FRICTION FIGHTERS

HOW TO IDENTIFY OPPORTUNITIES AND VULNERABILITIES IN THE PLATFORM ECONOMY

AN INTRODUCTION TO THE FIT™ FRAMEWORK

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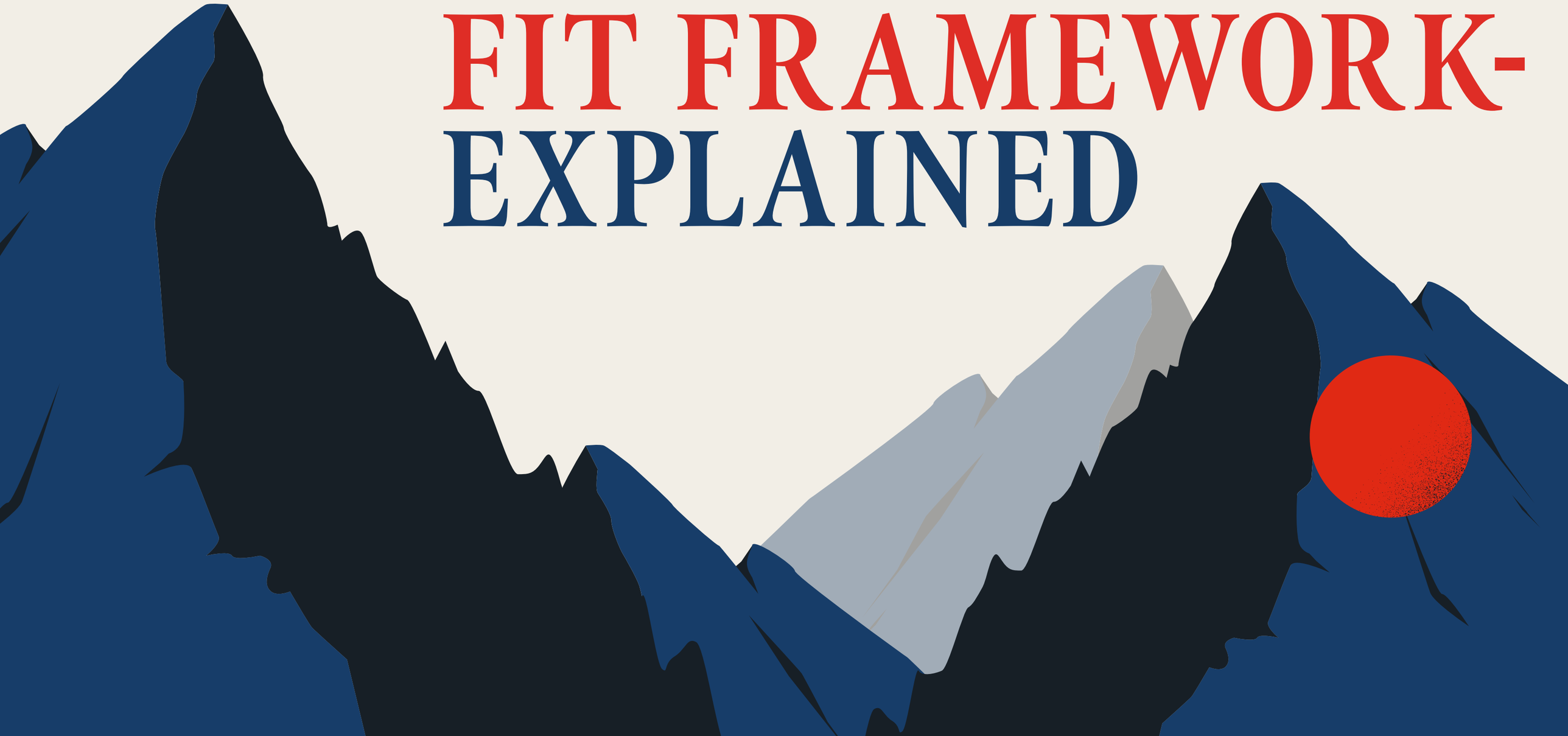
THE FIT FRAMEWORK-EXPLAINED



David S. Evans and Karen L. Webster

February 12, 2024

Decisions, Decisions

More data isn't always the answer, which many executives say can overwhelm and confuse rather than clear the path.

It is said that the average person makes 35,000 decisions a day. Some, like whether to have oatmeal or eggs for breakfast, don't carry a big downside risk since both are healthy food choices.

Others may.

Nearly three quarters of executives surveyed recently said the number of business decisions they make daily has increased 10X over the last three years; 59% said they don't feel confident making at least one of them.

In a digital world dominated by network effects and platform solutions, frameworks are now essential decision-making tools for business leaders. The markets in which they compete are more dynamic, competitors less conspicuous, and decisions come with unprecedented layers of complexity. Yet, these dynamic markets create more opportunities for companies to reduce friction, save time, and overcome the inertia that can hobble innovation and new sources of value for customers.

Understanding how innovators can use new technologies and business models to navigate the friction, inertia and time continuum is essential to making digital transformation a successful outcome for their business.

Frameworks

for Innovating Platform Businesses

Successful platform businesses are the ones that have found a way to eliminate a friction that makes it so difficult and costly get together that good partners don't even try. When friction wastes a lot of people's time there's an opportunity, since people and businesses love saving time.

The Friction, Inertia, and Time (FIT) Framework is a tool for business innovation, leveraging academic research and practical insights to identify and tackle inefficiencies in the digital economy. It aids leaders in pinpointing opportunities for new platforms by analyzing how friction, inertia, and time affect business success and customer value. FIT guides businesses in reducing waste, overcoming change resistance, and aligning technology with market needs, enhancing predictability in the fast-evolving digital economy landscape.

BUT

inertia may interfere with finding a better way. If participants have gotten used to dealing with frictions, they likely have baked in the time for dealing with them and may, therefore, resist change. After all, for all they know a new platform may cause more friction and suck up more time.

The Frictions, Inertia, and Time (FIT) Framework helps business leaders innovate for growth, in a dynamic, interconnected, digital world, by identifying the critical issues that drive successful outcomes for their businesses and the customers they serve. And it is key for identifying the opportunities for creating and igniting a new platform business.

This proprietary framework uses rigorous academic research, data-driven econometric models and the practical knowledge gained over decades working with the most innovative players across the digital economy to uncover and monetize the interdependencies between Friction, Inertia and Time.

It helps platforms, key stakeholders and their investors, find places where resources are being wasted or where people are wasting time, and where a platform could sharply reduce that waste. FIT is an analytical framework for understanding what keeps potential participants from making a change and whether there are strategies available for overcoming inertia.

	FRICTION	INERTIA	TIME	TECHNOLOGY
FOR THE CUSTOMER	Is the friction something that is required of the business, or in the way that the business chooses to implement that requirement?	Is the friction big enough that enough high value customers are willing to switch to an alternative provider?	Does the solution save the customer time?	What is required of the end user to access, learn and use the new tech
FOR THE BUSINESS	Is the friction big enough and for enough users to make solving for it worth the investment?	Are enough customers leaving that the business is willing to change?	Can the businesses reduce or eliminate the friction and get to market in a relevant timeframe for their customers and the business itself?	What is required to support the new tech, and how long before it can scale and deliver a ROI?

The average person faces 35,000 decisions daily, ranging from simple choices like breakfast options to complex ones such as job changes. Executives report a significant increase in daily decision-making, often feeling overwhelmed by data, highlighting the importance of decision-making frameworks in today's fast-paced, digital economy. These frameworks, like the Friction, Inertia, and Time (FIT) Framework, are crucial for navigating the complexities of modern business, reducing waste, and fostering innovation. The FIT Framework, grounded in academic research and practical experience, aids in identifying inefficiencies and overcoming resistance to change, ultimately aligning business strategies with market opportunities in the digital age. This approach is vital for businesses aiming to thrive in a landscape shaped by digital platforms and rapid technological advancements.

THE FUTURE

Belongs to the FIT

The introduction of digital and the reality of a more connected economy creates new opportunities and sources of competitive pressures for businesses operating in every sector. The accelerating diffusion of AI and other technologies has quickened the pace of change and the profile of competitors. New business models are changing market dynamics and creating new platform economics.

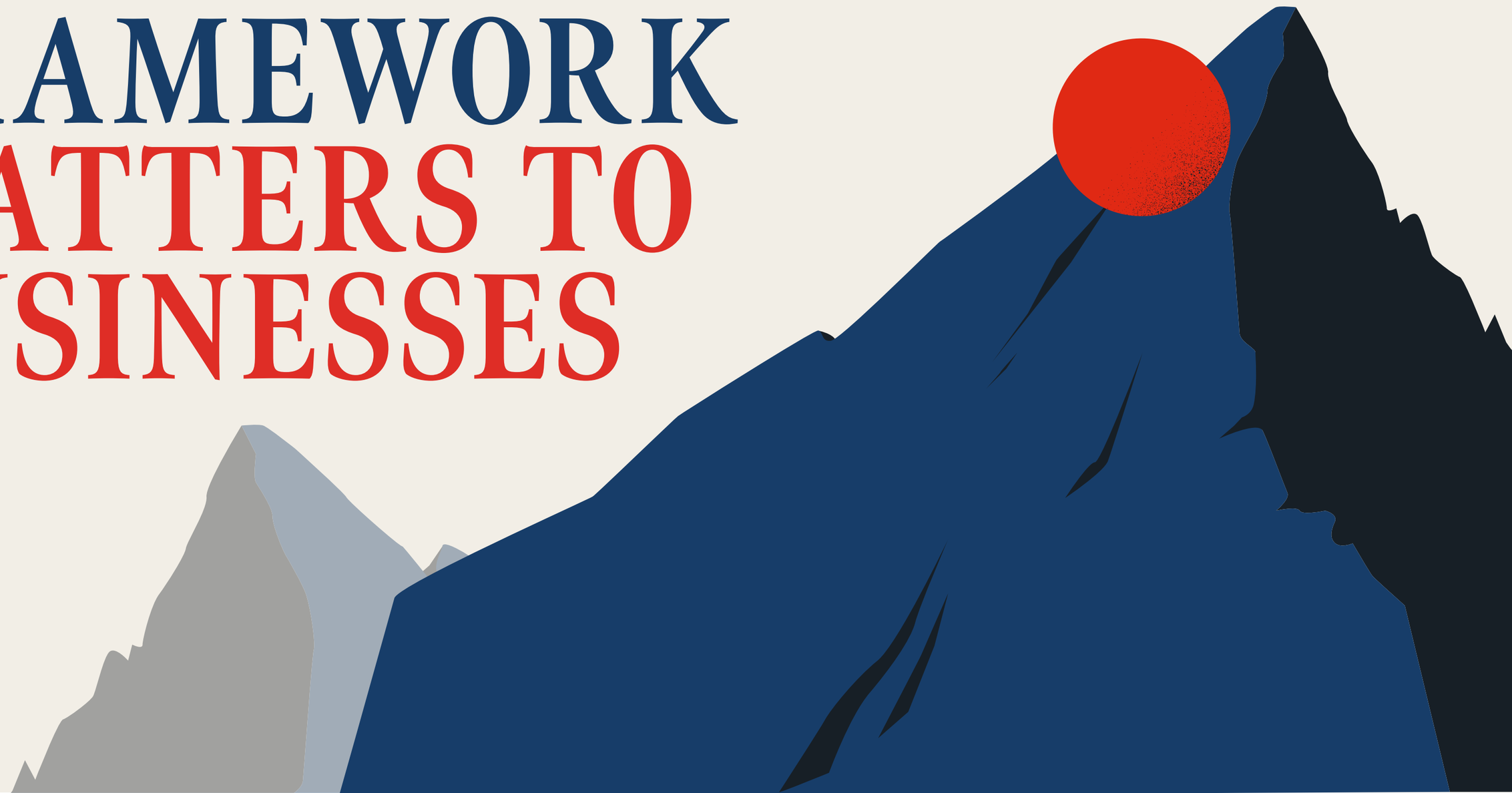
The FIT@ Framework provides executives with an analytic baseline to more accurately examine the why and the what of a new business opportunity, and a decision framework for how to execute for profits and scale. The result is a more predictable way to align business and technology readiness with customer value and market opportunity in a world dominated by digital platform ecosystems.

This collection of essays and insights will immerse you into the relevance of using this analytical framework to drive success in the digital economy.

One more informed decision at a time.

David S. Evans
Karen L. Webster

WHY THE FIT FRAMEWORK MATTERS TO BUSINESSES



KAREN WEBSTER

JUNE 15, 2020

WHY DIGITAL'S 3.0 SHIFT MAY TAKE LONGER THAN WE THINK

There is an out-and-out frenzy to capitalize on the pandemic-fueled digital shift that gave consumers few options for accessing products and services over the last twelve weeks.

Miss this shift and miss it now, and pundits say it probably won't be long before you're just another piece of roadkill on the highway of companies who couldn't adjust with the times and changing consumer and business demand.

And you better do it right now, they add, since digital shifts wait for no one.

Innovators with better tech will appear and — literally overnight — snatch your customers out of your calcified incumbent arms and build scale, they say. And incumbent, for some, means any business that existed before March of 2020.

There is, of course, some truth to this.

Any business, new or old, that hasn't used the last 12 weeks to rethink its business focus, business model and digital strategy likely won't make it in the long term — but not because an overnight sensation will emerge in the next few months to eat its lunch.

And there will be businesses that, regardless of the will to shift, simply can't because of a failure to embrace digital as a key customer touchpoint even before the pandemic made it an essential business strategy. For those companies, making the quantum leap to digital is, literally, a bridge too far.

And certainly, there will be innovators — new and existing firms — who see the very important secular shift that has just emerged, and the opportunity to capitalize on it, who will find success.

This shift isn't about giving physical a digital channel, but instead integrating physical into a digital-first experience.

But it won't happen overnight.

Just ask many of the players who are, today, powering the digital shift that we have just witnessed.

THE FALLACY

Of 'Internet Time'

In November of 1998, a book was published that captured the prevailing wisdom of startups operating at the time. The book, *Competing in Internet Time*, was written by Professors Michael Cusumano (MIT) and David Yoffie (Harvard Business School) about the headline-making browser war rivalry brewing during that decade: Netscape and Microsoft.

The book's thesis, using the David vs. Goliath example, was that competitive advantage was up for grabs at the hands of startups that could take share, achieve critical mass and scale, quite literally overnight. Their message was that "internet time" waits for no one — and those who can't move at internet speed would die at the hands of startups who could. And quite possibly even before incumbents realized they'd been outflanked.

The "internet time" mantra drove startups into thinking that anything built to run "on the internet" could become an overnight success because the internet would magically propel its scale.

Unfortunately, that thinking ignored the complexities of adapting businesses processes, workflows and business models to a digital world, what was needed to successfully build and operate platforms at scale, the fragility of platform business models and an understanding of the dependencies needed to drive success.

Not to mention the time it would take to do it. Especially if any of those innovations touched the physical world.

As a result, many startups that drank the "internet time" Kool-Aid found themselves on the wrong side of the competitive advantage proposition.

The Nasdaq composite index, fueled by the notion that startups could be overnight sensations by operating at the speed of "internet time," rose by 400 percent in the late 1990s, only to crash by 78 percent in 2002, erasing all of its gains. Most of the overnight successes built on "internet time" largely became one-hit wonders, including Netscape, which soon lost the browser war to Microsoft, and was largely shuttered not long after it was acquired by AOL Time Warner for $4.2B in 2002.

Soon, the "internet time" mantra was replaced by the "tipping point" battle cry — a concept where just a nudge of luck could vault an Internet business into the stratosphere.

If only.

SLOW AND

Steady Through The Slog

There were, however, those born during the heady days of the dot com boom who survived the dot com crash, largely because they were in the middle of the long slog to build scale and ignite — and because they were also very much tuned into the complexities and slow pace of getting to scale.

These startups, and many who were born much later, saw the potential of digital and the internet to change how consumers and businesses found information and interacted — but also saw the challenges of quickly getting to critical mass, and had a business model that would generate and sustain profits for themselves and their investors.

And they steered well clear of the elixir of ad-supported content plays to help them do that.

For those startups, digital's 1.0 shift was about figuring out ways to reduce the frictions of engaging in a physical world where the lines between physical and digital were then very bright and very fixed.

And where going digital was very new.

Access to the internet then relied on devices — desktop computers — that consumers had in only one of two places — their homes or offices — and had to make time to use.

At the turn of the millennium, only 25 percent of the U.S. population had access to a cell phone — and if they had a desktop at home, access to the internet wasn't via a broadband connection. Broadband wouldn't become pervasive in homes until about 2005.

Until then, going digital was largely via a very slow dial-up modem and required operating on a desktop at home during evenings and weekends, or at work using the office computer at lunchtime. Fulfilling those digital purchases meant figuring out how to accept payments online and managing the logistics of getting products delivered. Delivery times then were measured in weeks, not days or hours.

Some of those survivors, now two-plus decades old, include many of the digital 1.0 shift pioneers: Amazon, PayPal and Google. The first decade of their work to build a critical mass of stakeholders on both sides of their platforms helped position them well to capitalize on innovations in wireless broadband, smartphones and apps that made it possible for commerce to happen anytime, anywhere.

These innovations would usher in digital's 2.0 shift, starting in about 2009 and 2010.

Digital's 2.0 shift was truly about blurring the lines between the physical and digital worlds by making commerce happen anywhere a consumer with a smartphone wanted it to. The digital 1.0 pioneers who invested to integrate payments into digital and then mobile apps helped to ignite a new wave of digital commerce for themselves, while inspiring others to embrace mobile as a more accessible digital channel for doing business — or as an alternative to doing business at all in the physical world.

Digital 2.0 also inspired a new crop of innovators who saw the opportunity to further blur the physical/digital world lines by using mobile devices and apps to create new digital-first experiences. Their names are familiar: Uber, Lyft, Instacart, DoorDash, Grubhub — innovators who have removed enormous friction from doing business in the physical world, and who today are used by tens of millions of consumers, but who have yet to prove their business models are profitable, even a decade or more hence.

Now, fast forward a decade to January 2020. The innovators who kicked open the doors to digital 1.0 and 2.0 more than 20 years ago had momentum, the result of their work over those two decades before to build scale, improve and enhance digital and mobile capabilities and add new features to their platforms. Yet as successful as they have been and as dominant as their platforms are today, they still represent a fraction of overall payments and retail sales.

According to a recent PYMNTS analysis, Amazon, for example, at roughly half of all online retail sales, accounts for only a small fraction of overall retail sales now, more than 20 years after it launched its eCommerce marketplace.

The ride-hailing platforms like Uber and Lyft represent a small portion of the overall mobility and transportation segment that they set out to displace and disrupt a decade earlier. In fact, Uber in its April 2019 S-1 said that it was only at 1 percent of its overall addressable market worldwide.

Aggregators and delivery platforms like Grubhub and Door Dash are expected to account for $16.6 billion in sales by 2023. Restaurant sales that same year are expected to hit $708 billion.

DIGITAL'S

3.0 Shift

Today, the pandemic has opened the door to digital's 3.0 shift — a world in which the lines between the physical and digital worlds will blur even further as physical becomes an integrated part of a digital-first experience.

But unlike the shifts to digital in the 1.0 and 2.0 versions, success will require more than a slick user interface on a mobile device, and even more than integrating payments and loyalty into a digital commerce experience. All of that is table stakes today.

A digital 3.0 shift will be characterized by the ability to deliver products and services at the hyperlocal level. Logistics — innovating and enabling that last mile, at scale — will ultimately decide who wins and who does not in a digital 3.0 world, a world where digital and physical become largely indistinguishable. And a world in which consumers say many of their digital-first habits will largely stick in a post-pandemic world.

LIKE THE 1.0

and 2.0 versions of prior digital shifts, those who have spent the last ten or twenty years investing in building out their platforms to evolve and blur the physical-to-digital experience, come to it with a running head start, having sorted through the kinks of getting critical mass and sporting the confidence of engaged platform stakeholders.

And, like every other digital shift, innovators will emerge who see the potential of the quantum leap to digital that the pandemic has created and who see an opportunity to amplify digital in a 3.0 world.

And all of them will be focused on truly cracking the code for the physical delivery of a digital-first interaction, on perfecting the workflows and the business models that underpin them and on removing the frictions that have become more visible as consumers and businesses have been forced to do business in a digital-first way.

