TRENDS SHAPING THE FUTURE OF PLATFORMS

2023 MIT PLATFORM STRATEGY SUMMIT

MIT INITIATIVE ON THE DIGITAL ECONOMY
As platforms strengthen and gain clout, models must continue to evolve and adapt

A decade after the first MIT Platform Summit, today’s interconnected ecosystems show no signs of slowing down. In fact, digital platforms have intensified their position as a transformational force within businesses and externally to customers and industry partners. Most notably they have permanently changed social transactions—think social media, entertainment, and collaboration.

The global online platform universe is ubiquitous, but it also faces some tough challenges including value creation, labor issues, antitrust, misinformation, and government regulation. The sudden advancements of AI are taking center stage, as well.

All of these topics were featured on July 13 at the 2023 MIT Platform Strategy Summit, held online and in person at MIT. Expert speakers—from academia, government, industry, and nonprofits—engaged more than 300 attendees in a day of debate and recommendations. Looking to the future of the platform economy, speakers focused on five key trends: AI, sustainability, regulation, manufacturing, and the creator economy.

Summit co-chairs Peter C. Evans, chief strategy officer of McFadyen Digital, Geoffrey Parker of Dartmouth College, and Marshall Van Alstyne of Boston University, along with Annabelle Gawer, a professor at the University of Surrey, explained how platforms will be pivotal to all of these disruptions. Parker sees a “super-dynamic” environment for platforms going forward, while Evans noted that the future of platforms will be “multidimensional.”

The co-chairs said that new technologies and models are infusing platforms with new energy and ideas. Chief among them, according to Evans, are platform-based responses to climate change and the circular economy. Van Alstyne is hopeful that as platforms evolve they will bring better social and economic outcomes to the world.

Gawer is optimistic as well, but she added some caveats: “When we as a community started to work on platforms…the mood was extremely optimistic, some might even say utopian.” But now, she said, “we need to take a harder and more lucid look into what platforms have achieved—not just in terms of good, but also in terms of bad.” Responsible self-governance and trust will be essential to maintaining the positive impacts of platforms, she said.

The sentiments of Summit speakers ranged from extreme optimism about platforms for manufacturing and sustainability, to extreme concern about the risks of unchecked artificial intelligence. But all agreed that platforms will continue to impact the way people interact, transact, and innovate into the future.

WHAT’S NEXT?

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Look for the icon to watch full sessions

FIVE KEY TRENDS

1 The impact of AI

2 The need for circular platforms

3 The role of regulation

4 Connected manufacturing

5 Influencers and the creator community

3 QUESTIONS FOR PLATFORM PROVIDERS

Platform governance and ecosystem rules are essential to keeping platform markets in check. As frontline governors of their private ecosystems, platforms must take responsibility and consider three key questions.

Which activities do you allow? Which activities do you prohibit? Whom do you allow to do what?
Artificial intelligence is advancing so quickly and suddenly, it can seem nearly impossible to evaluate. But at the MIT Platform Summit, panelists offered specific use cases, historical context, and predictions about the hottest AI technologies.

Platforms contribute to AI in three basic ways. First are platforms that create and sell AI technology as a service. Second are platforms that adopt AI technology to drive their business. And third are hybrid platforms that create and sell AI technology as a service.

H. James Wilson of Accenture sees an evolution taking place. “Going back more than 10 years, there are a number of ways businesses can benefit from human-machine collaboration,” he said. “As this new era of generative AI comes into the workplace, I don’t see those benefits going away.”

In fact, Wilson expects generative AI to deliver serious benefits to businesses. Those could include greater scalability and flexibility, better decisions, and highly personalized processes. “We’re talking about language and reasoning tasks,” he added, “so there are whole new classes of work that are going to be impacted.”

Several panelists are already implementing new forms of AI. Christian Freytag of SAP is using AI to both infuse intelligence into business processes and develop new commercial software. Kaifu Zhang of Alibaba, China’s giant platform, also has efforts under way. “For the past few months,” he told attendees, “we’ve been working night and day to implement generative AI throughout our entire operation process.” Zhang joined the discussion remotely.

Panelist Hamilton Mann, also attending remotely, reminded summit attendees that the benefits of advanced technologies such as AI are often distributed unequally, favoring certain segments of society, often to the detriment of others. “Since the beginning of human history,” he said, “we have been very good at building products that meet specific needs of certain people, and thus exclude others.”

Urging Caution

A more direct warning was issued by Turing award winner, AI pioneer and developer Yoshua Bengio, who is worried that potential for harm. AI systems could actually become so smart, they’re essentially a new species. Bengio, who spoke from Montreal, said this species could be difficult—perhaps even impossible—for humans to control.

