: There's really a new economy emerging. Every day we tell incumbent companies, "Don't look at yourself from this little field that you've protected; look at everything that's around. Look at how you can be disrupted."

When Amazon, Alibaba, and others were startups, they had two benefits. First, they could disrupt themselves because they were new. Second, they were digital first, so they understood from day one that digital was about the endless aisle. The biggest struggle our clients and prospects face is realizing those opportunities and acting on them. Once they understand, we focus their efforts on execution.

Evans: What is Albertsons able to provide through these marketplace offerings?

Fahrner: Fifty million households shop with Albertsons every year. In any given location, there might be 10 customers looking for a special dietary need, or something that's trending, so it wouldn't make sense to stock that item for a small market.

With the marketplace platform, perhaps 10,000 people of those 50 million have the same dietary need—and we're allowing them to shop digitally for that item. We're vetting this network of third-party sellers for our customers, and they can get it within the Albertsons ecosystem.

From the time that a seller contacts us, we can onboard quickly, which is critical since food trends evolve fast. We can normally add a new product on the marketplace within two weeks.

Evans: Where do you see the biggest opportunity for incumbents to adopt marketplaces?

Nussenbaum: When I look at our 190-plus clients every day, they're all selling items that they never carried before, that their buyers would not source because it didn't fit the traditional model. They're learning more about what their brand stands for and what it can do.

In 20 years, no business will survive without building an ecosystem, whether it's mass market or high-end luxury. Even Hermès, the great French brand, is implementing an ecosystem with interior designers to offer related services to their clients. We're living in a world of ecosystems.

Fahrner: Sometimes, you have to sacrifice margins early on to attract new customers. Forget about the economics of this for a second: What's the perfect customer experience?

When I was at Zappos, we were one of the first to offer free shipping and free returns. Our investors were getting sick over that. But everybody started talking about us and reoccurring orders jumped to 80% almost overnight.

Without the customer experience, a platform alone is not going to do much.

Baharloo: Marketplaces increasingly will become that single UI that everybody goes to, not just to purchase, but to research, to investigate, to connect, and socialize. It becomes a user community.

Fahrner: I've worked with eBay over the years, and was fascinated by their origin. eBay started with collectibles, like beanie babies. They owned that niche, then went to the next niche, and the next. Every marketplace has to find out what their beanie baby is. You can't be everything to everyone, especially not at first. Just be sure the customer comes back.

> "In 20 years, no business will survive without building an ecosystem, whether it's mass market or high-end luxury."
>
> Adrien Nussenbaum

FACEBOOK: LESSONS OF PLATFORM GOVERNANCE

ELLIOT SCHRAGE
FACEBOOK

MICHAEL SCHRAGE
MIT IDE

MARSHALL VAN ALSTYNE
BOSTON UNIVERSITY

As platforms proliferate, so do the social, political, and governance issues they face. Facebook's governance concerns are echoed throughout the platform landscape and perhaps a leading indicator of challenges all platforms face as they grow. The company operates in the social media world where trust and transparency collide and regulatory controls hover over the business model.

Marshall Van Alstyne (center) moderated a spirited exchange between brothers Elliott Schrage of Facebook (left), and Michael Schrage (right) on the topic of privacy and regulation.

> "You build trust by giving people meaningful control."

ELLIOT SCHRAGE
FACEBOOK

Since 2008, Elliot Schrage has served as a Facebook VP in charge of government outreach, public policy, global media, and, for a time, platform marketing. During that time, platforms have skyrocketed, while definitions and boundaries are blurring.

"Where are the boundaries between public and private platform governance?" asks Marshall Van Alstyne.

Marketplaces are evolving, and Facebook is building ecosystems and offering people community. But those advocating greater regulation should be careful about what they wish for, warns Elliot. "There are many gray areas, such as the rules governing appropriate behavior and a healthy ecosystem—and who decides the rules." These questions will only grow more complicated as platforms increasingly rely on sensors, machine learning and AI. Rethinking 'platform governance principles' has become a regulatory, legal and executive challenge.

THE HYPE CYCLE OF PLATFORM GOVERNANCE

Elliot's remarks highlighted changing popular attitudes to communications platforms, particularly social media. "The period of glorification of new media generated by Facebook, Google, and YouTube has ended," says Elliot. "Everyone thought these platforms were as wonderful as apple pie. Now everybody thinks they're horrible."