That will be hard, and it won't happen overnight.

Even innovators like Amazon, with decades of experience and billions of dollars of investments in building out a massive logistics platform, struggled to meet the upsurge in demand during the pandemic. They, like everyone, have a long way to go to handle large increases in volume as we move to a digital-first economy where consumers want more things delivered to their doorsteps — and faster than ever.

But it's not just about the physical inventory and getting goods to consumers and businesses. Other innovations — in payments, in healthcare, in B2B payments, in moving money cross-border, in travel and hospitality, and more — will each have their own "last-mile" problem to solve as they try to leverage their assets and use digital's 3.0 to revolutionize how they engage with their customers and partners.

Although time is of the essence, digital 3.0 will take time to realize its full potential. Those who understand this will take a measured approach to capitalizing on this extraordinary opportunity by playing offense, not defense. Thinking strategically, not being reactionary. Being focused, not distracted by the clatter of the next big thing that underappreciates the effort required to scale and drive profits.

Because if we have learned anything over the last 20 years of living in a digital world, it's that playing to win in internet time probably isn't necessarily the best way to play the long game.

Karen Webster

JULY 13, 2020

HOW TO DRIVE SUCCESS IN A DIGITAL 3.0 WORLD

In 1946, the then-61 members of the World Health Organization (WHO) saw the need for a consistent yet comprehensive definition of "health." They felt strongly that any definition had to acknowledge that a person's good health was more than not being sick or disabled, but instead should reflect "a state of complete physical, mental and social well-being." Two years later, that definition of health became the cornerstone of WHO's mission, and it remains so now, more than 72 years later.

In 1979, psychologists Daniel Kahneman and Amos Tversky developed the Prospect Theory, one of the foundations of behavioral economics for which they would win the Nobel Prize in 2002. The premise of the prospect theory is that humans are hard-wired to avoid the loss of what they know they have, and therefore make tradeoffs to protect themselves from that risk. This theory posits that people, generally, are willing to accept a more modest upside gain to avoid what they perceive to be a significant downside loss. The greater the potential for loss, the more likely people are to also accept a less-than-optimal experience or outcome.

The pandemic is putting that decision framework — in the context of the WHO's definition of health – to the test.

Today, consumers are making decisions about every aspect of their lives — how they live, work, shop, buy food, do their banking, eat, travel, work out, socialize (or not), spend their leisure time and just about everything else — with an eye on protecting their downside risk of loss from contracting the coronavirus, dying from it and/or spreading it to others.

But unlike the risk/outcome tradeoffs those consumers might have had to accept a decade ago (or maybe even five years ago), we're also seeing a consumer with the opportunity to both manage her downside health risk without necessarily having to accept a subpar experience.

WHY?

Because avoiding the health risk was motivation enough to get her over the inertia of trying something new — which could ultimately be as good as, if not better than, her physical world alternatives.

In July of 2020, we see a U.S. consumer who had to make an abrupt shift to digital when states locked down the physical economy in March. We also see a consumer who, today, seems more than willing to stick with at least some of those "Digital 3.0" options nearly four months later, even as the stores, shops and restaurants in the physical world have, to varying degrees, reopened.

Back in March, the consumers who were already living their lives in a digital-mostly world simply shifted more of their activities online. The consumers who divided their time between the digital and physical worlds shifted more of their activities that way, too, even though they could still shop at some physical stores. Consumers who may have been digital-on-occasion shifted out of necessity, and have now embraced a Digital 3.0 world with both hands and thumbs.

The digital platforms and enabling technologies created a decade or more ago made these pandemic-fueled shifts an easy transition, breaking whatever inertia might have prevented them in years past. With that inertia finally overcome, the consumer's decisions to stick with a digital-first experience are now a safe and attractive alternative that saves them time and eliminates the friction of being exposed to the virus.

HOW

long those digital shifts will stick is the subject of intense debate.

What isn't up for debate is what will define success in a Digital 3.0 world.

The success stories will be those businesses — both physical and digital — that recognize that their biggest downside risk is a consumer who is willingly, and even comfortably, making digital/physical tradeoffs to minimize her own risk.

It won't be hard to spot the winners.

WHO IS DIGITAL 3.0-FIT®?

I've had the chance to take a sneak peek at the latest PYMNTS data on consumer commerce digital shifts over the course of the pandemic. Since March 6, PYMNTS has published eight consumer studies, now covering a national sample of more than 18,000 U.S. consumers. The results, which we will report soon, point to a consumer whose decisions are still shaped by her interest in reducing the risk of contracting the virus, even as state and local governments have decided that it's safe enough to reopen, in some ways, the physical world.

We see a consumer whose biggest personal fear remains dying from the virus — and whose second-biggest concern is spreading it.

We also see a consumer for whom a vaccine is still the only thing that will give her confidence that her downside risk of putting herself and her loved ones in harm's way is not only reduced, but eliminated entirely.

We also see a consumer who, just a month ago, said that it wouldn't be until January 2021 until she would be comfortable reengaging in her pre-COVID physical-world activities — but who today has expanded her own personal timetable much longer. (I think you will be surprised by what that timeline now looks like.)

But we also find a consumer who has overcome the inertia of getting (or shifting) once-physical world activities online — and has gotten comfortable living in the Digital 3.0 world.

Not surprisingly, we also find businesses large and small stepping up their Digital 3.0 games.

As a result, consumers now find their digital-first experiences to be an efficient way to manage their time, stay safe and get what they need. These experiences are so good that many consumers who have made these digital shifts report even more of a willingness to stick with all or many of them, even after the pandemic is a distant memory.

That's telling, since economies have reopened and consumers have now had the chance to reengage. For many, the risks are still too great, and their experiences in the physical world are filled with more friction than those same experiences online — even if they aren't entirely identical to what they once enjoyed in the physical world.

MAKING CONSUMERS AND BUSINESSES DIGITAL 3.0-FIT®

The success or failure of any digital platform is its ability to remove friction — to make it easier for people and businesses to interact at scale and to turn a profit. Getting to scale, profitably, is always make-or-break.

Going forward, success will be defined by how businesses manage what I call the Digital 3.0 **FIT® Framework**: their ability to eliminate **Friction** for the consumer, and in doing so, giving consumers the incentive to move past the **Inertia** that once kept them from trying something new. That leads to preserving their second-most valuable asset, next to their health: their **Time**.

That means platforms must, first and foremost, find a big enough problem that enough people also consider a big enough problem, and then get them on board. A big part of romancing those stakeholders is the promise that once onboard, the platform will make interactions so efficient that time once spent doing things the old way can be freed up and reallocated to other things.

As good as that sounds, it's still a slog to convince enough stakeholders to shift from the inefficient-but-still-workable (and familiar) option to something that has a lot of potential but requires work — and is not guaranteed to live up to its promise.

Inertia was always the biggest impediment to overcoming stakeholders' resistance to change.

Pandemics have a funny way of making inertia look like a couch potato running for the exit when the fire starts.

In fact, this pandemic gave both consumers and businesses a new — and very personal — incentive to leave inertia behind. Consumers, largely, had no choice, even though essential businesses like grocery stores remained open. And the physical businesses that wanted to save themselves didn't have a choice either.

Take shopping for groceries.

In January, going to the grocery store was part of the weekly routine. Sure, supermarkets had invested in online ordering and delivery, but that was a friction-filled experience for most consumers. Why bother investing the hour (or more) to get that first online grocery list assembled when it was just as easy to spend that time at the store getting exactly what was needed?

At the start of the year, the consumer's use of online channels to order groceries was nascent. In May of 2020, our PYMNTS research found that four times as many consumers ordered groceries online than on March 6 — a massive shift to digital on the part of tens of millions of consumers in just three months — even though grocery stores, as essential businesses, remained open.

Take shopping for things other than groceries in retail shops.

Although digital has been making a steady dent in how (and how often) consumers shop in physical stores, going to the store and the mall was still something they did. For many consumers, seeing, touching and feeling a product was preferable to ordering online — and preferable to the time and friction associated with sending back something that didn't work.

As stores locked down, consumers shifted those purchases — at least the ones they continued to make — online. Between March and the end of May, PYMNTS research also found that four times as many consumers shifted their purchases of retail products online — and this is the digital shift that most consumers say they are willing to stick with.

Take going out to eat at a restaurant.

Going out to eat is something that nearly all consumers say they miss the most about being on lockdown. Without any access to physical restaurants, consumers who wanted a restaurant meal had no choice but to order from an aggregator, or from the establishment itself, for delivery or takeout. It wasn't like being at the restaurant, but it was close — consumers got a break from the kitchen while helping to support a local restaurant that they enjoyed visiting.

Now that restaurants have reopened, consumers have reemerged to an understandably different dining experience. Social distancing, masks, Plexiglass and other CDC guidelines and restrictions have changed not only the experience, but also the vibe. Some consumers have been eager to reengage, but many have decided to sit it out a little longer. The digital alternatives are working for them, and so is the nice weather and the chance to fire up the barbie and have a meal with a small circle of trusted family and friends.

TAKE GOING TO THE GYM.

In many states, gyms are among the last businesses to reopen, and among the hardest-hit. Consumers were forced to shift to digital methods, causing a spike in sales of Peloton bikes, treadmills and gym equipment, as well as downloads of livestreamed and video workouts. As gyms reopen with social distancing requirements in place, most consumers remain cautious — particularly given the investments they have made and new workout routines created around the safe, digital alternatives that are available to them, on demand.

In each of these cases — and in many, many more — the activities that once delivered the best experiences are now the ones that produce the most friction, so long as the virus is still around. Going forward, success will be defined by how businesses manage the Digital 3.0 FIT® Framework I mentioned earlier.

For consumers, the FIT® Framework will drive their decision of who gets their business, and who can make it easy, safe and efficient to get the products and services they need.

For businesses, it will determine how well consumers think they FIT® into their lives.

HOW TO START AND STAY FIT®

What we are seeing play out in real time is that those experiences that once delivered the highest possible outcome for consumers now present the highest potential risk to their health.

They also happen to be the ones for which efficient, scalable, digital-first alternatives exist.

The great irony, perhaps, about the **FIT®** Framework is that in January of 2020, before the pandemic's restrictions, the activities that consumers felt had the lowest risk but also the lowest reward — like ordering take-out from their favorite restaurant when they could still go inside to eat there — has now totally flipped. The risk of going inside a restaurant to eat carries a far greater risk for many consumers than popping open an app or going on a website and ordering a meal. The reward for going into the restaurant to eat is also lower, given the social distancing and CDC requirements. The **FIT®** Framework provides insights into a digital transformation accelerated by the global pandemic, and by a consumer whose decisions about their upside gain and downside risk are being made through a "my health-first" lens.

It also tells the story of a consumer for whom inertia is in the rear-view mirror.

I've told this story often, but it bears repeating.

My 85-year-old father now orders his groceries online using Instacart. The funny thing is that I didn't even suggest it — he discovered it all on his own. This is a guy who once considered going to the grocery store a social outing, but now won't go inside his favorite supermarkets. This is also a guy who has a lot of time on his hands, but says he just isn't comfortable — and he also says it would take him too much time now, with all of the restrictions. He likes the predictability, efficiency and personal safety of ordering groceries online, and says he'll stick with it.

Aside from the fact that he is 85 and my dad, he's no different than every other consumer who is making decisions right now about how physical and digital will co-exist in their worlds — at least for the foreseeable future.

At some point, my dad and every other U.S. consumer will want to get back to dining inside a restaurant and recapturing that cool vibe; getting on planes to visit family and friends or to take vacations; going to the gym and the nail salon; enjoying a live concert, the theater or a sporting event; and even going to the grocery store to buy food.

But maybe not as much as they did before. And in some cases, like grocery shopping, maybe even a whole lot less.

As many people have said, and I agree, the pandemic has shown us the resiliency of businesses, but also the fragility of old models that are too steeped in the physical world. It has inspired innovation and the sheer grit of entrepreneurs, giving them more than a fighting digital-first chance.

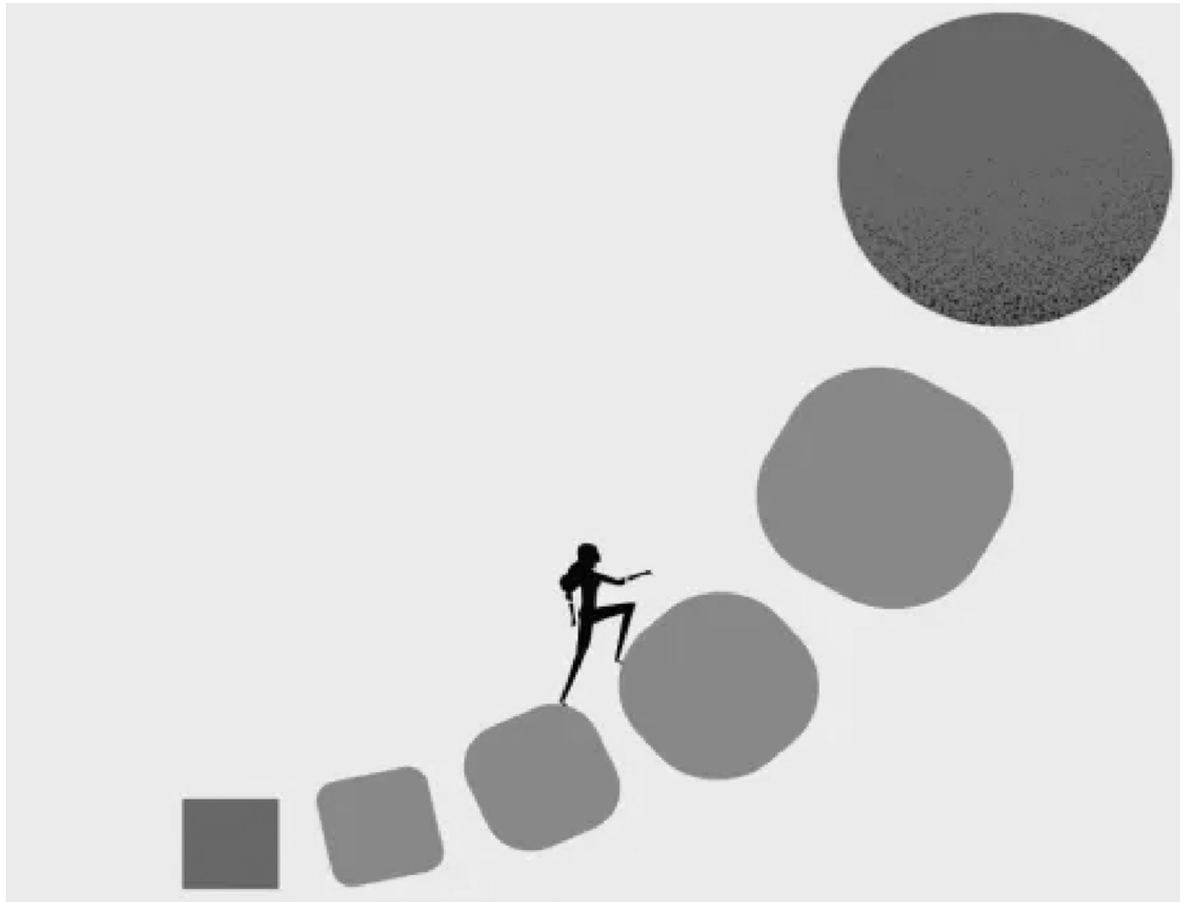
And it has taught entrepreneurs who are seeking the power of digital to innovate physical models, and has shown them the importance of overcoming inertia — provided they have a solution that solves a big physical friction, and probably saves people a lot of time.

And helps both consumers and businesses stay FIT.®

Karen Webster

SEPTEMBER 18, 2023

WHY THE DIGITAL TRANSFORMATION NEEDS A RESET



Warren Buffet is reported to have said that digital transformation is a fundamental reality of business today. McKinsey says that 70% of digital transformation projects fail. Both suggest the need to reset expectations about what digital transformation means and what success looks like in the inevitable transition to a more digitally-enabled global economy.

My colleagues at PYMNTS and I have been tracking the shift to digital, worldwide, across 37 distinct activities since March of 2020, when the physical world abruptly shuttered and consumers and businesses were forced to rely on digital methods to go about their day-to-day.

These quarterly studies of more than 15,000 consumers in 11 countries, along with monthly studies of nearly 4,000 consumers in the U.S. and hundreds of CFOs, is the most comprehensive dataset benchmarking the behavior of consumers and businesses over the forty-one months in which the world — and the digital habits of those living in it — radically transformed.

These tens of millions of datapoints — and the several hundred one-on-one conversations with CEOs and founders that I've had over those forty-one months — lead me to one conclusion.

A SUCCESSFUL DIGITAL TRANSFORMATION STARTS WITH A SHIFT IN MINDSET.

It's time for a new data-driven framework for turning digital transformation into a successful outcome for every business and the customers they serve.

That starts with an understanding of the five very distinct ways that digital transformation is changing every business — one way or the other. And not tomorrow, but right now.

1:

Digital is more than a channel.

While at PricewaterhouseCoopers in the late 1990s, the consulting business debated how to position the firm as a leader in the dot com economy. We were considered late to the dot com party and needed a unique way to tell our "eBusiness" story. I suggested that we simply drop the "e" and tell our clients that online is the way business will be done. In other words, stop talking about it as a separate thing. eBusiness is business. It resonated.

Fast forward thirty years and the conversations about digital transformation seem a little déjà vu all over again to me.

It is remarkable to me that so many businesses still talk about digital as if it is a project, a distinct channel for doing business that they must master so they can check that box. This way of thinking has driven the steady decline of physical retail over the last 15 years and will throttle the massive potential for the industrial economy to find new ways to monetize their assets and simplify the complexity of their trading partner relationships.

Over nearly four years, connected devices and technology have shortened the distance between the customer and a business, moving commerce to anywhere with an internet connection. Digital transformation is about the physical world becoming an extension of the digital world, not a bolt-on or a separate channel that is the stutter step to the analog processes that define business today. Digital must become a way of doing business, creating a fluid transition between the many digital and physical endpoints in which consumers and businesses engage.

In many ways, that means that a successful digital transformation starts with a shift in mindset.

2:

Industries are defined by what customers do, not what companies produce.

Over the last thirteen years, all of us have had a ringside seat for the shift from a single connected device — the smartphone along with a series of single-purpose apps in an app store that defined the decade of the 2010s — to a series of connected devices and ecosystems in the decade that began in January of 2020.

Software platforms and marketplaces now organize once-discrete activities into a single digital front door. There one login, one set of embedded payment credentials, and the rich data to personalize and anticipate what customers may want next delivers a quick, easy, and secure experience for the consumer and new revenue flows to the platform. The

A PERSONALIZED ONLINE GROCERY IDENTITY SAVES CUSTOMERS TIME AND MONEY REGARDLESS OF HOW AND WHERE THEY SHOP.

critical mass of users on the platform is an incentive for complementary third parties to sign on, enhancing the consumer's experience, creating new sources of revenue for these third parties and new, high-margin revenue streams for the platform. More engagement means more opportunities to extend the ecosystem's remit to include more adjacent, complementary activities.

Take food. The activity called eating is what drives where and how consumers buy their food. Platforms help connect and aggregate the many options available to consumers to buy the food they want to eat, wherever they want to eat it.

In this connected economy, grocery stores and restaurants and aggregators now compete for the consumer's share of stomach and food spend. They do that in a category consumers don't think of as grocery stores or restaurants or delivery aggregators, but eating.

Competition for market share and revenue streams suddenly includes players that don't look or operate like the guy across the street or appear on the same list of companies with the same NAICS code. The competition is truly among those who can best satisfy the consumer's desire to eat.

IN THE CONNECTED ECONOMY, TRADITIONAL INDUSTRY CLASSIFICATIONS WILL BE LESS ABOUT WHAT COMPANIES PRODUCE AND MORE ABOUT WHAT CUSTOMERS DO.

3:

Companies break from conventional industry norms and business practices.

With $200 trillion in payments flows moving between trading partners globally every year, the opportunity to digitally transform how businesses do business with each other is massive. It is here where technology, data and payments create new business models that chip away at the industry practices put in place by long-standing intermediaries that have held sway in a more traditional physical-first world.