We may need to design “safe” AI systems that could protect us against “rogue” AI, he said. He also urged companies, governments, and regulators to take action—and fast.

“I’ve radically shifted my predictive horizon of when we would be able to build dangerous AI,” Bengio said. “I used to think it would be something like a couple of decades to a century… now I think it might be just a few years.”

Panel moderator Marshall Van Alstyne remarked that generative AI offers bold new challenges of AI, especially in its generative version. “This is the first technology that has actually mastered language,” he said. “It’s one thing for a printing press to print a book, but an entirely different thing for the press to write and design the book from scratch… Technology’s never been able to do that before.”
“I’m convinced AI will be more disruptive than the arrival of the internet 25 years ago.”

Christian Freytag
Chief Data & Technology Officer, SAP (center)
Network effects can boost reuse efforts across industries—from fashion to plastics

The circular economy describes innovative supply chains that emphasize product reuse, repair, redesign, and recycling, all in the name of helping to ease the climate crisis. The need is great. It’s estimated that less than 9% of materials get reused—meaning over 90% of man-made products end up being burnt, tossed on a landfill, or dumped into the ocean.

“I think more and more of us are aware that we don’t have 200 years to fix all the work we did in the industrial revolution,” Kenny Arnold said. “I think it’s a matter of survival.”

To that end, panelists are spreading the word and seeking partners. Panelist Maryam Al Mansoori is General Manager of the Rebound Plastic Exchange, a global B2B digital marketplace for recycled plastics. It aims to match companies with plastic they’d like to unload with those who seek the material for recycling and reuse.

Plastic is a challenging market, Al Mansoori told Summit attendees, because of two main factors: the industry’s old-fashioned practices and the relatively high cost of recycled plastic. “Climate change and circular economy are the new buzzwords, but it’s not enough to write about something or to say you’re going to invest in something; you need to practice it,” she said. “Platforms provide you the data, they save you time, resources and costs.”

Changing Norms

Fashion is an area where consumers have grown comfortable with the concept of recycling and reusing clothes, said Cynthia Power, who formerly worked at the women’s clothing designer Eileen Fisher Inc., where she started the company’s resale program, Eileen Fisher Renew. “When I started…a lot of our customers were horrified by the idea of buying used clothing,” she said. “But by the time I left, six years later, the program was very beloved.”

Deborah Weinswig also believes opportunities exist. “People will actually change what’s in their [digital shopping] cart to have a lower carbon footprint,” she said. “So if you give them the data, and if they’re able to have some control, they do care.”

Moderator Peter Evans agreed. “We’re at an inflection point,” he said. “People are getting more serious, and the pressures on both governments and businesses are ramping up. It’s going to be different over the next five years.”

The circular economy was the topic for panelists (from left) Cynthia Power, Maryam Al Mansoori, Deborah Weinswig, Kenny Arnold, and Moderator Peter Evans.
“Climate change and circular economy are the new buzzwords, but it’s not enough to say you’re going to invest in something. You need to practice it.”

Maryam Al Mansoori
General Manager, Rebound Plastic Exchange
As platforms gain clout, they’re also attracting regulatory oversight. In the United States, much of the action is taking place in the courts, while in Europe, action is coming more directly from government bodies. Either way, as members of the Summit’s “New Platform Regulators” panel discussed, there’s a lot of activity.

In the U.S., oversight stems largely from what’s known as Section 230, which grants digital platforms legal immunity from the third-party content generated by their users. It also grants them immunity based on their own editorial decisions. These limits, however, are now being tested by several lawsuits, both at the state level and in the country’s Supreme Court.

As a litigator representing tech firms, Chris Marchese explained that the platforms have in some cases responded with countersuits. “The crux of this is, does the First Amendment ever apply?” he said, referring to the constitutional amendment that prohibits Congress from passing laws that, among other things, abridge the freedom of speech or of the press.

“We’re confident that private publishers like Meta and Google have First Amendment rights, including the right to editorial discretion—meaning, how they moderate content, how they present that content, how they curate it, etc.,” Marchese added. “But the states have a different view.”

Oversight can come from nongovernmental groups, too. That includes the Stanford Internet Observatory, which describes itself as a cross-disciplinary lab for the study of abuse in IT, with a special focus on social media. As the Observatory’s Renée DiResta explained, the group studies this issue from four perspectives: trust and safety (including child safety); information integrity (including misinformation and fake news); emerging technologies (including AI); and policy.