Today, he noted, "People emphasize the risks and the dangers." Schrage observes that platform champions and users alike live in the "trough of disillusionment." He believes that Mark Zuckerberg's call for regulation is genuine, since the platform wants clarity, too. The challenge is what does good regulation look like?

HOW DO PLATFORMS BUILD LEGITIMACY?

Elliot emphasized that transparency, trust and control are the essential elements of respected platforms. "You build trust by giving people meaningful control," says Elliot. Control is not meaningful unless people understand the choices they can make and the implications of those choices – and that requires transparency. "People want simple, yet comprehensive transparency, and that's really hard to achieve—and getting harder."

These concepts are easy to articulate but challenging to deliver. Very early on at Facebook, leaders were criticized for publishing a privacy policy that was longer than the U.S. Constitution. "We gave users very granular controls over their privacy experience," says Elliot. "We were criticized because they were too much. People felt overwhelmed. So in response Facebook cut back on the number of controls and offered simpler explanations. "And then we were criticized for explaining too little!"

Noting that governments and government oversight isn't monolithic, Michael queried which bodies should have regulatory ownership over platform power. "Is it the FTC, FCC, Congress, the Courts, or Justice's anti-trust department?" he asked. "The more global the platform, the more conflicted and confused platform policy and oversight become. Who will be the true beneficiaries of this political, regulatory and legislative fragmentation?"

Michael argues that industry incumbents embrace regulation that entrenches their market leadership, referencing Nobel Laureate George Stigler's concept of regulatory capture. In fact, he argued, most of the social media lobbying in Washington, Brussels and elsewhere had less to do with better articulating sustainable 'governance' principles than protecting and entrenching corporate interest. This self-serving approach has come back to hurt platform reputation.

STEMMING FAKE NEWS

One of the most pressing issues social media companies face today is fake news. Elliot explained in some detail the framework Facebook deploys to address fake news.

Elliot emphasized that Facebook is "not making these decisions for commercial reasons...we are making them because we believe they reflect some definition of public interest; either national law, or international standards." Despite assertions from many media or political figures, Schrage reiterated that Facebook does not decide which content to post or remove based on the political point of view it advocates.

Finally, Elliot noted that the company announced that it is creating an independent appeals process, including an independent board, to review controversial decisions, removing them from any business association. This, he argued, is an important step in 'governance mechanism' design. "It is dangerous for a platform to get into the business of deciding what is true and what is false, except in extreme cases," involving health, safety or harm, says Elliot.

He closed the chat by referencing former Supreme Court Justice Louis Brandeis: "The best way to fight bad speech is with good (more accurate) speech, not to censor the content."

> "Marketplaces are evolving. We're building ecosystems and offering people community. But be careful what you wish for, because there are many gray areas."

Elliot Schrage

LESSONS FROM A PLATFORM PIONEER

LORRIE NORRINGTON
LEAD EDGE CAPITAL

ANDREW MCAFEE
MIT IDE

Early on, a handful of platforms, such as eBay and Intuit, blazed trails. Lorrie Norrington helped bring those platforms to market, as well as Autodesk, HubSpot, and many others. Andrew McAfee spoke to Norrington about her perspective on today's markets and what she's learned along the way.

Lorrie Norrington believes that the primary obstacle to platform innovation is timidity. The lack of speed and agility isn't helping either.

"Too many companies have a fear of keeping the engine running while the plane is in the air," says Norrington. "But they have to move fast. Perfect is the enemy of the good."

Few firms have the desire to disrupt themselves, but that hasn't been the case for Autodesk, of which Norrington is a board member. Since its founding, executives have believed that the company could reach its goals even if it meant disrupting its business model.

Yet many businesses don't know the first thing about how to disrupt the status quo. The good news is that people are coming out of business school who know it's critical.

In the case of Intuit, technology constraints—not fortitude—were the problem. When Norrington led parts of the firm in the early 2000s, the technology couldn't reach customers in real time. "We wanted to open our software to developers," says Norrington. "We couldn't innovate fast enough to fill the void, but APIs didn't exist yet. We got there very slowly."

MIT IDE Co-director Andrew McAfee asked Norrington about the financial differences among platform companies and what makes an outstanding platform investment.