Brands that once exclusively sold products to end-consumers via the traditional B2B channels are using new technology, data, and embedded payments to test B2B2C models and build relationships with their end-customers — without cannibalizing the incumbent industry intermediaries that drive most of their sales today. Platforms are going direct to consumer and changing the economics once defined by traditional B2B intermediaries. Consumer brands are turning products into platforms and integrating third parties with complementary products — and monetizing that access. They use social media channels to create contextual opportunities to capture impulse sales and leverage new physical channels to meet consumers where they are — all to hedge their bets against a challenged and challenging physical distribution model.

Cars are becoming software platforms on wheels while payments players, Big Tech and OEMs vie to become that digital-first point of entry to the driver and the commerce experiences that originate inside the car. Voice and AI will change how and with whom consumers discover brands and buy, something that 75% of Millennials believe will be a reality in less than five years. The promise of invisible payments will be realized and amplified as data, AI and identity become an embedded element of moving between these smart, connected endpoints.

The industrial economy is also being pressured to move their supply chains away from the paper-based processes that slow things down and create errors. Buyers seek ready access to a more diverse group of suppliers, and suppliers are adopting digital methods to decrease days sales outstanding to counter the impact of an expensive and constrained credit economy. Digital challengers are stepping in to give suppliers and buyers new ways of engaging, putting pressure on incumbents to participate or miss the opportunity to capture sales as part of their new digital workflow.

4:

Platforms use technology to turn "incumbent loyalty" into their business opportunity.

Moving from the status quo to something new takes work, and in many cases a leap of faith that the new is better than the now. The friction of moving to that something new and unknown has kept consumers and businesses from making that move. Macro-economic forces and killer apps give consumers and businesses the incentive to consider new alternatives. APIs and micro-services that minimize the time and cost of switching are challenging the lock-in that established players often mistook for loyalty.

Innovation is now modular and plug-and-play — an opportunity for customers to test the waters incrementally with something new and move more of their business over time. Switching no longer must be an all-or-nothing commitment. The inertia that has prevented a more spirited embrace of digital transformation efforts by many established players is starting to weaken.

Take Igniting a B2B platform — perhaps the most challenging business model to get off the ground given the many intrenched dependencies that can prevent the adoption and use of new business models. Today, getting one off the ground is happening without asking express permission of the key stakeholders to get on board. Platforms are using AI to overcome supplier inertia to collect and standardize product descriptions to bring buyers on board with lots of product choice and competitive prices. These platforms turn the tables on reluctant suppliers by creating competition for the business they thought they'd always have. Buyer and supplier dynamics shift, as do the economics of those customer interactions. Incumbents are being disrupted without knowing it until after the fact as they become a participant in someone else's platform, forced to play by the new rules of a new game.

TECHNOLOGY, DATA AND PAYMENTS CREATE NEW BUSINESS MODELS THAT CHIP AWAY AT ESTABLISHED INDUSTRY PRACTICES.

5:

Generative AI levels the competitive playing field

There is no denying Generative AI's transformative potential, although the technology itself is in its very early days. GPT applications and use cases are proliferating and already changing how business works. Everything from customer service to content creation to sales and marketing and payments is being given a new GPT front end. Foundational models are spawning applications that make this powerful technology more accessible and affordable to all businesses. Developers are glomming on. For that reason, Generative AI will, without a doubt, only accelerate the digital transformation of the global economy as apps and use cases will be more accessible to a much wider pool of businesses at a much faster pace: the democratization of AI.

The accessibility of these LLMs and the rapid pace of development will force businesses to focus on what truly makes them great. "Table stakes" will become a higher and higher bar as businesses large and small use GPT to level up their business processes. Generative AI will spawn new engagement models that make the outsourcing of activities to consumers and businesses easy and convenient as labor dynamics put pressure on businesses to shift basic customer service processes away from their internal teams. Success will be determined by how well businesses are able to adapt these models to amplify their competitive assets and create operational efficiencies for their businesses. Over time, GenAI will follow the path of software innovation and become vertically specialized for use cases that support the delivery of new customer experiences.

The Digital Transformation of the Consumer

In 2023, consumers are living their very best digital lives in the physical world.

After forty-one months — March of 2020 to August 2023 — PYMNTS data shows clear evidence of a consumer that has increased the number and frequency of the digital activities in which she engages, and of the digital flywheel accelerating. A consumer who increases her digital retail shopping activities by 10 percent also increases her use of digital channels to order groceries, use telemedicine and book travel using digital methods by 7 percent. Familiarity with digital breeds more engagement with the businesses that offer a seamless digital way to engage.

Saving time and saving money is why the shift to digital is indisputable, undeniable, and permanent.

Consumers are not only doing more of the 37 activities that we track online, but they are also increasing the frequency with which they do them. Activities that were once done only occasionally using digital channels are now done monthly, such as using telemedicine services Activities that were only done digitally monthly have become weekly, such as grocery shopping, using ride hailing or mobility services or making retail purchases Activities that were once weekly have become daily, including banking, payments, streaming content, and ordering food for delivery or takeout. More than twice as many consumers order groceries online in 2023 than in 2019, with the majority of those online grocery shoppers being millennials who will drive grocery store sales for the next several decades.

SAVING TIME AND SAVING MONEY IS WHY THE SHIFT TO DIGITAL IS INDISPUTABLE, UNDENIABLE, AND PERMANENT.

For many consumers, using connected devices and apps to “multitask” means the ease and convenience of accomplishing things digitally that were once only possible with a visit to a physical establishment. A third of consumers order food for delivery or takeout while at work, 39% shop for groceries, and 15% check in on loved ones.

Businesses see this behavior and want to create a better experience that appeals to a connected and increasingly digital-first customer — experiences that will force a change in how businesses themselves organize for success in a digital-first world.

That’s why digital transformation is not “maybe someday” thing nor a “one and done” project. It’s a journey, not a destination. From the consumers’ point of view, it’s a journey that’s already begun.

Karen Webster

OCTOBER 3, 2022

WHAT 2014 TEACHES US ABOUT THE FUTURE OF PAYMENTS AND THE DIGITAL ECONOMY

In 1963, Nobel-prize winning physicist Dennis Gabor wrote that the future can't be predicted, but it can be invented. Gabor, who won the Nobel for inventing the hologram, explained in his book, "Inventing the Future," that it is humankind's ability to invent that shapes the future, even though its impact remains unknown at the moment of its creation.

In October of 2022, almost everyone wants to know what the future will look like, perhaps more intensely than ever. I was asked recently how I thought the future of payments and the digital transformation might look, given the complicated micro- and macro-market dynamics that pose forceful headwinds right now.

As I was reflecting on how to answer that question, I began to think about some of the things that had a profound impact on the evolution of the digital economy over the last decade. It was then that I was struck by how many of those things took root in 2014, seven years after the introduction of the iPhone and six since the launch of the App Store.

They came in just when the foundations for using connected devices, data, the cloud and digital payments began to come into their own.

The Dash to Online Ordering

On April 6, 2014, Amazon introduced Amazon Dash, the wireless wand that consumers could use to scan the bar codes of the products in their fridge, pantry or medicine cabinet and create their weekly grocery shopping list. Rather than taking that list to the grocery store, Amazon had the items delivered to the consumer's front door via Amazon Fresh: all paid for using their Amazon account linked to their Dash device.

A year later, on March 31, 2015, Amazon would simplify the ordering experience further with the launch of Dash Buttons for Prime Members. Universally regarded as the ultimate April Fool's prank, pressing one of those product-branded wireless plastic buttons triggered an order — and a free delivery to the consumer's home — when it was time for that product to be replenished.

IN PERHAPS

one of the earliest examples of contextual commerce, Dash Buttons were intended to be placed in the environments where products were used, becoming a visual prompt to reorder when supplies were running low: the laundry room for Tide detergent, the kitchen cabinet for Bounty paper towels and Glad wrap, the baby's room for Huggies, the medicine cabinet for Gillette razors or L'Oreal products, the fridge for Gatorade. The buttons also afforded a clever look into consumer behavior and way to collect data.

Fast forward to 2022, and the Dash Wand and Buttons are no more. Instead, there is Amazon's Subscribe & Save platform on the Amazon site. There, consumers can buy name-brand products on subscription and CPGs can use the platform to offer digital coupons to incent purchases of their branded products, hedging the "trading down" to grocery store private-label products when consumers go to the store to shop.

Since 2014, Amazon has subtly shifted consumer behavior from making sure consumers never forgot to order often-used pantry and household staples to ensuring that consumers don't have to remember to buy them at all — and now across a large swath of consumer household, grocery and beauty products.

ACCORDING TO

PYMNTS data, Subscribe & Save has become the largest retail subscription service for consumers in the U.S., with ten percent of all U.S. consumers now ordering their name-brand household products and grocery staples using that platform and the registered credentials stored in their Amazon Prime account. This share will only increase as inflation-challenged consumers shift individual retail subscriptions to this platform — in fact, our latest consumer subscription study sees evidence of this happening already.

Also in 2014, then two-year old Instacart raised $154 million after seeing its revenue grow 15x year over year. In December the company valuation hit $2 billion, a quadrupling of its valuation in June of that same year.

Often regarded by grocers as a threat to their sales, Instacart powers the online purchase of groceries at stores, many of which are more accessible to consumers online then if they had to get in the car and drive to them. I wonder if what grocery stores really dislike about Instacart is that it creates more competition among them for the consumer's food spend.

According to PYMNTS data, roughly thirty-seven percent of US consumers order groceries online, of which 36% used same-day delivery services such as Instacart. The growth of online grocery orders grew dramatically over the last two years because of the pandemic — but it has held its own even as most consumers have gone back to the grocery store to shop.

But that's today. PYMNTS data also shows that shopping in the grocery store is the least favorite of all consumer shopping experiences — not only in the U.S., but across five other countries. As consumers shift more of their spend online to buy the things they no longer need to inspect, how consumers use grocery stores will certainly change. That extends to consumers who use SNAP benefits to shop for groceries and who can now use electronic versions of them to shop online instead of going to a grocery store.

Cars Got Connected

About 152,000 people were introduced to about 20,000 new products at CES in Las Vegas in 2014, including the perfunctory supply of robots, wearables, video game consoles and high-tech gadgets. Perhaps not as headline grabbing as the Toyota electric 3-Wheel iRoad, which never saw the commercial light of day, was the introduction of 4G LTE capability inside of any car powered by the Android OS and Qualcomm's Snapdragon Automotive Solutions.

For the first time, car OEMs could integrate real-time navigation, weather and entertainment options into the car cockpit, eliminating the need for third-party devices to connect to those experiences. This innovation gave developers a new channel through which to reach consumers and payments players, and BigTech and FinTechs a new way to attract and monetize that engagement. The connected car also gave OEMs the ability to consider new business models to support an ongoing customer relationship once the car left the dealer's lot.

Over the last eight years, we've seen a tremendous amount of innovation powered by chips to turn cars into connected commerce platforms and the penultimate mobile payments device.

Connected cars and apps now innovate how consumers pay for gas at the pump and trigger orders at QSR drive-thrus. We see innovators using car telematics to turn cars into mobile points of sale to simplify how fleets and fleet drivers pay for fuel at authorized operators and how to finance, manage and reconcile that spend. Voice assistants make hands-on engagement a seamless and safter experience in the car.

Others see the integration of payments into connected car technology to reimagine how car owners finance, register and pay for the servicing of their car at the moment they decide to buy it: linking to their bank for loan origination and underwriting, then registered payments credentials service the loan and pay for purchases made from the car, including insurance, registration, tolls and maintenance.

Autonomous vehicles connected to the internet and the owners' digital payments credentials will be able to find and park their car on demand, saving the driver time and money, and parking operators the expense of hiring people to park cars and collect payment. Connected car use cases will only proliferate as autonomous and EV-powered vehicles become more mainstream.

These innovative payments wheels all started turning in 2014.

Uber Struts Its Platform Stuff

Uber's launch in 2009 was lauded for its reliable and efficient way to get around town. No more taxis, no more "broken" card readers in the backs of smelly cabs, no more uncertainty about getting a ride when one was needed and no more having to wait an extra 3 to 5 minutes to pay at the end of the ride, and maybe get hostile reaction trying to pay with a card. The Uber app and invisible payments redefined mobility and the consumer experience in moving from point A to point B in many markets around the world.

Although ride-hailing was Uber's first use case, Uber's real innovation in 2009 was the launch of the gig economy and logistics business model at scale that efficiently matched and priced the supply of drivers with demand by riders in real time at scale. That platform gave Uber the ability to expand more easily and cost effectively into adjacencies at favorable unit economics over time.

In August of 2014 Uber did that with the launch of UberFRESH in Santa Monica. Uber was a late entrant to the online food aggregator business, but its scale of users and drivers gave it a chance to experiment in one market, then to scale nationally — and later globally — using the same supply of drivers and logistics tech that powered the ride-hailing business.

A year later, UberFRESH rebranded as Uber Eats and gave its drivers an additional source of revenue. In 2020 Uber acquired Postmates to further expand its online restaurant footprint and customer base.

Today Uber Eats is the second-largest delivery aggregator behind DoorDash with reported gross revenues in Q2 of $13.9 billion. Like its category competitors, Uber Eats has also expanded into the delivery of convenience store and retail products, and introduced a subscription product to subsidize delivery fees on purchases made using it.

Although online orders through aggregators remain a low-single-digit percent of the number of online orders that restaurants receive, many restaurants use it as a strategic fill-in for off-peak times, and price-optimize orders taken from that channel.

Consumers have also maintained their aggregator ordering habits. According to PYMNTS data, 27 percent of consumers use online ordering, mostly millennials and Gen Z consumers in a hurry to get food they decided to order at the last minute.

Uber's platform 2014 expansion proved a few things. First, first movers don't always win. In April of 2014, Grubhub, the leader in U.S. online ordering went public with a valuation of more than $3.2 billion at the close of the market and a reported 70% of the market. Today, it only has about 14% of the market as competitors, including Uber, entered the market, drove margins down and gave restaurants more incentive to invest in innovating their own digital online order and delivery experiences.

Second, business model innovations are powerful, sticky and as important as the technology that powers them — and they make it possible for competitors to traditional players to enter at scale and disrupt. Although Uber competes with individual competitors in each of the sectors it operates, its driver and customer base allows it to scale across the many use cases that require people or products to move from point A to point B at more favorable economics.

Voice Commerce Says Hello

On November 14, 2014, a select group of Prime Members were invited to test a voice-activated cylinder called an Echo and a voice-activated assistant called Alexa. In June of 2015, Amazon made Echo commercially available to everyone. By the end of 2015, Amazon reportedly sold 4.4 million Echo devices.

Most consumers who bought a smart speaker were less interested in the hardware than having access to a voice-assistant named Alexa. This assistant could reliably turn lights on and off, play their favorite music on demand, make their shopping lists, remind them of the things they needed to do, make them look smart in front of their kids by answering trivia questions — even tell them corny jokes.

THE 2014

Amazon playbook wasn't to sell hardware, even though the Echo, the Dot and the Show were the onramps to a much larger ambition. It was to get consumers comfortable with talking to a piece of hardware on the kitchen counter that answered back — and to introduce Alexa as the operating system for the connected economy.

In doing that, Amazon introduced the consumer to a new way of connecting with information and brands that used to require a touch or a tap on a keyboard or a physical interaction with a specific piece of hardware to complete. People didn't need to "fat-finger" a screen or use a keyboard — or find their phone or pop open an app to get information or place an order, track an order, and over time, even pay bills. They could just say what to do and trust that Alexa would just get it done.

Eight years later, there are more than 100,000 Alexa skills, and hundreds of devices and appliances connected to the internet and made smart thanks to Alexa.

According to PYMNTS data, 25 percent of consumers use their voices to order and pay for things, not only in the U.S. but around the world. Not surprisingly, 39 percent of those users are millennials and 34 percent bridge millennials. Consumers also use the voice-activated apps on their smartphones to complete many routine tasks — such as making purchases, including via the Alexa app, which can be downloaded on an Apple or Android phone. We've seen these numbers increase over time, as more retailers voice-activate their ordering experiences. The latest introduction of the Echo Show puts another arrow in that quiver as the combination of Alexa, a screen, and curated "buy with recommendations" help drive more sales.

Eight years later, Amazon's voice AI operating system is creating the third operating system for commerce, moving consumers and businesses closer to an always-on connected commerce ecosystem that follows the consumer wherever she goes. This operating system will become far more important and far more pervasive as more devices get deployed through the retail and commercial physical space, powered by super-fast 5G.

Apple Launches an In-Store Mobile Wallet

On October 20, 2014, Tim Cook took to the stage and introduced the world to Apple Pay and the promise of never having to root around a purse or leather wallet for a card to pay at the physical point of sale in the store. I remember the date well — it happened to be PYMNTS' fifth birthday.

Almost eight years later, those plastic cards in those wallets and purses, now contactless, remain the biggest competitor to Apple Pay in store. In the U.S., 39% of consumers paid for their most recent in-store retail purchase using debit cards and 30% using credit cards. In comparison, only 3% paid with Apple Pay. Meaning that more than 10 times more consumers used debit cards and credit cards to pay for their last purchase in store than Apple Pay even as the barriers to adoption and use have largely disappeared. Most stores accept contactless cards, and most iPhones now have Apple Pay installed. In fact iPhone users have to install Apple Pay to complete software upgrades. Yet Apple Pay's share of overall retail spend in-store remains small, accounting for roughly 2.1% of US retail sales according to PYMNTS' consumer study of Apple Pay use and adoption conducted in September of 2022.

All that said, Apple Pay holds the largest share of all of its mobile wallet competitors in-store – in fact it accounts for roughly half of all mobile wallet use instore. The problem is that not enough people use any mobile wallet to pay in the store, including Apple Pay's.

FOR APPLE,

the problem compounds further since the very best that it could ever hope to get is 100% of every iPhone user's instore spend — which, according to the latest statistics, is about 50% of the smartphone market in the U.S. This goal is as unlikely as it is improbable, particularly when considering the world's largest physical retailer (Walmart) and the world's largest online retailer (Amazon) don't accept it.

Eight years later the mobile payments foundation that Apple had hoped to create online and in store hasn't materialized, putting at risk its ambitions to become a mobile payments powerhouse online and in store. The same can be said for any of its mobile wallet competitors. Apple Pay and the others that followed in its footsteps didn't solve the consumer's checkout problem, which wasn't about pulling out a plastic card at checkout. The friction that consumers would like solved is waiting in line to get to the terminal, then waiting for the cashier to scan and bag what was purchased – even navigating the store to find what they wanted to buy in the first place.

THE QUESTION

now for Apple, and every other general purpose mobile wallet, is whether eight years into the adoption and usage experiment, they all just need more time — is the future about waving a phone at a terminal in the store, and we all just need to be patient for most of us to do that?

Or perhaps all the mobile wallets are at risk of being considered legacy tech as the point of sale moves to the cloud, and the consumer's checkout experience moves along with it.

What's Next

I started this opus with a quote, and I'll end with one that is particularly well suited for these times. It is from Peter Drucker and goes something like this:

The relevant question isn't what to do tomorrow, but what to do today to get to tomorrow.

As innovators plan their 2023 roadmaps, some of the decisions about what to do today can be taken from the experiences of these five innovations, many of which seem so obvious in hindsight.

Technology is only as good as the business model that powers it and the real problems that it solves at scale. Platforms have the power to leverage their assets to disrupt sectors that aren't on anyone's radar until it happens. Not everyone can be a platform, even though everyone thinks they can and they should. Most platform wannabes are well-funded features hoping for ignition. Hardware is a means to an end, not the end — whether it's a car, a phone, a thermostat, a connected bike or a speaker sitting on the counter.

And consumers decide the future. They'll embrace and use the things that make their life easier, more convenient, and give them back more of their time.

Just as much as they did in 2014 — and probably even more.

DAVID S. EVANS

OCTOBER 31, 2023

WHAT LIGHTING A FIRE TELLS US ABOUT IGNITING THREADS AND THE BILLIONAIRES' NEW CITY

It never hurts to brush up on basic skills, like how to make a roaring campfire in the woods before taking that next backpacking trip. How you make one also provides some timely reminders for Silicon Valley heavyweights who may be off on their next platform startup adventure.

What Lighting a Fire Has in Common with Platform Ignition

You need three ingredients for a fire. Oxygen — if you don't have that you are really in trouble. You better bring a match or a flint, unless you are really skilled at creating sparks. And you'll need to gather tinder and logs.