In all areas, the Observatory makes one consistent claim: Transparency is good, and more transparency is better. “One of the things that we’ve advocated for a long time,” DiResta said, “is that when you have situations in which governments make requests or in which governments are engaging with the platforms, those requests should be put somewhere transparent.”

Digital platforms are loosely regulated by Section 230 of the U.S. Communications Decency Act of 1996, which says that digital platforms shall not be treated as publishers. In practice, this means digital platforms are granted legal immunity for content posted on their sites by others. In addition, the law permits digital platforms to remove or block access to objectionable content, so long as it’s done in “good faith.” While Section 230 has been challenged, it has not been overturned. Two related lawsuits—Gonzalez v. Google and Twitter v. Tamerlan—went all the way to the U.S. Supreme Court, which ruled in favor of the platforms.

The Digital Services Act aims to create a set of cross-border rules for Europe that define the obligations and accountabilities of digital services. The law covers intermediary services (such as internet providers), hosting services, online platforms and large platforms with more than 45 million users. Among other measures, the DSA bans certain targeted ads, requires very large platforms to conduct periodic audits, and obligates platforms to be transparent, which can include sharing their recommendation algorithms. It also holds them liable when they violate their own stated terms of service.

When it comes to regulating digital platforms, the United States and the European Union have taken two dramatically different approaches.
“We’re confident that private publishers like Meta and Google have First Amendment rights, including how they moderate content, how they present that content, how they curate it, etc. But the states have a different view.”

Chris Marchese  
Director of Litigation, NetChoice
Manufacturing can seem like the sleeping giant of technology. It’s an enormous sector of the global economy, with manufacturers contributing $13.6 trillion to the GDP in 2020, or more than 17% of the value added by all industries that year, according to the U.S. National Institute of Standards and Technology (NIST).

However, when compared with other industries, manufacturing has been slow on the digital tech uptake. Unlike banks and other information businesses, manufacturers must implement not only purely digital systems, but also IT systems for physical assets, namely, factories and their associated gear, such as industrial robots, assembly lines, and materials. Now the giant is waking up to the benefits of digital platforms.

Two companies tapping into manufacturing’s demands—ToolsGroup and Sight Machine—were represented by their CEOs on a summit panel on “End-to-End Visibility: The post-pandemic coming-of-age for logistics and manufacturing platforms.” Their discussion, led by Geoffrey Parker, highlighted the way platforms can unlock factory data that manufacturers have collected, but until now rarely used.

Sight Machine has developed technology that takes a customer’s voluminous factory data and turns it into concise, usable information that allows customers to run “smart factories” at enormous scale. “Most factories in the world are maybe half or two-thirds as efficient as they could be,” said Jon Sobel. “They do a really good job with the tools that they have. Our focus is on helping them use their data to be better at manufacturing.”

Smart Data

ToolsGroup has implemented solutions based on advanced predictive analytics. It helps companies forecast demand, replenishment needs, and more—often with uncanny accuracy. “Over half of our customers have over 5 million SKUs; there is no single human being or even Excel spreadsheet” that can forecast at this scale, said Inna Kuznetsova. Artificial intelligence can figure out the risk for each item, she added.

The overall goal: a more holistic view of the manufacturing supply chain—and the ability to make changes quickly and at enormous scale. Platforms and AI, said Parker, represent “the coming revolution in supply-chain and manufacturing visibility.”

HOW LEADING MANUFACTURERS GAIN VISIBILITY WITH PLATFORMS

As Summit co-chair Geoffrey Parker explained, “We’ve seen platform transformation happen in a lot of different industries, but not so much in logistics and manufacturing.” Fortunately, he added, that’s changing. Here are a few examples of manufacturers that have worked with ToolsGroup and Sight Machine to make significant improvements:

To replace a manual planning process done by one person with an Excel spreadsheet, the beverage maker developed fully integrated demand planning and inventory optimization and replenishment systems.

Boise Paper had a shipping problem. The average transit time for its paper products was longer than two weeks, meaning much of its inventory was sitting in rail cars. By harnessing its data and implementing inventory optimizer, Boise cut inventory by more than 25%.

The automaker implemented systems to perform anomaly detection on 300 industrial robots. The result is accurate predictions and root-cause analysis for downtime, and the ability to perform predictive maintenance.

The beverage company used AI techniques to trace the true cause of alarms in its packaging lines, an issue previously unresolved for 20 years. A combination of natural language processing, agglomerative clustering, and sequence analysis traced the problem to its root causes.
“Most factories in the world are maybe half or two-thirds as efficient as they could be. Our focus is on helping them use their data to be better at manufacturing.”