"The advantage goes to those that ensure that customers have tremendous choice and the ability to self-serve," says Norrington. "Consumers want choice, but at the same time they want ease of use."

"Companies also need to let go of the idea of building infrastructure," she notes. "It's faster to buy a platform-as-a-service."

So what are the best practices for CEOs in need of funding for platform investments?

"At Autodesk, market cap declined by $2 billion," Norrington says. "Yet there was a steadfast belief that if we did not disrupt our model, somebody else would." She admits that this mindset is unusual—and that 90% of Fortune 500 companies probably wouldn't take the same path or even know where to begin.

"Technology is no longer a constraint, but you still have to be sure that the community understands you. You need to have an ongoing dialogue. You have to do more than connect based on algorithms. You have to connect in person."

McAfee notes that the virtualization of the economy requires a huge amount of "good old fashioned face-to-face interaction."

"Humans still want to connect," Norrington says. "You need to deliver content on a consistent basis and create relationships, because relationships are difficult to repair once they go wrong."

> "Consumers want choice. At the same time, they want ease of use."
>
> **LORRIE NORRINGTON**
> LEAD EDGE CAPITAL

Companies need to let go of the idea of building infrastructure.

Lorrie Norrington believes we are only in the second inning of the platform revolution game and that most Fortune 500 companies don't know how to manage the transformation.

WISE WORDS FROM A PLATFORM PIONEER

An ecosystem can out-innovate a company, and as a result, it can move faster. So it's actually a two-way benefit.

Boards are becoming more diverse, except when it comes to digital. They need a digital education.

Brand building will be very different going forward.

Startups are more likely to die of overeating than starvation. Focus on the business you're in. Don't try to build everything.

Culture is critical—nurture it! Without a strong culture, a company can fall apart.

We are in the midst of a revolution in machine learning and AI. Get on board!

In the platform economy ball game, we're only in the second inning. We're definitely not in the third.

SUMMARY

WHAT WE LEARNED

MARSHALL VAN ALSTYNE
BOSTON UNIVERSITY

GEOFFREY PARKER
DARTMOUTH COLLEGE
MIT IDE

PETER EVANS
PLATFORM STRATEGY INSTITUTE

Marshall Van Alstyne, Geoffrey Parker, and Peter Evans closed the event with highlights and calls to action.

During the summit, we learned that platforms **are** *the business in so many cases, and there is huge optimism in what platforms and technology can do. There were also sober reminders that unchecked growth can harm the marketplace, the ecosystem, and society.*

"We are navigating uncharted waters."

GEOFFREY PARKER
DARTMOUTH COLLEGE
MIT IDE

Several speakers—from Amazon to Albertsons to Barclays—emphasized the importance of always starting with the customer and staying relentlessly with that focus.

On the financial side, it's better to be a giant business with low margins than a tiny business with fat margins.

From Facebook VP Elliot Schrage, we learned that governance is challenging. If it were easy, it would already be done.

Cultural and societal problems are beyond what any one firm can tackle alone.

5G is going to move to the boundaries of the firm and is, by itself, a technology platform but not a business platform. However, there are strong platform business models to be built on top of the technology.

The ability to invert the firm is not equally distributed. As Lead Edge Capital Partner Lorrie Norrington said: "We're only getting started in the platform economy; we're in the second inning of the game."

Most corporate boards aren't willing to disrupt the business they're in, but those that do, reap the benefits.

Dirk Didascalou, VP at Amazon Web Services, reminded us that experimentation leads to rapid innovation. Don't overthink reversible decisions; save scarce management attention to analyze the "one-way doors."

6 BIG TAKEAWAYS

1
Create organizations with the ability to rapidly experiment.

2
Incumbent organizations must undertake massive change to adapt to new digital and platform delivery service models.

3
We're at most three hops from a security threat. You're hyper-connected to everyone in your ecosystem.

4
Consumers are attracted to what platforms can do and facilitate, not the platforms themselves.

5
If governance were easy, we would have already done it.

6
Think like it's 2024.

MIT PLATFORM STRATEGY SUMMIT 2019

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We are grateful to Accenture, Deutsche Bank, and Mirakl for their sponsorship of the 2019 MIT Platform Strategy Summit.

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Photography Andrew Kubica **Content** Paula Klein, Christie Ko, Shannon Farrelly **Design** Shawneric Hachey