AFTER

that, it's all physics. Energy is released when you light the tinder. Then, in a chain reaction, more energy will be released, and the pile will combust. You'll have a raging fire that will keep you warm and heat your morning coffee. But only if — and these are big ifs — you've gotten wood that can burn well, arranged the tinder and logs in just the right way, and made sure the oxygen can circulate to fan the flames.

The fire will keep burning as you add more logs because it generates more energy than it consumes. A reaction that creates more energy than it consumes is called an "exothermic process."

It turns out that igniting a platform business and igniting a fire sort of follow the same physics.

Consider a simple three-sided delivery platform with restaurants, drivers, and consumers. Those participants are the essential ingredients. Just like combining fuel and oxygen, the platform founders have to start with them. And not just any participant — they have to be the restaurants and the consumers who are likely to want to do business with each other and drivers who will provide timely and reliable delivery. In platform economics, that's usually called "getting the participants on board" or solving the "chicken-and-egg problem." (Don't worry, we won't mix analogies and rotisserie chicken.)

Then, the founders have to "light" the platform by getting those participants to interact with each other. For the delivery business, that means people ordering food, restaurants preparing it and drivers picking it up so that the early adopters of the platform start getting value out of it.

After that, the founders must fan the flames to get a chain reaction. They must get more participants on board and get them to interact more. Some participants will lose interest or stop using the platform just like a fire initially sputters and may die out. Some restaurants might drop out because they aren't getting enough volume to justify the hassle of participating, and some consumers might get bored with the restaurant selections.

The founders should power on until they reach a "critical mass" of participation and interactions. That's when a chain reaction kicks in and there's combustion. The platform ignites when it reaches this point where the platform, in an exothermic reaction, generates more energy than it consumes.

At ignition, the platform starts attracting more participants and activity than it loses from attrition because the network effects between participants become so powerful. Restaurants join because the platform gives them access to a lot of consumers, drivers to a lot of jobs and consumers because they can get a good selection of meals delivered reliably to their homes.

Entrepreneurs, corporates and investors can learn more about the art and science of platform combustion from my article on igniting new platform businesses and my book on the economics multisided platforms with Dick Schmalensee. (Dick and I also have a technical article on the dynamics of platform ignition for math nerds).

Unfortunately, launching a platform is far harder than starting a blazing fire.

The mountains would be littered with frozen corpses if backpackers were as successful at starting fires as founders were at igniting platforms.

You'd think that there's nothing like experience, though. It is, therefore, surprising to see Facebook flail with Threads and a bunch of Silicon Valley billionaires think they could start a city from scratch.

THREADS FLUBS IGNITION

Meta saw an opening as users and advertisers deserted X following its acquisition by Elon Musk on Oct. 27, 2022. X's flame has hardly gone out, but the global number of app users has declined by 16% and U.S. ad revenue has fallen by around 60% since it was sold.

The economics of ad-supported microblogging platforms like X are straightforward. A minority of users post blogs or comments and thereby generate most of the content. Most people don't do that so much, but come to view the content created by others. There's a positive feedback loop: content creators value a platform that has more viewers because they want to be influential and users value a platform that has more content creators they like.

The platform makes money by selling ads to companies that want to message the users. There's another positive feedback loop: more content attracts more viewers, which attracts more ad revenue and more ad revenue funds operating and investing in the platform. These related positive feedback loops can result in a chain reaction and self-sustaining growth.

Through a number of intentional changes, new X management weakened these positive feedback effects, much like depriving a fire of oxygen.

Meta adopted, what it appears to have thought, was a winning strategy to create a new X rival. It leveraged its Instagram social network, which has about 2 billion monthly active users globally.

Instagram

users could use their credentials to sign into the Threads app (which they had to install) and then instantly follow their social network on Instagram. Threads had more than 100 million sign-ups in less than a week, even though it wasn't available in the EU to start.

The problem was that these Instagram users did not have much motivation to post microblogging content. Furthermore, while their connections on Instagram might be interested in seeing pictures of their dog doing tricks, they weren't the right people to share opinions or news. Meta did not appear to have a strategy to get account holders to engage in microblogging.

Meta might have thought that getting a massive number of account holders could only help. That's not necessarily true for the same reasons that piling a lot of logs without tinder or oxygen can't start a fire.

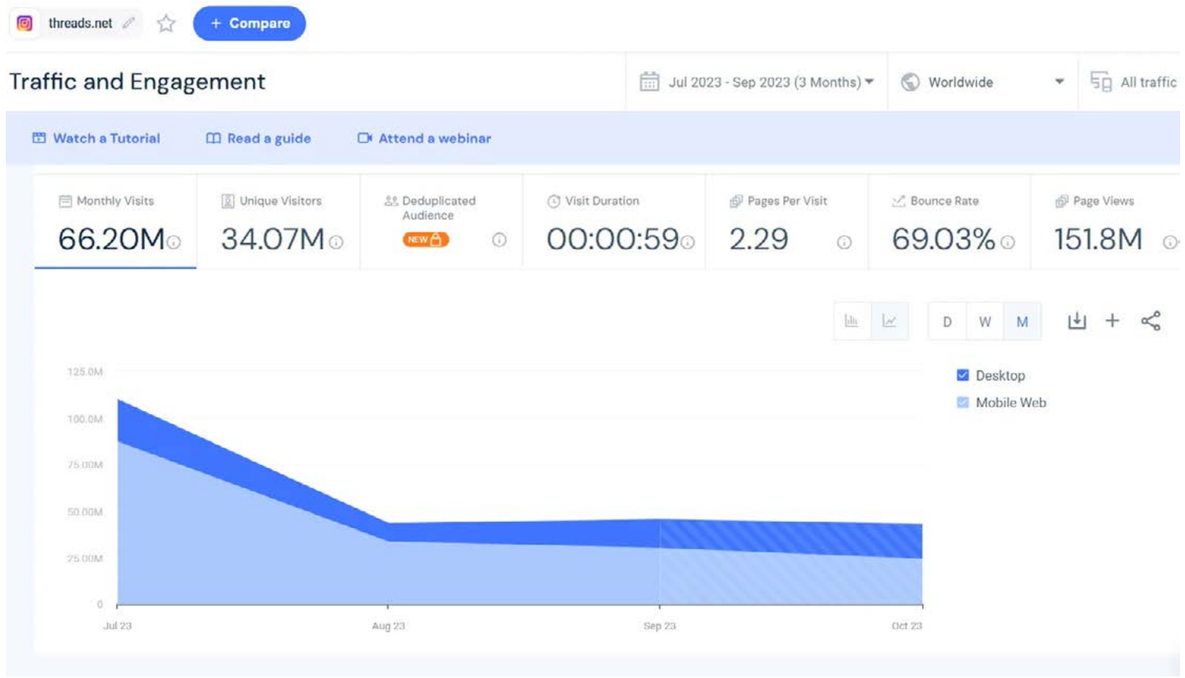
Users who check out Threads weren't likely to see content they'd be interested in. The longer that went on, the less likely they would be to come back to Threads. Meanwhile, content creators are less likely to post because they don't have an engaged audience.

Threads now has almost 140 million people account holders. Instead of providing the foundation for a chain reaction, however, those about 140 million people have learned that Threads is not a useful microblogging site for them. Many customers will no longer be fuel for the critical mass needed to set off a chain reaction and ignite the platform. They also probably won't recommend that their friends or acquaintances try this new X-rival.

So far, the signs are quite bad. In July, the month of its launch, Threads had 109.8 million web and desktop visits, according to similarweb.com. By September, that had fallen to 42.8 million visits, a decline of 61 percent.

Mark Zuckerberg, who has a lot of practical experience with platform ignition, seems to have recognized the problem posed by lots of people having a bad experience on a platform. Yet his remarks on Meta's latest earnings conference show a serious mismatch between how Meta launched Threads and what he says is the right way to do it.

"[W]e have a basic playbook here, which is build an experience. It's got to be something that people like, so it has to have product market fit. Once you get that, it's not always retentive. So a lot of people might like an experience, but you need to kind of tune it so with the numbers works that people who use it are continuing. We feel like we're getting to a good place on that with Threads. There's still a lot of basic functionality to build.



Once we feel like we're in a very good place on that, then I'm highly confident that we're going to be able to pour enough gasoline on this to help it grow once we get to the point where we feel good that everyone who's using it is going to continue using it at a high rate. And then, in a few years, once we get to the point where it's at hundreds of millions of people, assuming we can get there, then we'll worry about monetization. But I mean, that's basically the playbook that we're focused on."

Unfortunately, that's not the playbook Threads followed.

The platform got a massive number of users signed up without apparently having any plan for getting them to interact much with each other. Now, Meta has a harder job to ignite a new microblogging site today than they did before they launched Threads in July.

It is really hard to get people to come back after a bad experience, just like it is hard to restart a fire that has sputtered with wet wood or not enough tinder.

IF WE BUILD IT,

They Will Come, So Say We

It's audacious, for sure. A group of Silicon Valley billionaire entrepreneurs and venture capitalists and hangers-on plan to create a new city in California, beginning by buying up thousands of acres north of San Francisco. Just breaking ground is a long way off, so unlike Threads no one can say for sure that they can't succeed. I'm sure that movie of their endeavor will be great, like Fitzcarraldo building an opera house in the Amazon, but I'd put the odds of it happening at about the same as the long-dead Shoeless Joe Jackson actually appearing in the Field of Dreams.

As anyone who has been following major cities, post-pandemic, has probably figured out, the economics of platform dynamics fits them pretty well. Cities have several stakeholders who depend on each other. They need businesses to employ residents and commuters, businesses to service those people, and they need residents who want to live there or nearby. And they must have enough businesses and wage earners to tax to fund all the services people and businesses need from the city. There is a virtuous circle connecting all these participants." When cities are in equilibrium, just kind of humming along, we don't focus on how interdependent these stakeholders are.

Sources: Andreessen Horowitz, LinkedIn

Until there's a debacle that upsets the equilibrium. Then, as we saw beginning in 2020, the chain reaction between the participants works in reverse. Fewer residents and commuters reduce the number and variety of service businesses. Those losses make it harder to persuade people to live and work in the city. Employers have less demand for consolidating office space in the city. And these negative vectors feed on each other. Since the pandemic largely subsided in mid-2021, cities have been recovering, but slowly, and it is not clear some will return to their former vibrancy.

Cities tend to agglomerate over time through the same sort of network effects that drive platform growth. People gravitate to cities where other people are, and so do employers. As all that happens, the number and variety of service businesses and other activities increase, which makes the city even more appealing for people. The process is slow because there are lags between improvements, people and businesses being confident in those improvements, and making investments and decisions based on them.

Starting a new city is massively more complicated than launching most platform businesses. To begin with, people or businesses located in a new city incur substantial sunk costs they won't get back if things don't work out. It is about as far from just clicking on a new platform, like TikTok or Threads, as you can get. City participants have to be very sure that the stakeholders they depend on will also show up. No one is going to open a new supermarket or restaurant without being sure that it will have customers.

Few people are going to buy new homes — assuming a construction firm took the chance of building some — without being confident that they'll have places to buy groceries or go out to eat. And, of course, employers aren't going to locate there and create jobs unless there's a likelihood that there will be people to employ.

Doing all of this, at scale, to compete with other major cities for people and businesses appears mind-bogglingly difficult.

Maybe the SV billionaires can get Taylor Swift do all of her concerts there. Her Eras concert reportedly caused a minor earthquake in Seattle, but perhaps she could ignite a city if she channeled her energy, and raised her kids there.

THE PLATFORM

Ignition Playbook

Platform ignition is far more complicated, messier and harder than lighting a fire. There is, though, a science behind both that can provide the basis for a playbook on how to maximize your odds of creating a blazing fire or igniting a platform. Even those who have started a fire or a platform can benefit from a refresher course.

That's true even for billionaires who've done it before.

David S. Evans is an economist who has published several books and many articles on the technology businesses, including digital and multisided platforms, including the award-winning *Matchmakers: The New Economics of Multisided Platforms*. He is currently the Global Leader for Digital Economy and Platform Markets at Berkeley Research Group. For more details on him, go to davidsevans.org.

FRICTION:
SIZING THE PAIN POINTS AND POSSIBILITIES

DAVID S. EVANS

OCTOBER 11, 2023

HOW AIRBNB AND 18TH-CENTURY NEWSPAPERS FOUND PROFITS FROM FRICTIONS

Brian Chesky says that Airbnb is broken and he's going to fix it.

New York City recently passed regulations that all but gave them the boot. Meanwhile, guests are griping — such as when they find, after a long trip, that the place they rented doesn't exist or they get a surprise cleaning bill after they've done double-duty as housekeepers. Hosts, many of whom are making a living from renting and not just sharing the spare coach, are looking to make more money from their properties.

Investors must not be worried too much, given that Airbnb has a market cap of about $80 billion. So long as NYC isn't a bellwether for other major cities, their problems seem fixable. Some reflect the tension many platforms have between multiple stakeholder groups and regulators.

AIRBNB STARTED

as a “friction fighter” in 2008. It provides important lessons to entrepreneurs, investors and corporates searching for opportunities to make their fortunes during the digital transformation.

To understand where they should look and to size up the potential, let me begin by knocking the company Chesky co-founded down a bit.

Not a New Product

Airbnb didn’t really invent a new product. People have been letting rooms and looking for places to stay for a very long time — probably almost as far back as people stopped sleeping on the ground and put roofs over their heads. Some of these were likely for short-term stays and for travelers.

It wasn’t even the first matchmaker for getting hosts and guests together at scale.

Print newspapers started sprouting up in the mid-1600s and started selling advertising by the end of the century. In London, newspapers became wildly popular during the 1700s and chock full of ads.

Those included blurbs for rentals of rooms for the day, week or month. Anyone looking for a place to stay just had to scan the newspapers to find a room with accommodations for a horse or with a widow looking for some extra income.

This new channel of communication eliminated a lot of the friction —including boot leather — for people looking for rooms for people with rooms to let. Instead of just posting “room to let” in their windows, landlords could reach a wide population and guests could save time trying to find one. Although there was already a well-established market for letting rooms, newspaper ads made it far more efficient by widely disseminating information on available inventory.

Hundreds of years later, classified ads in newspapers, and eventually Craigslist and other internet-based publications, became the mainstay for short- and long-term rentals. Rental agencies and other matchmakers emerged, but they relied on newspaper and magazine ads to spread the word.

So Airbnb didn't really invent a new product. People have been subletting rooms and searching for places other than hotels to stay for as long as people decided there were better options to sleeping outside.

Airbnb also wasn't unique in creating a communication channel between buyers and sellers. Nor was it the first matchmaker to help people find a place to rent for a couple of weeks in Tuscany or the Hamptons.

Century-old ads show that Airbnb wasn't even the first to deal with trust and payments. Reciprocal references and cash may have done that for centuries.

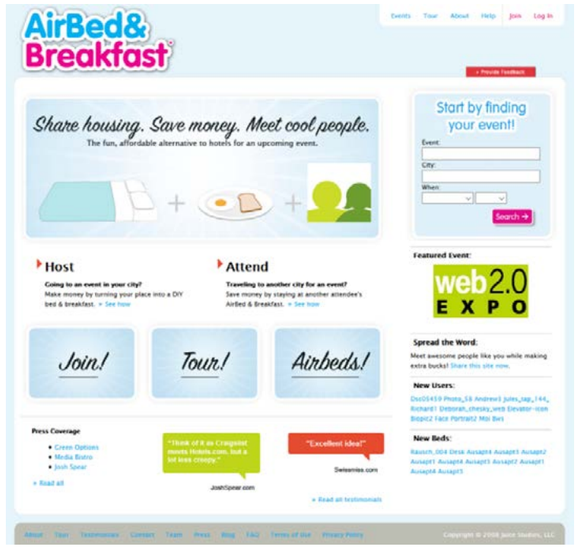

THE TIMES
LATE LONDON EDITION

STARTING

a Friction Fighter

So, what's with the $80 billion?

Airbnb's innovation was recognizing that the existing market for short-term rentals was rife with frictions that could be reduced with new digital technologies and new business models made successful by previous digital pioneers.



The company didn't have to create a new product. It "just" made an existing market, with many active buyers and sellers, work far better. And it sure did.

This is an important point with practical implications for every innovator,

Some inventions seem to come from nowhere, sprung from the mind of a genius. At least that's how we think of them after they've succeeded. The fact that there are often several pioneering thinkers chasing the same idea around the same time doesn't change the point much. Almost by definition, it would be impossible to give the person who won the race to create the new thing, such as electric power or calculus, an instruction manual on how to do it. Although I'm sure if I looked on Amazon, I would find some with 4-5 star reviews.

But when a market already exists and fundamental innovations have already been made, there's a greater opportunity to use research, data and analysis to find pockets of untapped profit opportunities. And that's the focus of many successful modern-day digital entrepreneurs.

They start with a traditional industry that helps connect two types of users so they can enter into an exchange that benefits them both, like marketplaces. Or one in which people benefit from getting together to improve how they find people or products or the perfect mate, like dating apps or social media platforms. Or an industry that helps make those pecuniary or non-pecuniary exchanges easy and secure, as payment cards do.

These entrepreneurs then unpack the process of interactions in the market to identify "frictions" that impose financial or psychic costs on one party or both. Some of these transaction costs may be so severe that they prevent exchanges from occurring at all, so reducing them enough could increase the market size and provide new revenue opportunities. Other sands in the transaction gears may just be taxes on the participants — the two sides may be able to find each other and transact, but less value is exchanged between them because some is lost to frictions. Market participants will pay to reduce these costs.

Finally, they have to figure out solutions — which could be based on using off-the-shelf tools applied to other markets — for eliminating or reducing these frictions. That is ultimately where their creativity in developing solutions and their ability to develop a business that can execute on bringing these solutions to an existing market is paramount.

They are friction fighters.

The potential profits to be gained from being a friction fighter depends on the size of the market, the impact of the frictions, the ability to reduce those frictions and the potential for expanding the size of the market from doing so.

The physical economy has pools of these potential profits, of all sizes, ready to be drilled by anyone who can find them, solve the friction points, and ignite a profitable business. Subsequent posts will elaborate on the FIT® Framework, introduced by Karen Webster, for maximizing the odds of success.

THE LESSONS

to be Learned

The original Airbnb was a matchmaking service for hosts and guests. But using digital technologies, one with far more potential for creating dense markets of hosts and guests by aggregating supply in a city and making it available globally. Airbnb then worked its way through the other frictions — such as ensuring the quality of host properties and guaranteeing payments by guests.

Next week, we'll drill down into the varieties of frictions to look for and the obstacles that can turn a promising friction-fighting machine into a predictable heap on the ground.

The trick is finding markets with solvable friction problems that don't face other insurmountable obstacles for success.

David S. Evans is an economist who has published several books and many articles on the technology businesses, including digital and multisided platforms, including the award-winning *Matchmakers: The New Economics of Multisided Platforms*. He is currently the Global Leader for Digital Economy and Platform Markets at Berkeley Research Group. For more details on him, go to davidsevans.org.

DAVID S. EVANS

OCTOBER 25, 2023

TO REAP DIGITAL GOLD LOOK FOR KLUDGE, HOPE FOR INSPIRATION

If you want to come up with the next big thing for digital transformation, you shouldn't wait around for inspiration.

Maybe the apple falling from the tree really did inspire Isaac Newton to develop his theory of gravity. In more recent times, it is harder to know whether eureka moments are more in the minds of the publicist than the founders. That's what happened with the story that Pierre Omidyar started eBay because he wanted to help his wife collect Pez candy dispensers.

The problem with inspiration is that a stroke of luck may not happen. Newton was at the family farm only because he was trying to escape the pandemic of the time. And even if the Pez story was true, what if Omidyar hadn't met and fallen in love with a collector?

But Entrepreneurs Can Apply Rigorous Analysis

There's no magic formula for identifying new digital-based ways of doing things in the physical economy.

Entrepreneurs and corporates can apply rigorous analysis to identify innovative opportunities. The FIT® Framework introduced by Karen Webster provides a set of tools for conducting important elements of that analysis.

A few weeks ago, I described how "friction fighters" like Airbnb develop solutions that make traditional markets work more efficiently by reducing the time and cost of transacting. In this piece, I dive into identifying frictions in the more traditional ways of doing things, aka the status quo, that can become an opening for exploring new digital opportunities.