Jon Sobel
CEO & Co-founder, Sight Machine
The platform economy has spawned several offspring—and they are taking on lives of their own. Chief among them is the multibillion-dollar creator economy, businesses built by independent, mostly self-employed creators, including social-media stars, podcast producers, bloggers, video hosts and others, many of whom have come up with clever ways of monetizing their influential activities. Increasingly, the creator economy also includes traditional companies that serve and sometimes employ these independent marketers.

Both groups rely on digital platforms to connect with their audiences, which can be impressively large. The most-followed user on TikTok, a young man named Khaby Lane, has nearly 162 million fans—more than the entire population of Russia.

Numbers like that attract attention, and the “Navigating the Creator Economy” panel, a first for the MIT Platform Strategy Summit, was laser-focused on these trends.

Once an online creator or influencer attracts a big following, they can attract brands. L’Oreal, Disney, and ESPN are among those that have paid influencers to help marketing campaigns. Some have even hired web personalities outright.

Choosing a strategy can be overwhelming. With so many creators and influencers out there, and on so many platforms, brands can be overwhelmed by choice. “You want to set your goals,” advised Lindsey Gamble. “What are your KPIs [key performance indicators]? What are you hoping to accomplish?... Then you can figure out what social media platforms you need to be on...and what type of creators you need to pick.”

B2B Joins In
While a great deal of the action is B2C, a new wave of B2B influencers is rolling in. And they’re using platforms beyond typical business sites like LinkedIn. “There’s so much more,” said Ansley Williams. “One of our top-performing pieces of content was a long-form video, ‘the most interesting man in insurance.’”

AI is coming into play, too. Panelist and podcaster Jordan Yates described an AI application she uses behind the scenes on a Caterpillar-sponsored podcast she hosts, “Energy Pipeline,” to help edit the podcast video. The AI tool detects which person is speaking during the playback. Then it makes sure that person is on screen. “It saves so much [editing] time,” Yates said.

That may sound modest given some of the loftier claims made for AI tech, but Heidi Mika said these kinds of shortcuts can help marketers overcome two big challenges: burnout—popular influencers must churn out new content frequently—and a related lack of time for creative brainstorming. In her marketing role, Mika is learning to use ChatGPT and other AI tools, hoping to stay current and discover the technology’s possibilities. “The best advice I’ve been given about AI,” she said, “is that it’s not AI that will take over our jobs, but the people who know how to use it.”

Overall, the creator economy will matter for three types of participants: brands, influencers and creators, and platforms. “This doesn’t actually happen,” said moderator Peter Evans, “unless there’s a platform.”
“The best advice I’ve been given about AI is that it’s not AI that will take over our jobs, but the people who know how to use it.”

Heidi Mika
Director of Influencer Marketing, Mekanism
FREEING UP PLATFORM INVESTMENTS

For those looking to invest in the next great platform company, as well as those wanting to build one, venture capital executive Scott Sandell has some advice: Think free.

Sandell, chairman, CEO and chief investment officer at VC firm NEA, offered his investor’s perspective on the platform market during a fireside chat at the 2023 MIT Platform Strategy Summit.

Sandell’s solution is simple, if counterintuitive: Whenever possible, startups should initially offer their software and services for free as a way to build market share. “If people adopt it very rapidly, you essentially take over a large share of the market,” he explained. Startups, he added, won’t get a large market share “by charging money for software, building out of sales, marketing, and all that in the old-fashioned way.”

The tradeoff, however, is no revenue, at least in the short term. “Investors will often have a hard time valuing that,” Sandell said. So once established, a startup will need to find ways to monetize products and services. That could mean offering a self-service option, upcharges or service tiers, or new services or software that appeal to a subset of the customer base. The goal, Sandell said, is to “come up with a new set of functionality for which you charge.”

Ultimately, investing is about taking risks. The smartest investors, Sandell said, “see what’s on the periphery, not only what’s coming straight at you...Look at tech that’s a quantum leap ahead of the others.”

INVESTORS
Understand network effects—increased numbers of users improve the value of a good or service. Don’t expect immediate revenue. Instead, look for market share. Seek new “quantum leap” ideas on the periphery.

ENTREPRENEURS
Initially, offer software and services for free. Build market share, then find ways to monetize your customer base. Persevere! Innovative companies develop over time.

RELATED RESOURCES
Why Customers Leave Platforms, and How to Retain Them
Harvard Business Review, 2023

Improving S230, Preserving Democracy & Protecting Free Speech
Communications of the ACM, 2023

Digital Platforms and Antitrust
Oxford Handbook of Economic Governance and Market Regulation, 2022

How APis Create Growth by Inverting the Firm
Management Science (forthcoming)

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