The FIT analysis starts with identifying a particular part of the traditional economy with a substantial addressable market that has worked the same way for a long time and appears to be a promising candidate for uncovering frictions that all stakeholders have lived with or worked around with less than optimal outcomes. That analysis leads to a deep dive into those frictions and a transparent appraisal of whether there is an opportunity for digital-led change.

THE THREE

Sources of Frictions

Kludge is the first main source of friction.

Kludge refers to practices that are clumsy, inelegant and inefficient. Kludge is everywhere.

Sometimes, it is obvious, like still getting paper checks by snail mail in the United States.

Other times, we just take it for granted, such as all the hassles in buying a house.

And it is not just consumers. Ask any medical professional whose time is consumed with paperwork. Or most employees who have to work with information technology strung together from legacy technologies.

Kludge often arises from "clusters of awkwardness" — a wonderful phrase coined by my colleague, David Teece, the world's most cited scholar on business and management.

These clusters include inflexible contracts, institutional arrangements and engrained practices that throw sand in the gears of the economy. Nevertheless, they have become more or less standard operating procedures.

Often, kludge leads to situations in which a lot of steps need to be undertaken to do business, where the exchange of value involves many different middlemen, or where many different pieces of technology are "kludged" together to make something work. The result is that everyone associated with that transaction spends too much time and incurs too much extra cost to get something done.

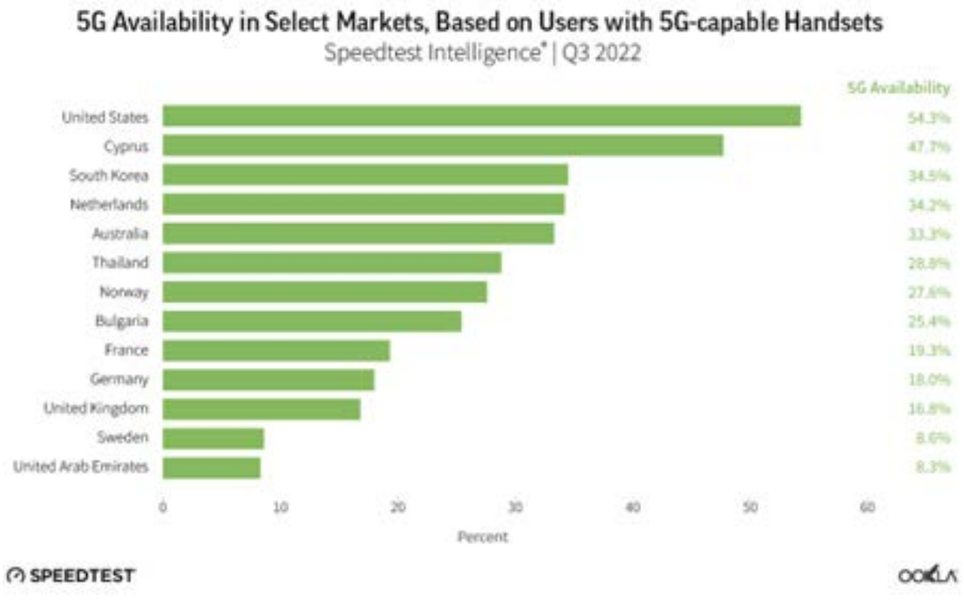
The second source of friction involves coordination. Many markets involve network effects between participants (as with short-term rentals and travelers) or require complementary products to work well together (mobile phones and cellular networks) to drive and deliver value.

Some markets have network effects, yet frictions of coordination hold them back. That was the case with short-term rentals before Airbnb. Newspaper (and then internet-based) advertising only went part of the way to connecting hosts with capacity and guests who needed a place to stay. Advertising alone wasn't enough to solve the coordination problem and get the flywheel moving at scale.

Other markets just take time to coordinate the provision of complementary products. It takes a long time, for example, for cellular networks to adopt new standards, such as 5G, which then limits the adoption of new phones based on the standard, which in turn delays the deployment of new apps that leverage the new standard.

Contractual frictions are the third source.

Most transactions — whether between businesses and businesses, businesses and consumers, and businesses and employees — involve some ongoing relationship between the parties over time. When a consumer buys a car, they rely on the manufacturer to have produced a reliable product. And when a dealer leases a car or a bank lends money to a consumer to buy one, they depend on the buyer to make timely payments.



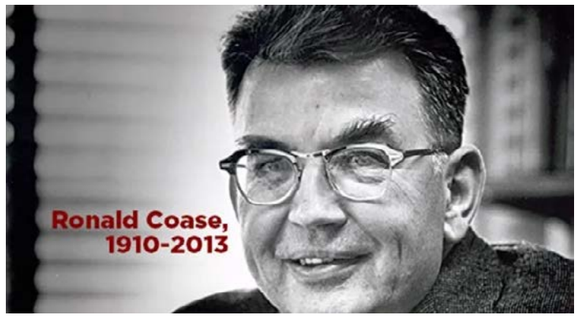
These ongoing relationships often have a variety of frictions related to asymmetric information, moral hazard, and opportunistic behavior. I refer to them as contractual frictions because there's often a written contract between the parties or at least an informal contract that reflects the expectations of the parties.

Contractual frictions have been a big deal for short-term rentals, as I noted in my piece on Airbnb. Hosts may misrepresent their properties, for example, while unattended guests may trash the place during all-night partying.

Airbnb developed rules and escrow procedures to deal with these issues, although problems still remain. These same issues have arisen for eCommerce platforms. "Matchmakers," my book with Dick Schmalensee, described how Alibaba identified and solved these frictions for its Chinese B2C business.

Economists have done many insightful studies on understanding and fixing contractual frictions; these are part of a specialty field called "transaction costs."

Ronald Coase won the Nobel Prize in economics in 1991 for showing, among other things, how important these contractual frictions are for understanding the economy. His work inspired other economists to analyze these frictions, including some who won their own Nobel Prizes. (Coase published his last book when he was 102, a year before he passed away.) It may seem odd, but much economic theory assumes there are no transactions costs similar to the frictionless plane in physics.



Frictions and New Products

Reducing frictions isn't necessarily just about shaving off some costs and layering on digital to make things work more efficiently. To reap the greatest rewards, entrepreneurs and corporates should be looking for situations where the frictions are so severe that eliminating them results in what almost seems like an entirely new product.

Consider ride sharing.

The taxi industry was a nasty mix of kludge, coordination and contractual problems. In some cities, such as Boston, where I live, getting a taxi was kludgy. Not easy to hail and not reliable to book. There wasn't also a good match between drivers and passengers as anyone seeking a taxi in lower Manhattan in the late afternoon discovered. Depending on the rules and enforcement, passengers couldn't be sure what service they would get when they jumped in a taxi. As for payment, the credit card terminals in the back of those taxis were always "broken" as drivers preferred cash.

UBER, LYFT

and other ride-sharing platforms globally solved these problems. Driver and rider apps eliminated much of the kludge and made payments invisible by bridging the online and offline worlds. The gig model, surge pricing and the apps created a sufficient density of drivers to solve the coordination problem. Add to that written contracts with drivers, precise rules and bilateral ratings eliminated much of the contractual issues.

Fighting Friction in the Remaining 90%

Almost 30 years after the launch of the World Wide Web, the potential for friction fighters with digital solutions is enormous. According to a November 2022 study by the U.S. Bureau of Economic Analysis, the digital economy accounted for only 10.3 percent of U.S. GDP in 2021. That understates the role of the digital economy somewhat because it doesn't include digital intermediaries like Uber. It also doesn't account for how traditional businesses are using digital solutions such as electronic health records.

Nonetheless, it is obvious that large portions of the economy have barely been touched by the digital transformation. The rapid acceleration in artificial intelligence technologies has also increased the opportunities for coming up with disruptive innovation for much of the digital economy.

As technology and business-model innovation progress, there will be more opportunities for entrepreneurs and corporates to go back and innovate the old digital economy as we are seeing now.

Scouting out kludge, coordination and contractual frictions is only a start in the search for opportunities. A future post will focus on time. It is the most important aspect of economic life but is often ignored in the analysis of innovation.

David S. Evans is an economist who has published several books and many articles on the technology businesses, including digital and multisided platforms, including the award-winning *Matchmakers: The New Economics of Multisided Platforms*. He is currently the Global Leader for Digital Economy and Platform Markets at Berkeley Research Group. For more details on him, go to davidsevans.org.

Karen Webster

DECEMBER 18, 2023

PAYPAL: THE ONLINE PAYMENTS FRICTION FIGHTER THAT BECAME FRICTION

I have perfected the art of multitasking**.**

Thanks to my mobile devices, the internet, apps and embedded payments, I can book airline tickets while waiting for a Zoom call to start, shop for holiday gifts while in the back of an Uber on the way to the airport, buy groceries while waiting for my dinner guests to join me at a restaurant, find and buy a car while waiting for the plane to take off (I actually saw someone do that a few months back), and pay the dog walker while sitting in the lobby waiting for a meeting to start. In a few minutes I can accomplish tasks that once required being in a totally different physical location. My digital multi-tasking experiences are fast, easy and hassle free. It's become my expectation. And yours too, I'm sure.

WHILE

on my Saturday morning run, I received a notification on my phone that an item on my wish list was now in stock. Since I intended this item as a holiday gift, I stopped running so that I could buy it — I didn't want to lose it. Within a few seconds, I got to the checkout page where I selected PayPal to complete the purchase.

I was taken from the merchant site to the PayPal log in screen, where I had to enter my email or phone number, then wait for a mobile code since I can never remember my password. I was then taken back to the PayPal page to complete the purchase, where it felt like an eternity for the transaction to process — the little wheel kept spinning and spinning. I cancelled the transaction, returned to the checkout page, and completed the purchase in less than ten seconds with Apple Pay.

My PayPal experience on Saturday wasn't unfamiliar. I have had a PayPal account since 1999. I have done thousands of transactions with them. I have enrolled in One Touch on all my devices and use PayPal on all of them. (Note: It's up to the merchant to enable that experience on their sites, which is why it can be inconsistent from site to site.)

The three-step process PayPal-check-out-jitter-jive (click on checkout page, enter mobile code after logging in, then click back to the merchant page) was a friction that I was happy to put up with for many years because of the convenience of using PayPal at most of the merchants I shopped online. It kept me from having to enter and save my card credentials at every merchant. It made shopping online efficient. It was great during those days.

Not so much anymore.

Friction is all relative. A business that solves friction at one point in time can be a source of friction at a later point in time when other alternatives can provide a better experience.

And relative to its competitors, PayPal introduces a friction that my inner multitasker is less willing to tolerate now. PayPal has a lot of company on checkout pages that make the experience easy and truly one touch or an easy double click. The PayPal checkout experience, by comparison, appears unchanged from the late 2010s, old and clunky. Where there are other options, I now often choose one of them.

A BUSINESS THAT SOLVES FRICTION AT ONE POINT IN TIME CAN BE A SOURCE OF FRICTION AT A LATER POINT IN TIME WHEN OTHER ALTERNATIVES CAN PROVIDE A BETTER EXPERIENCE.

The payments innovator that unlocked online payments at scale by removing friction at checkout — and became the wallet that owned the online checkout experience — is now at risk because they create too much of it, relative to others. PayPal's Q3 2023 earnings reflect this, too. Branded checkout volumes are not growing as robustly as they once did. Active users are in decline.

Friction and its impact on a company's prospects is a topic I have been writing about since 2019. It is also the foundation for the FIT™ Framework that I introduced that year. This framework gets its name by examining the interdependencies among Friction, Inertia and Time as a proxy for assessing opportunities for disruptive innovation — and the future success of any business, regardless of its stage or stature.

I define **Friction** by how much hassle the prevailing status quo creates and whether that hassle is big enough for a large enough group of people to build a business around.

Inertia is defined as whether the alternative to the current friction is so much better that a critical mass of customers will move away from the status quo to something new.

Time is simply about whether the swishy new alternative saves time and is available to customers in a timeframe that is relevant to them.

Plainly speaking, the FIT™ Framework is a rigorous analytic framework, informed by hundreds of business experiences. It is predictive in determining whether the juice is worth the squeeze for enough customers to invest time and money in building and scaling profitable business.

My Saturday morning PayPal experience is a great illustration of why understanding those interdependencies matters, particularly in a highly competitive space like payments, and why it isn't enough to assume that market share will always mean customer preference.

And how one company's friction often becomes a challenger's opportunity to use modern technology to create a different experience that can quickly change market dynamics in their favor.

ONE COMPANY'S FRICTION OFTEN BECOMES A CHALLENGER'S OPPORTUNITY TO USE MODERN TECHNOLOGY TO CREATE A DIFFERENT EXPERIENCE THAT CAN QUICKLY CHANGE MARKET DYNAMICS IN THEIR FAVOR.

Fighting Online Checkout Friction

PayPal's origins are certainly quite familiar.

Transacting on eBay was one big ball of friction when it launched in 1995. Buyers who found stuff to buy from sellers on the platform indicated their interest in the item, then put a check in the mail. Days later, banks got the checks and had to clear them, then send the seller the money once the item was sent to the buyer. Transactions took weeks not days, and were a hassle for everyone: buyers, sellers, eBay, and the banks with the responsibility of managing the flow of funds.

PayPal launched in 1998, went public for the first time in 2002 and was sold to eBay that same year for $1.5 billion. It became the trusted payments intermediary on the eBay platform — establishing merchant accounts for sellers and payments accounts linked to buyer bank accounts — making money movement faster, secure and digital. It was an amazing friction fighter, making it so easy for buyers, sellers and eBay alike to do business with each other.

It and eBay grew like a rocket ship, and PayPal with its thousands — then millions, then tens of millions — of buyer accounts moved off eBay to create a network of merchants that wanted an easier way to sell and accept payments online. PayPal's second IPO and decision to add issuer cards more easily in its wallet drove more merchant acceptance and consumer usage. Today, PayPal is the most widely accepted digital wallet, with nearly 76% of all U.S. merchants accepting it and roughly 237 million US consumers with an active PayPal account.

The One Touch experience in 2014 was a first — a breakthrough — that sidestepped the need to authenticate the user for every transaction. For both consumers and merchants that was a huge deal at the time, if merchants adapted their checkout to enable that smoother experience for the buyer. Even though the experience still added steps to the checkout process, it saved time by eliminating the hassle of entering card credentials on sites consumers wanted to shop. The benefit to the merchant was more sales, particularly for smaller merchants where consumers were reluctant to enter and store card credentials.

For many years, guest checkout and registered card credentials were PayPal's only competition. Other "buy buttons" were a long way from ubiquitous and the card networks abandoned their own buy button ambitions after a few years. Merchants' efforts to create their own never got off the ground. Ambitions around a secure remote commerce button sort of imploded. But PayPal's two-sided network continued to crank, more users brought in more merchants, more merchants brought in more users — the flywheel went into overdrive.

For years, it was the best checkout experience on the web — and its user numbers, merchant acceptance and GMV proved it. When PYMNTS Intelligence published its Buy Button Index in May 2022, merchants that enabled PayPal were proven to save consumers an average of 51 seconds at checkout, a time savings of 43% when PayPal as not used on those same sites.

But paying with or without PayPal is no longer the only choice facing consumers when shopping online or in their mobile apps.

Google made it possible to store credentials in the Chrome browser in 2015, providing payments choice at guest checkout using Autofill on any connected device. Shop Pay, introduced in 2017, created a true one-touch checkout experience by taking the customers of Shopify merchants directly to a checkout page to complete the purchase in one click. Amazon Pay moved off Amazon, as did Amazon's merchant services — including free shipping with Buy with Prime and fulfillment — to create its own two-sided network. Apple Pay, where available, is a fast double-click. GPay offers payments choice and soon BNPL options as part of the payment mix. BNPL and pay later options are now proliferating. Seeing multiple options on the checkout page is no longer unusual, and consumers have already registered their card credentials in many of them.

UBIQUITY IS NO LONGER ABOUT ONE WALLET BEING ACCEPTED EVERYWHERE, BUT WHICH PAYMENT EXPERIENCE MOVES A BUYER THROUGH THE VIRTUAL CHECKOUT LINE THE FASTEST AND EASIEST.

This dynamic has changed the consumer's perception of ubiquity, choice, and friction.

Choice is no longer between entering credentials from scratch at a guest checkout or PayPal. Consumers can choose from multiple "buy button" or wallet options each time they visit a merchant checkout page. What used to look like a jumbled-up Nascar page a few years back is more organized today, and not as off-putting or confusing.

Ubiquity is no longer about one wallet being accepted everywhere, but which payment experience moves a buyer through the virtual checkout line the fastest and easiest. Why? Because consumers have their cards registered on all of the ones they use.

Friction is no longer the hassle of switching to something new, it is using a checkout option that takes too much time.

PayPal, I Hardly Knew Ye

I'm not the only digital card-carrying member of Generation Multitasker. More than half of baby boomers and 70% of millennials use their mobile devices to compress time and place and do multiple things at the same time, according to recently published PYMNTS Intelligence data. As people become more mobile, return to the office, and get out and about more with family and friends, the ease with which consumers and businesses can interact with their assorted connected devices will decide consumer preference and, by design, their loyalty.

With study after study suggesting that payments preferences play a huge role in establishing that choice, having a seamless or invisible payments experience will become a critical capability. Innovations in checking out will reflect these expectations, and innovators will use new technology to make interactions, well, invisible — a non-experience that becomes a fluid part of the customer buying journey. Eliminating friction and saving time is where innovators are focused, and to the successful friction fighters will go the spoils.

Everyone — from issuers to card networks to merchants and innovators across the payments ecosystem — is focused on what they can do to further reduce, or eliminate, the hassle of checkout and boost conversion for the merchant. It's no longer a tough slog to convince consumers there is a better way.

The risk to PayPal is that there are a lot of people like me who can still be counted as active PayPal users, but who transact at a much lower volume than in years past as alternatives make paying for something online or in app more efficient. That the spend that used to flow through PayPal will find its way through other channels — and those other channels now include Apple Pay for iPhone users, who skew to a more affluent user base and drive a disproportionate share of retail spend.

As any platform innovator will tell you, it is much faster to lose network mojo than to build it. PayPal has done a remarkable job over the last 25 years of building an online payments network that is the envy of many of its fiercest rivals. It has added capabilities that position it as a viable alternative for capturing the "everyday app" opportunity that 79% of consumers say they would love to have.

Last Saturday was a stark reminder of how the PayPal I once knew is getting tougher to recognize in a connected economy where ease and convenience will drive adoption, usage and scale. PayPal has an incredible foundation to leverage and a global presence and merchant acceptance that remains unmatched. I am quite sure that managing the friction/inertia/time dynamic is a high priority for the new PayPal executive team, even though they may not refer to it in those exact terms.

This new team now includes one of the most accomplished professionals in payments leading its global markets focus. It's a team with all the right incentives to turn things around. Let's see what 2024 has in store.

INERTIA:
DEVISING INCENTIVES TO FORCE CHANGE

Karen Webster

MAY 16, 2022

RIP DIGITAL TRANSFORMATION, WE HARDLY KNEW YA

It's over. It's done. Stick a fork in it.

All those digital habits that consumers developed and fine-tuned over the last two years — they were temporary, at best.

Ordering groceries online? An anomaly.

Having DoorDash or Uber Eats show up at the consumer's doorstep two or three times a week? A blip.

Binge-watching Bridgerton on Netflix? No mas, as consumers head back to the theatres and binge-eat movie theatre popcorn instead.

Ordering stuff from Amazon? Seriously people, that's so 2019.

Today, it's brick and mortar, baby — all consumers, all the time.

And shop 'til you drop in those same malls and retail storefronts that were gasping for life in 2019 as a result of a 20-year decline in retail sales growth (and their market caps) at the hands of those same online players that are today's poster children for The Great Digital Demise.

The 'new' normal in 2022?

It's the old normal that just took a two-year COVID timeout.

That's certainly the sentiment you get when you read almost every media account about the "decline" in the consumer's use of digital channels and the corresponding stock market drubbing the tech, FinTech and Big Tech company stocks are taking.

The so-called proof points are well documented.

THE

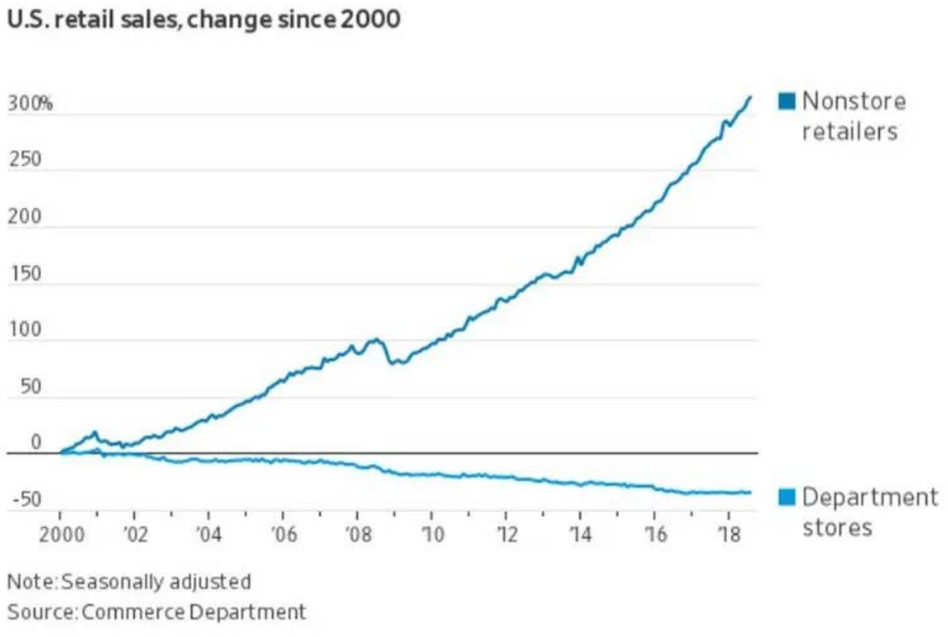
Nasdaq suffered its worst performance since 2008 in April. The basket of FinTechs that went public between 2020 and today has declined 40% in value. The CE100 Index of the 100 publicly traded stocks that represent the connected economy's future has declined 30 percent this year, after outperforming the Dow and S&P in 2020 and 2021.

As of the market close on Friday May 13, 2022, PayPal's stock was trading at levels not seen since April 2018, Shopify's since December 2019, Amazon's since April 2020, Block since July 2020. Teladoc is trading at levels not seen since January 2018, Uber at levels not seen since March 2020.

The market is treating these companies — and many others — as if the payments innovations and digital transformation of consumers and businesses witnessed over the last two years — en masse and everywhere in the world — was fleeting, a fluke buffered by habits that are unsustainable and now reversing course before our very eyes. This despite reported growth in users, user engagement and GMV from these companies.

Of course, no one who lives in the real world believes this is even remotely true, stock market drubbing and headlines aside.

That's because no one really believes that this chart of non-store retail sales over the last 20 years (courtesy of the Wall Street Journal) is now suddenly going to reverse course. That online sales will flatten or dramatically decline as department stores sales catch a massive tailwind as part of The Great Physical Retail Reawakening.



Or that consumers are going back to cash and taxicabs — or shutting down their video, music streaming and social media accounts.

Instead of more fancy models, maybe we need some good old-fashioned common sense to sort out the digital transformation storyline based on observations of the consumer's digital preferences, now three years into the world according to COVID.

Let's look at how great businesses are investing to make the physical world an integrated part of the digital experience consumers have spent two years perfecting — and now expect as they reengage.

The Great Digital Miscalculation

COVID created a jump discontinuity in consumer behavior starting in March/April of 2020 — for the obvious reason. With no vaccines and a rising death toll, people were afraid to leave their houses to do anything if they could do it online instead. When the physical world literally shut down, digital was the only way consumers could access many things.

And without the digital foundations laid by FinTech, BigTech, HealthTech and payments and commerce players over the prior decade, navigating this global pandemic would have been largely impossible.

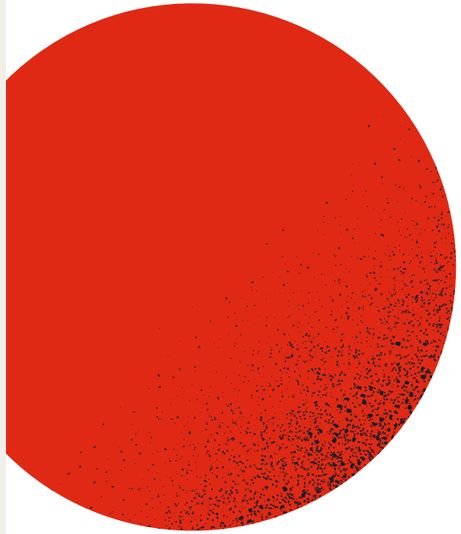
But navigate and survive we did.

PYMNTS began to examine the consumer's digital shift every month — the activities that had begun moving more online and less in the physical world *before* the world shut down — starting March 6, 2020. Even then, our data showed, consumers had begun to pull back from doing business in the physical world.

As the pandemic intensified, so did their shift to digital.

In 2020, we saw consumers doing three or four times more activities in the digital world than they did in the physical one: shopping and ordering food from grocery stores and restaurant aggregators online, working remotely, streaming videos and hanging out more with family and friends on social networks.

Yet, no one expected, nor should they have, that consumers would stay pinned to the max to those COVID-created digital-only behaviors when the world reopened, when consumers were vaxxed and boosted and as the pandemic receded.



Today we see consumers logically doubling down on the activities for which there are no great digital substitutes — traveling, eating out at their favorite restaurants, going to concerts, taking the kids to amusement parks and county fairs — the things that they couldn't do or felt uneasy doing in the physical world for the last two years. We see a corresponding shift in how consumers spend their money — more on services and activities and less on sofas and barbeque grills. Yet there is not much of a shift in how they find, book and pay for those purchases: more and more digital and less and less cash.

Consumers are also returning to the physical store to buy retail products and groceries. But they're not doing that to the exclusion of using online channels to make those purchases — and they're using digital methods to pay for those purchases in the physical store.

Just like they did in 2019, consumers use a mix of digital and physical channels to get what they want. And despite the sensational down-with-digital headlines, it seems they're using digital channels to do that even more.

Mastercard SpendingPulse™
U.S. Snapshot – March 2022

	Sales Growth Year-Over-Year March 2022 vs. March 2021	Sales Growth vs. Pre-Pandemic March 2022 vs. March 2019
Total Retail (ex. Auto)	+8.4%	+18.0%
E-commerce	-3.3%	+83.7%
In-Store	+11.2%	+9.4%

According to Mastercard March 2022 Spending Pulse data, retail sales growth in the online channel is nine times more than in-store, based on a comparison of March 2022 to March 2019.

That's despite the 3 percent YOY decrease in online sales. Even a small decrease from a massive double or triple-digit increase is still an overall increase, as the Mastercard trend data shows.

PYMNTS April 2022 monthly consumer shopping data shows that 33% of retail purchases were made online, up from 29% in March 2022. PYMNTS data also shows nearly half of US consumers shopped online that same month. Not at the exclusion of shopping in the store — but not at the exclusion of ever using digital channels to buy things, either.

The same holds true for grocery purchases, as we see convenience continue to drive a bifurcation of how consumers buy their food.

PYMNTS April data shows 88 percent of consumers shop mostly for groceries in store, but 12 percent of consumers mostly don't — a relatively steady state since November 2021. Think about that for a minute. In 2019, the percent of consumers who shopped for groceries online was in the anemic low single digits. Two years later, it is — and seems to remain — almost an order of magnitude higher.

MORE

telling, however, is the mix of physical and digital behaviors when making those purchases, shaped by the growing number of in-store shoppers who buy center-aisle grocery items online.

According to the PYMNTS Subscription Commerce Index, done in collaboration with sticky.io, roughly a quarter of consumers have retail subscriptions, with an average of roughly four retail subscriptions for each subscriber. Those subscriptions are for the things that consumers used to buy in the physical store — a small but a growing share of spend for items shifting to digital channels.

Fully one in 10 retail subscriptions held by U.S. consumers are for Amazon Subscribe & Save — mostly staples, classic center-aisle items for grocery stores. That's been more or less consistent over the last year. There is every reason to think that even more of that spend will shift online as consumers shop at the grocery store to buy the items they would rather see before buying — and online to buy the things they don't want to waste their time lugging around in the store.

The same digital behaviors are seen when consumers consider eating at restaurants.

Consumers' appetite to dine in-person at restaurants doesn't seem to be denting their use of online channels to order food for takeout or delivery that much. According to the PYMNTS and Paytronix study of consumer restaurant trends for April 2022, roughly a third of consumers are using online ordering options to get food, a percent that has been largely constant since September of 2021.

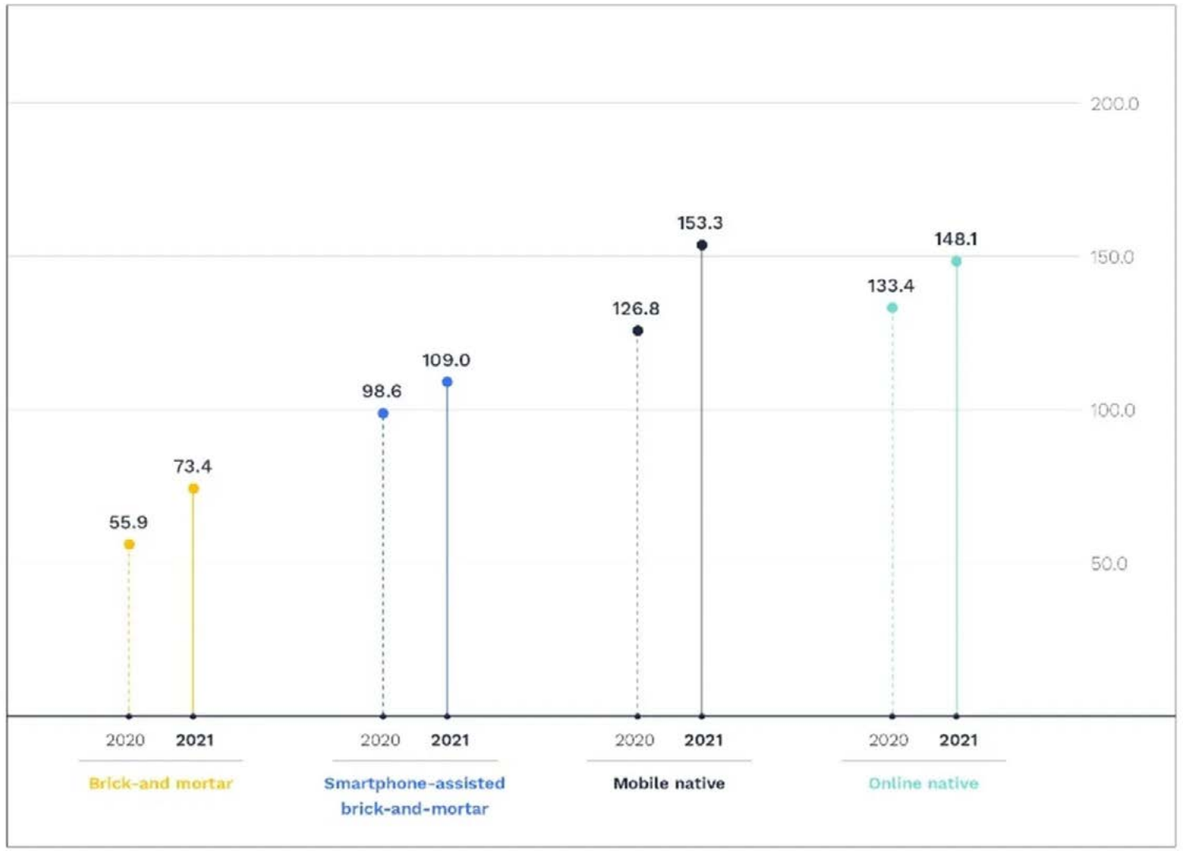
Digital is even a force when consumers eat inside. Menus are often QR code-enabled, even in hotels for room service, offering restaurant operators better staffing and operational efficiencies, menu and pricing flexibility and checkout opportunities when payment is integrated with digital apps or enabled via digital wallets.

The Great Physical Store Disappointment

Consumers' use of digital is also shaping how they use the brick-and-mortar store.

The 2022 Global Digital Shopping Index, a six-country merchant consumer study done in collaboration with Visa's Cybersource, shows that consumers increasingly use stores as pick-up points for online ordering — particularly in the U.S., where consumers over-index their use of online order and pickup, especially for groceries.

Merchants are embracing the consumer's digital shift and investing to drive more sales using that channel. According to this study, 57% of merchants now allow consumers to use their stores as fulfillment centers because it is as good for the consumer who wants to "buy now and get now" as it is for their own store economics.



Merchants are also beginning to realize that just because consumers shop in the physical store doesn't mean they love shopping there.

The 2022 Global Digital Shopping Index shows that consumer satisfaction when shopping in the physical store is roughly half that when they shop and take delivery online.

In fact, it is the least satisfying way consumers shop.

HITTING RESET

One observation about the digital transformation now seems quite clear: the definition needs a reset.

Digital transformation — at least as we at PYMNTS have written about it — was never intended to mean digital-only. It was always about the reality that, eventually, almost every physical-world interaction will have some kind of a digital connection. The great opportunity that innovators have to create those new experiences for consumers and businesses and to engage and monetize those interactions will power the digital transformation of the global economy.

Digital transformation's focus, therefore, is making the physical world an extension of the digital experience — sometimes replacing it, but largely as a complement to it. This transformation is rooted in the inevitability that digital and physical will become one integrated experience as ecosystems emerge to streamline and simplify access to the many activities that define the consumer's day-to-day. How consumers bank, maintain wellness, communicate, eat, have fun, live, move, shop, pay and work already reflects a blending of the online and offline experiences everywhere in the world. Technology will make it possible to move between activities and channels with a consistent experience, payments will make it possible to monetize engagement and digital identity credentials will make access seamless and secure. More innovation and innovators with new and creative use cases will only accelerate the transformation already underway.

FINDING THE DIGITAL F.I.T.

This reset will take some soul-searching — and for many, a hard course-correction.

Flush with capital, many “me-too” innovators over the last two years focused on the red ocean of low friction/low inertia opportunities as they addressed a wholly captive audience of online consumers without a sustainable business model to support it. But this is also where we will see (and have seen) both massive digital roadkill and consolidation as larger, more successful digital platforms go shopping for features that could become suitable plug-ins. Others have been or will be forced to shut their digital doors.

The herd will also thin where there is high friction — many inefficiencies in how consumers engage in the digital and physical worlds — but the consumer’s interest in embracing digital alternatives remains strong. Here again, business fundamentals will rule as investors divert capital to those who solve real problems at scale. It’s also where digital platforms have already made strong inroads but see opportunities to extend their consumer engagement to new adjacent and differentiating cases.

Digital transformation’s biggest opportunity, however, is wherever there is much friction in the interaction between consumers and businesses, but where the costs of switching are too high or the benefits too low, so it remains a tough sell.

In each of these cases, success and profits will be about saving consumers’ time. The “T” in the FIT framework is a critical box to check for consumers to overcome their resistance to change — and for entrepreneurs and business leaders to allocate their capital and resources to innovate.

The Great Digital Transformation

Pundits have likened the “Tech Wreck” to the dot com bust of the early 2000’s. Rather than focusing on the crash and the carnage, I’d like to reflect instead on the innovations that flourished in its aftermath. The iPod was born in 2001 and changed not only how music was consumed, but the structure of the music industry. The iPhone followed in 2007, the App store in 2008, creating — along with Android and Google Play — the foundations for the app-based digital innovations we enjoy today.

An examination of the digital behaviors of more than 15,000 consumers across the 11 countries that represent 50% of the global GDP shows digital transformation's vast potential — almost three quarters of the 40 consumer activities we studied are largely untouched by digital. Some of the most exciting opportunities to explore are those that bring commerce to the consumer, in the many high-engagement digital activities that already have their attention. The low-hanging fruit is to simply make the digital experiences consumers have today, easier and better.

Not only is the digital transformation not done and over — it has really only just begun.

Of course, now that people don't *have* to do everything online, they are going back to physical — but that shouldn't be a surprise.

In fact, back in early the 2020s we had every reason to believe we'd be back to normal by the Fall of that year. Instead, it would take more than two full years for most to feel comfortable reengaging.

But the trend lines towards digital-enabled experiences that we have had for the two decades before the pandemic will keep rising. And physical-only experiences will gradually wither as they had been doing even before the notion of a global pandemic became our reality.

The stock market seems to be living in its own world with hard-to-explain rises during the height of the pandemic and just as hard-to-explain nosedives now that it's receding. Those of us who live in the real world may not know the right price for tech stocks, but we do know the digital transformation is happening under our feet.

To paraphrase Mark Twain, the reports of the death of the digital transformation have been greatly exaggerated.

DAVID S. EVANS

JANUARY 3, 2024

PLATFORM IGNITION NOT GOING WELL? CALL IN THE VOLCANOS

In early 2010, as winter turned to spring in Iceland, one of the many volcanos, Eyjafjallajökull, erupted. Beginning in mid-April, the volcano ejected about 250 million cubic meters of ash. An ash plume reached almost 5 miles above its peak.

The ash spread. Soon, an ash cloud covered the skies above Europe. Most airspace in Europe was shut down for about a week, including for commercial jets, leading to the most severe air travel disruption since World War II. Planes were grounded. Lots of luck getting a train.

of lightning from the sky, to ignite their long-distance ride-sharing platform. They had a mobile app that enabled a person driving between cities with a spare seat to find a person looking for a lift and willing to help defray the cost of the petrol. Drivers and passengers could select whether they were looking for a chatty or quiet companion based on the number of bla's they selected.

This wasn't BlaBlaCar's first stroke of luck. The company got massive publicity at its start thanks to one of the worst train strikes in France and the founder having a sister who was clever at PR.

BlaBlaCar ignited in France and then in Europe.

Today, it has a market value of $2 billion, with 26 million active members operating in 21 countries.

Inertia Stands in the Way of Great Ideas and Market Realities

The role of *deus ex machina* in igniting platforms provides insights into one of the biggest problem startups face in moving great business ideas from compelling slide decks to market reality:

INERTIA. The resistance to change. So what's sitting stays so. And what's moving keeps going as it's always done.

Sticking with France, the modern concept of inertia was discovered by Rene Descartes, building on work by Galileo Galilei, and became the basis for Isaac Newton's first law of motion. It is also the second concept in the FIT® Framework, introduced by Karen Webster, for discovering, launching and growing successful platform businesses.

Sometimes, the force necessary to counter inertia in the economy is so massive that even though a platform *should* succeed because it can create substantial value for its participants, it *can't* succeed without substantial outside help.

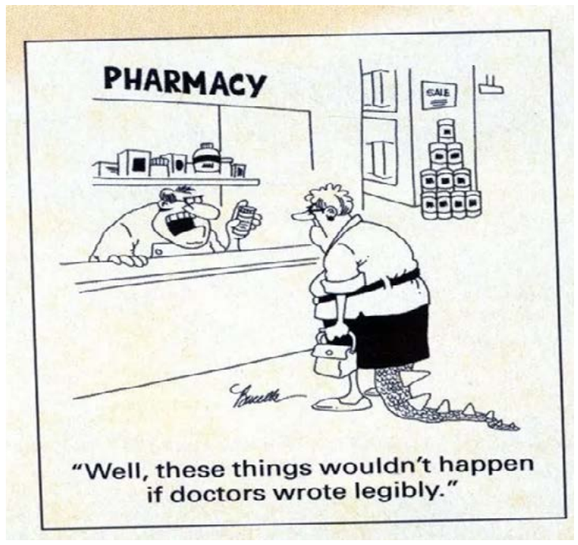
Entrepreneurs, corporates and investors should carefully examine what it will take to overcome inertia before wasting their time and money on pursuing a plan that can't counter inertia and leave an ROI that's worth the risk. You can't count on a volcanic eruption.

JOKES ASIDE,

Doctors Should Stop Writing Prescriptions

It wasn't that long ago — for most people, about a decade — that doctors wrote out prescriptions by hand, and patients took them to their pharmacy to get them filled. It is amazing more people didn't die, given the notoriously bad handwriting doctors had. There was even a cottage industry of jokes about their handwriting.

Fax, phone, and paper were the main technologies used by pharmacies and physicians to communicate with each other about filling and renewing prescriptions.



In the early 2000s, Surescripts started an electronic network to do all that digitally. The pharmacies loved the idea and joined. Physicians, however, were happy to keep doing what they had always done — scribbling hard-to-read scripts. For them, installing technology to make e-prescribing possible was a needless expense and chore. By 2008, hardly any prescriptions were done electronically, even though replacing the error-prone, time-consuming, and friction-filled analog methods made sense.

A Volcano Couldn't Help, but Uncle Sam Did

Congress and the Executive Branch saw the value of moving prescriptions and a lot of medical data and interactions over to electronic methods. That meant physician offices and hospitals needed computer systems — electronic health record (EHR) software. And the physicians, and other medical professionals, needed to get in the habit of using them. Two federal programs, adopted in 2008 and 2009, used carrots and sticks to make this happen. Physicians and hospitals received incentives for adopting EHRs and using them, including for prescriptions, which amounted to around $40 billion over the lifetime of the programs. Then, the incentives were replaced with penalties for not doing so.

This helped ignite e-prescribing. Between 2008 and 2018, the percentage of prescriptions transmitted over electronic networks increased from 3% to 95%.

We don't know whether e-prescribing would have eventually taken off without this *deus ex machina*, but it appears unlikely. The experience with B2B payments is instructive. Despite all the electronic methods that businesses have at their disposal, a 2022 PYMNTS study found that 40% of B2B payments were made with checks. The inertia — with businesses, their processes, and their employees stuck in their ways — makes change hard.

A GOOD GLOBAL PANDEMIC CAN OVERCOME INERTIA

No one wants a pandemic, but even the worst ones can do some good. Take the Black Death. It killed off around half of Europe's population in the early 14th century. By some accounts, it helped end feudalism because it caused labor shortages that gave more bargaining power to the serfs. Without that event, perhaps the inertia of the feudal system might have delayed the Industrial Revolution for a few centuries.

A pandemic met the digital era with COVID-19. While the digital transformation has been grinding on not for almost three decades, it got a real boost with the long-term lockdowns and health risks from being out and about. It helped overcome inertia for many digital platforms.

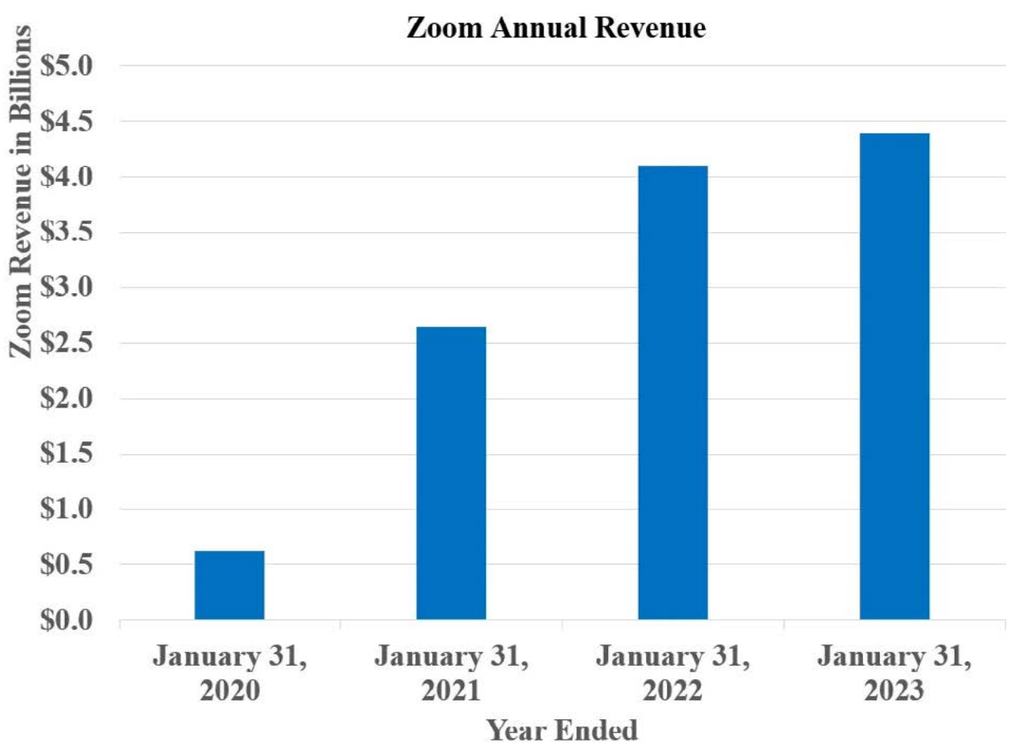
Not the least for video conferencing, such as Zoom and Microsoft Teams.

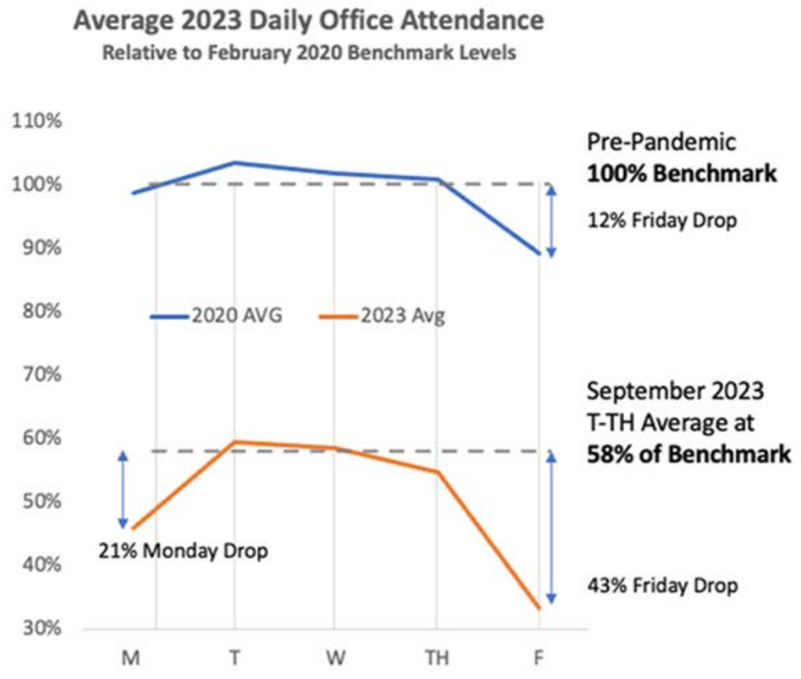
People had been doing video conferencing for years before the pandemic, particularly to interact with colleagues in other offices. As more people worked from home, video conferencing became the common method of communication.

And it has remained because the pandemic jolted a system that was so beset with inertia that no one even thought about it: working at an office.

Even though people had access to video conferencing solutions like Zoom, communication tools such as Slack, and many other ways to interact virtually, most everyone just accepted that people would schlepp back and forth to offices, which could take up a couple of hours a day in major cities.

[Source for chart below]





Once people found they could be pretty productive at home, without the time, hassle and expense of commuting, interact with their partners, kids, and pets when they wanted, and have more flexibility balancing home and life, they resisted returning to an office. Meanwhile, businesses balanced the benefits and costs of a remote workforce and often decided to accommodate work from home.

According to Stanford economist Nicholas Bloom, the "new normal" is that many Americans have permanently shifted to working from home much of the time. "One metric is office swipes [of ID cards], and the Kastle Systems data is now flat throughout most of 2023. Office occupancy on average is half what it was pre-pandemic. Separate research shows that about one-third of work days are happening at home. So on average, North Americans have decided they are in the new normal."

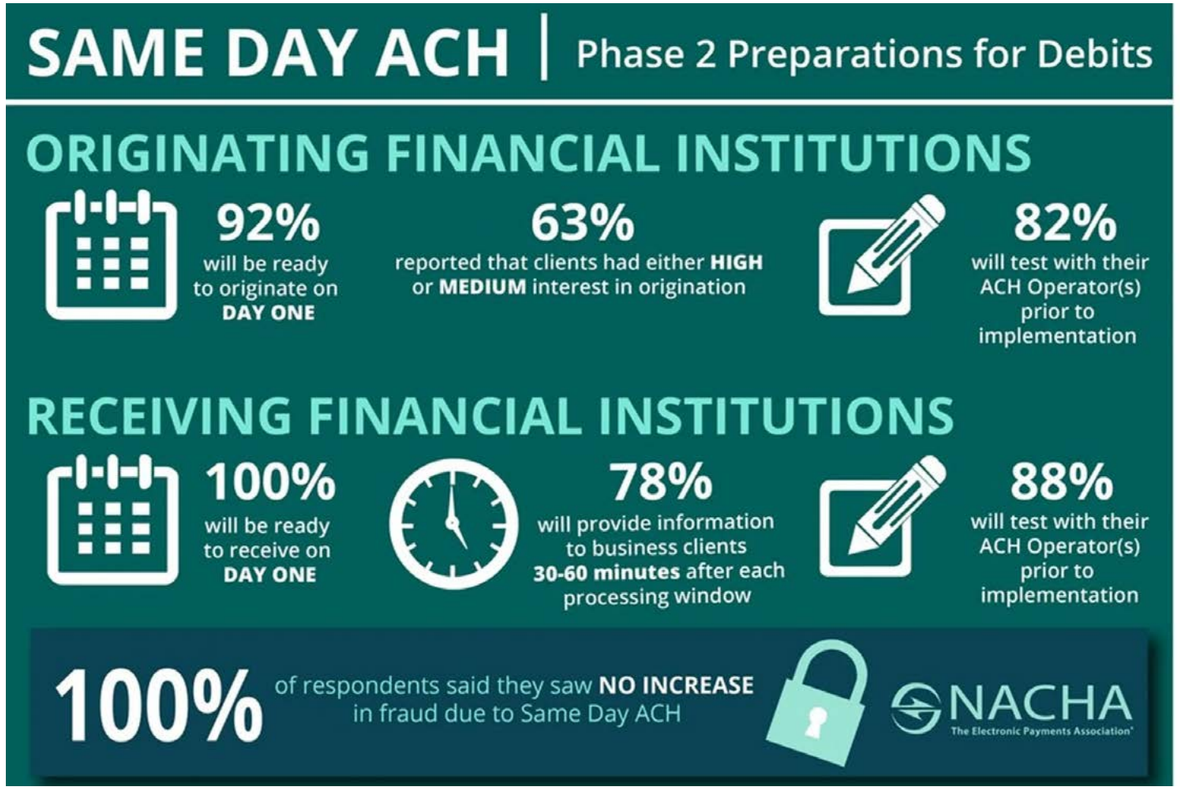
And, of course, hardly anyone is in the office on Fridays anymore.

HOW SAME DAY

ACH Solved the Inertia Problem How Same Day ACH Solved the Inertia Problem

A decade ago, it could take a few days for the ACH system in the U.S. to move money. NACHA governs the ACH Network in the U.S., which moves money between financial institutions, including most payroll deposits. It can set rules and standards, among other things. NACHA stakeholders represent most financial institutions in the U.S., from small credit unions to the largest banks. These stakeholders have a voice through voting in this governance process; like many standards-setting organizations, decisions are based on supermajorities that reflect a consensus.

In the early 2010s, NACHA considered adopting rules that would have led to "same day ACH." That didn't attract a supermajority. In November 2013, the American Banker claimed that the big banks killed it.



NACHA tried again to get a consensus. In May 2015, NACHA announced that members had approved the plan. CEO Jan Estep noted, "Through dialogue, input, and outreach, NACHA was able to balance differing perspectives and incorporate industry feedback from many types of organizations." Financial institutions had different perspectives in part because they had different revenue considerations depending on the extent to which they originated or received transactions and varying implementation and operating costs. In September, the Federal Reserve Board approved the plan.

With this consensus, NACHA ensured that all financial institutions would adopt Same Day ACH to comply with the new rules. It was ubiquitous from the start.

Faster, slicker, instant payments networks, unfortunately, face inertia.

Every financial institution has to make a separate decision to join. The Clearing House's RTP® Network, introduced in November 2017, has struggled to get widespread adoption and use. The Federal Reserve's FedNow Service, which began in July 2023, will likely face the same problem. Inertia makes it hard to get financial institutions to change. Critically, inertia makes it extraordinarily difficult to get almost all of them to make the changes required for widely accepted payment methods.

NOT TO WORRY,

Platforms Can Often Overcome Inertia Through Sound Ignition Strategies

The examples above are meant to highlight the serious role that inertia can play in starting a new platform. Platform entrepreneurs can succeed without counting on the equivalent of winning Powerball or miraculously getting a guardian angel. Platforms can secure critical mass and achieve self-sustaining growth by developing and executing well through ignition strategies, as Karen Webster and I have discussed in previous posts.

Knowing about inertia is essential, though. It is a reminder of how tough it is to get potential customers to change what they are doing. And that the time may not be right, and may never be, for a seemingly great business idea.

David S. Evans is an economist who has published several books and many articles on the technology businesses, including digital and multisided platforms, including the award-winning *Matchmakers: The New Economics of Multisided Platforms*. He is currently the Global Leader for Digital Economy and Platform Markets at Berkeley Research Group. For more details on him, go to davidsevans.org.

TIME:
CREATING VALUE FROM SAVING AND MAKING TIME

Karen Webster

NOVEMBER 15, 2021

MAKING ONLINE CHECKOUT BETTER STARTS AT THE BEGINNING, NOT THE END

A study conducted in 2011 **by two University of San Diego professors says that people who read the end of a book first not only go on to read the entire book from beginning to end, but enjoy their reading experience more.** Their research suggests that knowing what happens at the end makes the story less confusing and easier for the reader to navigate – and that "spoiled" versions of the story don't cause readers to be any less interested in the book than those who don't know the ending before they crack open the cover.

Spoiler alert.

PYMNTS' research of 2,138 adult U.S. consumers in July 2021 finds that 29% of consumers abandon their online carts at checkout at least once a week. Two of the top reasons they don't buy are learning that shipping isn't free and finding out that what's in their cart can be bought cheaper elsewhere.

Although it's not clear whether those consumers eventually return to complete their purchase, the lack of free shipping and uncertainty over getting the best price suggests that sites and marketplaces that offer both are more likely to win their business.

Turns out that bookworms aren't the only ones who might benefit from knowing what happens at the end in order to make the experience less confusing, more enjoyable and more effective from the start.

Hopefully, you'll keep reading.

ONLINE

Checkout Takes off – and So Does Checkout Friction

We do a lot of benchmarking studies and indices at PYMNTS that allow us to compare what happens over time. The perspective provided by these serial studies helps shape important insights that improve outcomes for businesses and investors across the vast payments, commerce and connected economy ecosystem.

PYMNTS has been benchmarking and indexing checkout conversion since 2016, tracking a proprietary, randomly selected basket of online merchants that represent roughly 70% of non-Amazon online sales. PYMNTS' analysts shop those sites and examine more than 70 features that represent possible points of friction along the consumer's path to purchase, and the dozen that our statistical models have found to make or break conversion.

The outcome of that work, the Checkout Conversion Index score, reflects a measure of checkout friction across the portfolio of those merchants. The higher the score, the better, since it reflects less friction and therefore higher conversion for those online merchants.

The latest report, in collaboration with Checkout.com, also reports the results of PYMNTS' survey of 2,138 U.S. consumers to further assess their experiences for those 12 make-or-break checkout conversion features.

In 2016, about 8% of retail sales happened online. Five years and a whole lot of payments and technology innovation later, census data show that nearly 16% of U.S. retail sales happen online, growth propelled by the pandemic and the massive shift to online purchases over the last 20 months.

Yet, the Q2 Checkout Conversion Index score is moving in the wrong direction – the degree of friction that consumers experience when shopping online over the last year has increased, not decreased. Checkout Conversion scores overall decreased by 1.1% from Q1 2021 to Q2 of 2021 – after a period of relatively steady improvement across that portfolio over the last six years. That decrease may sound small, but the fact that it didn't increase is important since we have had constant improvements, learnings and technology that should be reducing that friction.

For the PYMNTS Checkout Conversion Index, a decrease in the index score reflects a conscious shift in the priorities merchants have set for their customers' online experience – and ultimately their chances of converting those shoppers to buyers in the end. The decrease is particularly concerning since it happened so quickly – in just the space of three months – and as more and more consumers are making digital a larger part of their shopping routine.

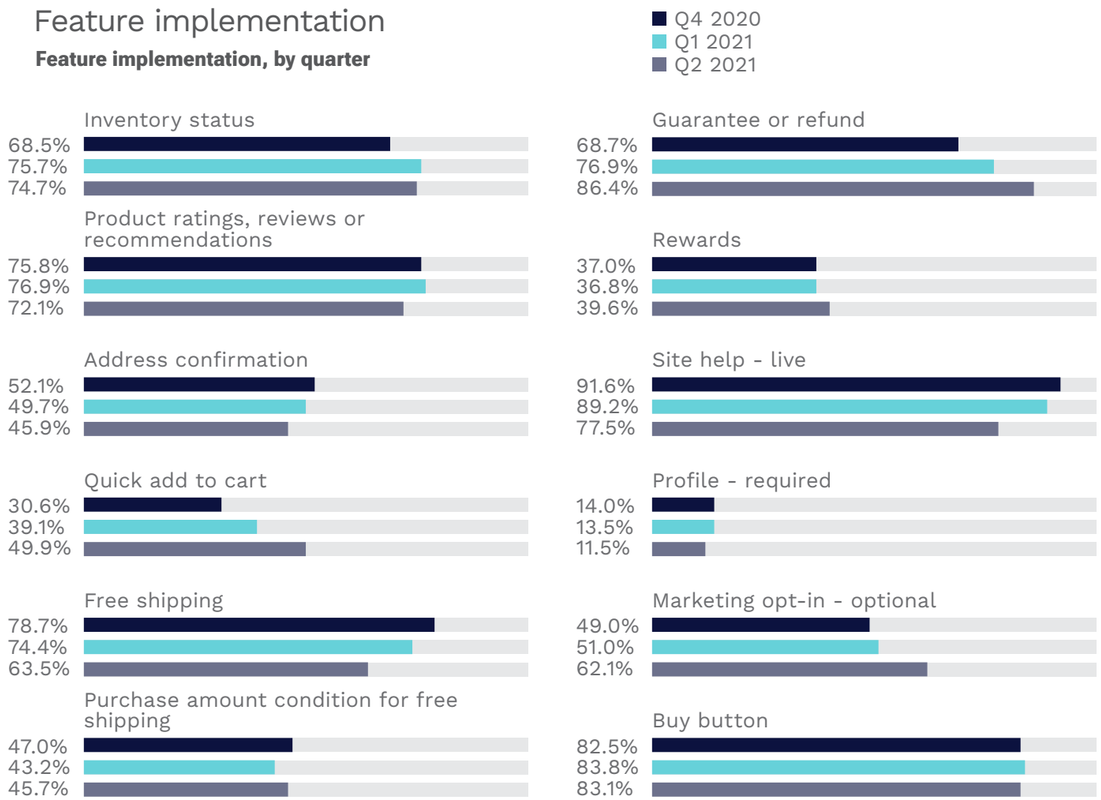
That conscious shift also results from a deterioration in the two areas that now represent the battleground for winning that digital consumer's business: good prices on the products they want to buy, shipped to them for free.

Over just the last three months, the number of merchants in PYMNTS' portfolio that offer free shipping decreased by 15% – from roughly three-quarters of all merchants to fewer than two-thirds. Over the last year, that decline is closer to 20%. At the same time, more merchants have added minimum thresholds to qualify purchases for free shipping.

FIGURE 1:

Feature implementation

Feature implementation, by quarter



Source: PYMNTS.com | Checkout.com
Checkout Conversion Index

The lack of free shipping is why nearly one-fifth (17%) of consumers abandon their carts every week. These abandonments can be very costly, particularly for new online brands.

Census data show an average of retail sales online, yet we know that in many categories – such as apparel, home accessories, beauty and sporting goods – online sales are much higher. And even higher still for the coveted millennial and bridge millennial consumer.

Further, PYMNTS research shows that roughly 30% of all consumers have shifted their shopping for retail purchases to be more digital and less physical over the last two years and that nearly everyone – 92% of U.S. consumers – have made at least one purchase online over the last 12 months.

PYMNTS research shows that this coming holiday season, eight in 10 consumers plan to shop online, 15% more than those who did so in 2020. Stacking the odds against converting the portion of shoppers who will get all the way to the checkout page and not buy is risky.

NOT

every brand selling online has a retail storefront that consumers can visit to find what they want, get what they want and walk out with what they want – or who can buy online and pick up at the store. Once a consumer knows that a brand doesn't offer free shipping, they might not even get a shot at their future business. Those shoppers have seen the end of the book, and may never decide to read it.

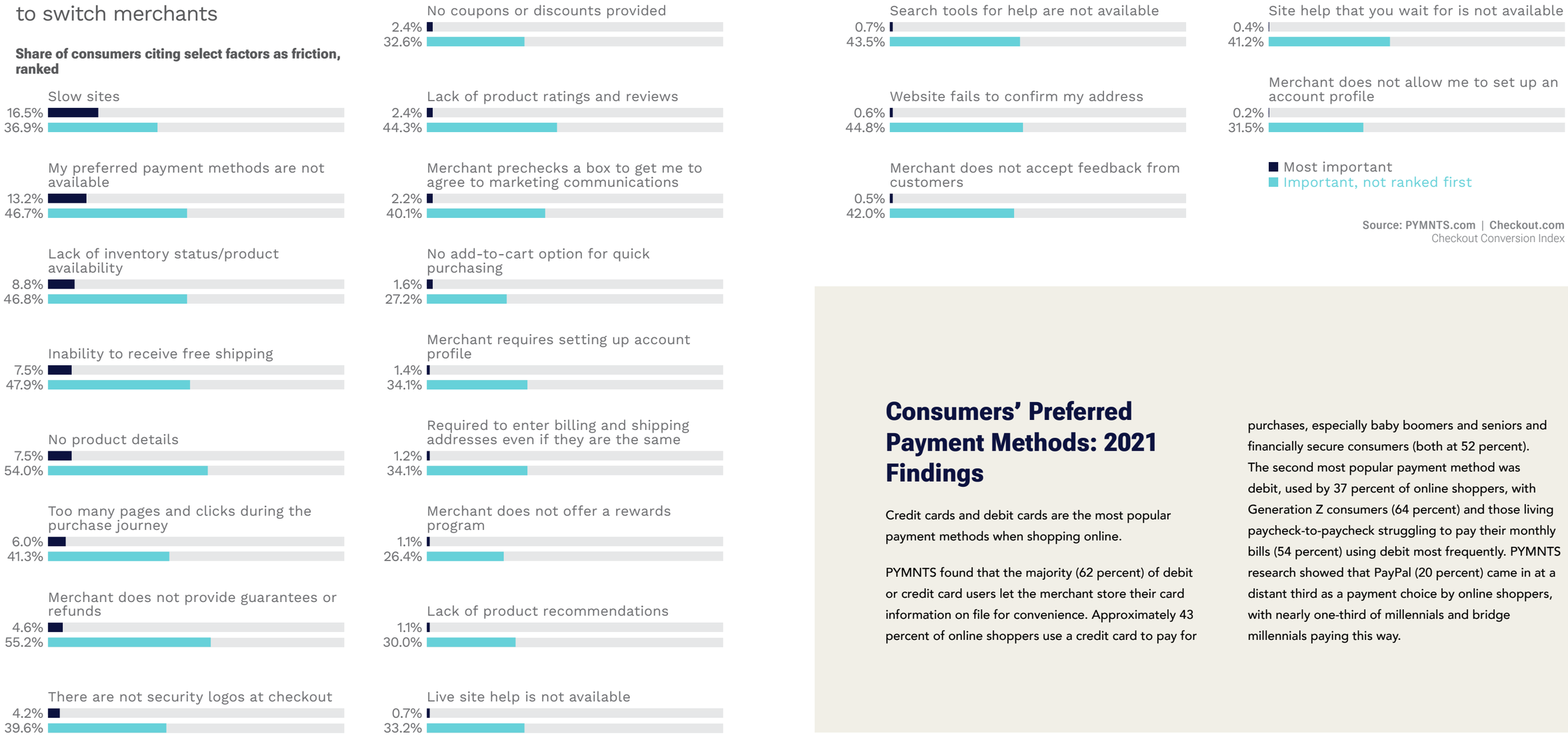
But that's just for those consumers who bail at the checkout page.

PYMNTS research also found that consumers might not even get that far if it isn't clear that what they want to buy is in stock (47%), or that the method of payment they want to use is accepted (also 47%). Importantly, the study finds that whether the merchant offers product guarantees or has a clear and acceptable returns policy could compel more than half – 55% – of consumers to switch. Having to pay for shipping is why 48% of all consumers in our study would shop with another online merchant that offers free shipping.

I think we're all clear on the names of the merchants that do. And it should be quite clear that the future of retail, as defined by so many consumers who now shop online, is about logistics – about the right product being on the virtual shelf to buy, with the ability to get it delivered the next day or two days later, for free. It's also an area ripe for disruption and innovation, as new players build platforms to unlock the untapped capacity of airline passenger cargo, and the idle time of independent delivery drivers to reduce the cost of the last mile for online retailers whose names aren't at the top of the free shipping list today.

FIGURE 9:
Factors that can drive consumers to switch merchants

Share of consumers citing select factors as friction, ranked



Source: PYMNTS.com | Checkout.com
Checkout Conversion Index

Consumers' Preferred Payment Methods: 2021 Findings

Credit cards and debit cards are the most popular payment methods when shopping online.

PYMNTS found that the majority (62 percent) of debit or credit card users let the merchant store their card information on file for convenience. Approximately 43 percent of online shoppers use a credit card to pay for purchases, especially baby boomers and seniors and financially secure consumers (both at 52 percent). The second most popular payment method was debit, used by 37 percent of online shoppers, with Generation Z consumers (64 percent) and those living paycheck-to-paycheck struggling to pay their monthly bills (54 percent) using debit most frequently. PYMNTS research showed that PayPal (20 percent) came in at a distant third as a payment choice by online shoppers, with nearly one-third of millennials and bridge millennials paying this way.

STARTING AT THE BEGINNING.

It isn't all bad news.

Eighty-eight percent of consumers who shop online report being mostly happy with the online experiences across all of the merchants they shop. PYMNTS' analysis of the top-performing merchants in PYMNTS' online portfolio – across merchants of all sizes and all segments – suggests that they are in sync with what their online shoppers want. These online merchants seem to have skipped ahead to the ending of the story and integrated the features all along the shopping journey that consumers report are key to making an online purchase and remaining a loyal customer.

Perhaps the most notable improvement is in the area that is, in the end, central to checking out – how consumers pay for what's in their shopping cart. Analysis of the merchants in PYMNTS' online portfolio reflects an optimization of the checkout page for the payment methods that consumers want to use.

The bottom-performing merchants now offer more than six different ways to pay (up from five at the start of the year) and top-performing merchants offer roughly eight, down slightly from the last quarter. My interpretation of this finding is that instead of eliminating options, top-performing merchants are optimizing the payments mix to reflect what consumers use and might want to use to pay – including buy now, pay later options.

Of course, getting that far requires that shoppers like the journey itself enough to complete it, and then start another one with the same merchant.

As consumers live their lives in a more connected economy and conduct more of their shopping and transacting in that connected ecosystem, they will expect the experience to be more intuitive, personalized and tailored to their own individual shopping journey. They will expect that those ecosystems use technology to unlock the sources of value that improve checkout conversion because they remove the friction that consumers face – and largely endure – today on the way to checking out. A shopping experience that goes beyond the low-hanging fruit like integrating relevant offers and promo codes into the checkout experience without a consumer chasing them down, and reminding consumers along the way that free shipping comes with a minimum threshold (if that's the case) to avoid surprises – and cart abandonment – at the end.

This experience will use data and technology to personalize and unlock new sources of value – like making points and unused gift cards spendable, suggesting what payment options might offer the best value for a purchase, and showing consumers options for how and where they can get the most value for what they have to spend and what they want to buy.

An integrated commerce experience that starts with knowing why consumers won't buy in an effort to persuade them to do so – from you. A process that clues in the consumer at the start of the journey that they will like everything along the way, including the final checkout page.

Unlike readers of books, consumers can't start at the end, so they need some help to make sure that by the time they get there, they not only like the ending but are glad they started the story – and tell all their friends.

DAVID S. EVANS

OCTOBER 4, 2023

HOW NETFLIX SHOWS THE IMPORTANCE OF GETTING INNOVATION'S TIMING RIGHT

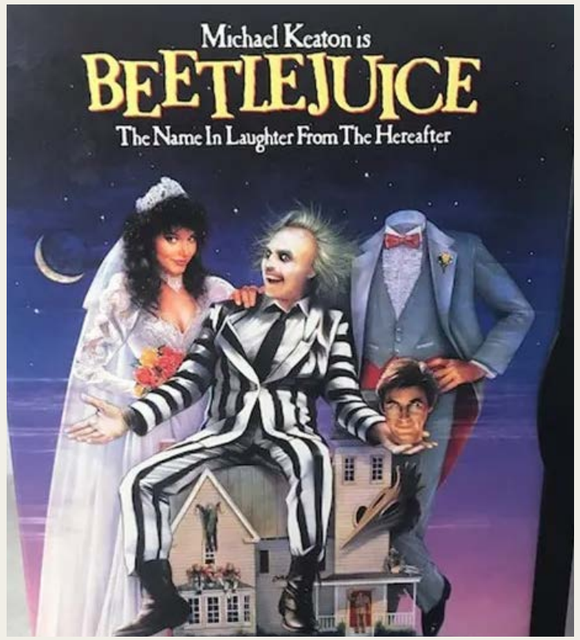
There Are Ghosts, of Course

A bit more than 25 years ago, on March 10, 1998, Netflix shipped its first DVD, "Beetlejuice," about two ghosts played by Alec Baldwin and Geena Davis. Last Friday, more than 5.2 billion DVDs later, it shipped the last one. Netflix is all in on its pioneering streaming subscription service, which it launched in 2007 at the start of its second decade in business.

These disruptive innovations in the media business owed a lot to timing.

When Netflix started, people trekked to their local video store to get bulky VHS tapes and went back again to return them. Customers paid hefty late charges if they didn't get them back on time. Given their size and fragility, starting a mail-order video company with VHS would be tough. But along came DVDs. The players began selling in March 1997 and were rapidly adopted by households. Netflix saw the opportunity to create a mail-order subscription business that sent out slender, durable DVDs and customers could just pop them in the mail to return them.

Netflix could have launched — also, or instead of — a streaming service. RealPlayer launched a couple of years earlier, making it possible to watch videos over the internet. If Netflix had, it would have been a bust. Most people were using slow dial-up modems and broadband speeds were slow.



Fast forward to 2007 and more households had broadband connections; by 2009, about 40% had Wi-Fi networks. Slow by today's standards but wicked fast compared to dial-up, it was possible to enjoy movies streamed over the internet. Broadband speeds grew rapidly as did its uptake, making high-quality streaming available to most households.

Netflix placed a huge bet on streaming. It paid upfront for rights to stream a large catalog of movies and television shows in the US. "The Field of Dreams" — build it and they will come — worked and the rest is history.

Its mail-order DVD innovation is widely credited with helping put physical video stores like Blockbuster out of business. However, its streaming innovation was far more important. By itself, and through follow-on entry by players such as Prime Video, Netflix led to the nosedive in cable subscriptions, emptied movie theaters and changed many of the business dynamics of producing and monetizing television and movies.

Today, Netflix has a market cap of about $170 billion.

IT'S ABOUT THE TIMING

Some entrepreneurs may just, like the proverbial Apple falling on Isaac Newton's head, come up with a brilliant idea and run with it. Most are in the business of searching for the next great opportunity. As are wannabee innovators at large companies. If you want to succeed at that, you have to get the timing right.

That's particularly true for digital businesses who depend on complementary technologies being developed or being far enough along, to make profitable ignition and growth possible.

Or who require changes in customer behavior that they can't force themselves.

That requires knowing not just whether a complementary technology will be developed or customer behaviors will change but when and how rapidly.

That was not so hard for Netflix when it started. The DVD player and discs were introduced in Japan in 1996 and were launched in the US in 1997. By 1999, it was reasonably clear the sleek players and capacious CD-like discs would displace bulky VHS players and tapes.

It was also obvious that streaming was not ready for prime time. It would take years for cable systems to lay broadband and for households to adopt it. Transmission speeds were low and latency high. But technological progress in broadband and investment decisions by cable companies also made it clear that there would be a future in streaming.

IN 1995,

RealNetworks launched its innovative media player, making it easy for people to stream audio and video over the internet. And it started a music and video content business at the end of 2001. There was nothing wrong in doing this, given the business they were in. But the timing worked against them. And the 2000s became the decade of the iPod and iTunes. Today, the market cap of RealNetworks is about $35 million, down from a post dot.com crash peak of $1.8 billion in November 2006.

Ultimately, Apple got the timing wrong, too, by not recognizing the power of streaming music over mobile devices with fast mobile and fixed broadband speeds. With iTunes on the rope, because of Spotify and other streaming music providers, it launched its own streaming service, Apple Music, in 2015.

Apple did OK.

The digital transformation is littered, however, with failed or shriveled companies whose principal failing is getting the timing wrong and being too early to the party. Or too late.

Managing Complementary Inputs in the Face of Dynamic Competition

Sometimes, no one's to blame for getting the timing wrong.

Before 2007, it was possible to predict that smartphones would get much better and benefit from the widescale deployment of 3G networks. Even Google, working intensely on launching Android, was dumbfounded when it saw the iPhone. Once iPhones and recalibrated Android phones became widely available, a number of startups that could have made sense, didn't anymore. A new set of entrepreneurs seized on the new smartphones and their app development platforms to make disruptive innovations, with Uber being one of the most successful.

But there's a lot the entrepreneurs, corporate innovators and investors can and should do before placing a bet on a new product or service, particularly digital ones.

The starting point is identifying dependencies on other products and services. These could be inputs that you need to provide the product or service to customers, complementary products that customers will need to have to make your innovation valuable to them, or customer behaviors that need to be acquired to a substantial degree for your innovation to succeed.

When it started, Netflix needed the DVD format to make its mail model work, but it also needed a reliable and reasonably priced postal service, and customers used to viewing videos at home.

Then, the question is whether, when, and to what degree markets will cooperate to provide fertile ground. In some cases, the dependency is where at or close to where it needs to be — the DVD player has launched, and people love it.

In other cases, it is enough that technologies have been developed and investments made to provide confidence that conditions will be fertile or soon after launch. Netflix could have started thinking seriously about launching a streaming service by the mid-2000s.

INVESTMENTS IN ONE

of the most important innovations of modern times were based on looking at what was in motion. In the early 2000s, it was clear that most people would get mobile phones. The adoption rate was high, and the devices were obviously valuable to people. As importantly, it was easy to forecast that people would have access to very fast, capacious mobile broadband.

The standard development organizations responsible for developing the next generation of mobile phones (2G, 3G, etc.) outline the goals about a decade before launch. Along the way, it becomes well-known what the speed, latency and other features of the next mobile phone network would be. It is also reasonably predictable that mobile carriers will build faster networks not too long after the development work is finalized.

Apple, Google, Microsoft and others knew in the early 2000s that most people would soon have access to 3G cell networks and that by the early 2010s, mobile carriers would likely roll out 4G networks. Then, people could have a fast, capacious computer in their hands anywhere and anytime.

Do You Have Enough Time?

There's another important dimension of time that startups and large firms need to consider when they launch what they believe is an innovative product.

Instant successes are rare. It usually takes time for new technologies to get to the point where they can be broadly adopted or for enough customers to embrace them to provide critical mass for profitable ignition and growth.

During that time, others are likely to be chasing the same dream based on similar or different foundational technologies and dependencies. I explored this issue in my article, Can Crytpo Fix Itself in Time? I pointed out that public blockchains, such as Bitcoin and Ethereum, have a lot of technological and governance problems that need to be fixed for them to provide fast, scalable and robust networks for payments or other transactions. It would take time to do that. Or for better blockchains to get critical mass to provide alternatives. But the world isn't standing still—lots of other players, including FinTechs and firms relying on private blockchains, are pursuing some of the same dreams without the same baggage.

Timing Isn't Everything

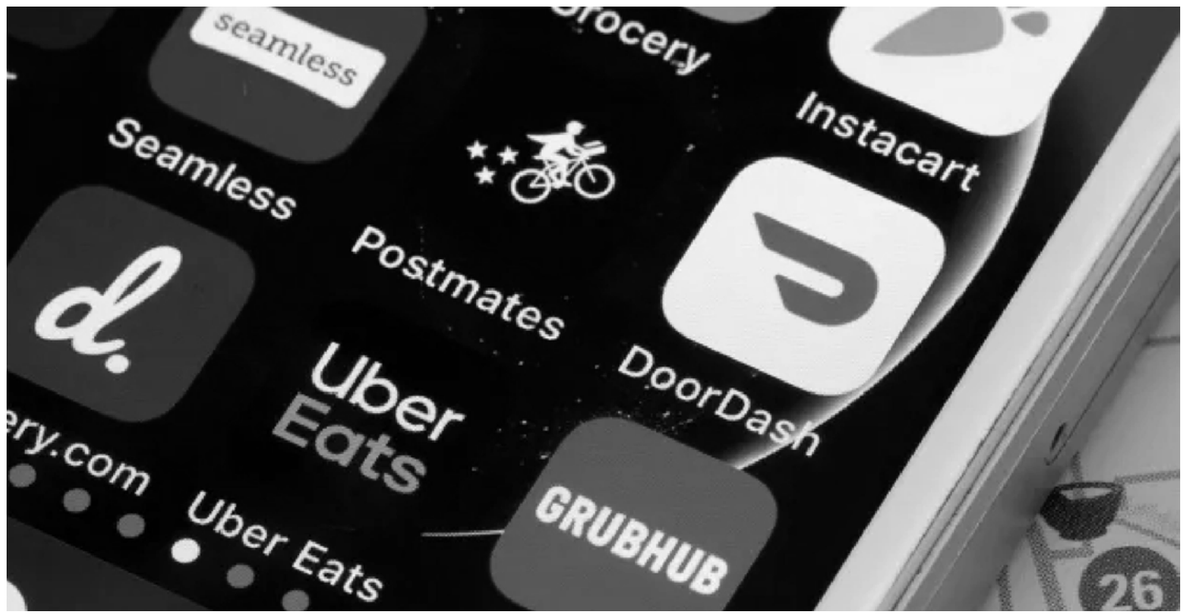
Timing, of course, is important, but it isn't everything. Getting the timing right is often a necessary condition for success. But then it is about having a great product, the right prices, a sound ignition strategy and a solid execution. A bit of luck doesn't hurt either.

David S. Evans is an economist who has published several books and many articles on the technology businesses, including digital and multisided platforms, including the award-winning *Matchmakers: The New Economics of Multisided Platforms*. He is currently the Global Leader for Digital Economy and Platform Markets at Berkeley Research Group. For more details on him, go to davidsevans.org.

DAVID S. EVANS

NOVEMBER 16, 2023

PLATFORM ECONOMICS: HOW INSTACART LEVERAGES TIME INTO PROFITS



Time is our most precious asset. Each day, we get just so much. Twenty-four hours, 1440 minutes, 86,400 seconds. If we don't use it, we lose it. We try to make the most of it. We can do lots of things with it and increasingly do many things at the same time. When we are born, we are endowed with a lot of time, perhaps up to 120 years — more than a million days — though few of us will make it past 100.

If you can figure out a way to save people time, so they can use it for something better or devise a way to give people more time by preventing death or extending life, you have the makings of a fortune.

Instacart Makes Profits From Time

In May 2020, a couple of months into the pandemic, I went to my local Whole Foods, where we did most of our grocery shopping, masked up. By then, Whole Foods had a policy of limiting the number of shoppers in the store to reduce risk. Sadly, they had already lost one employee to COVID-19. Shoppers

queued up to get into the store as others left. That day, the line was long, and it was clear this was going to be a time suck.

Like many of you, I decided to try Instacart despite having had bad experiences with other grocery shopping apps over the years.

This saved me a lot of time. It helped me avoid the risk of getting COVID-19 and losing the rest of my time.

Instacart is one of many innovators that have built valuable businesses off of time.

TIME IS MONEY,

but How Much?

Economists have developed clever ways of estimating the value that people place on their time. These estimates provide insights into the value of innovations that save or preserve time and the profit potential from these innovations.

Economists value time by looking at how much people have to be paid to give up time, say, for work. Or by how much people will pay to save time, say for a faster commute. These aren't ivory-tower exercises. They now drive federal cost-benefit analyses of new programs, regulations and spending.

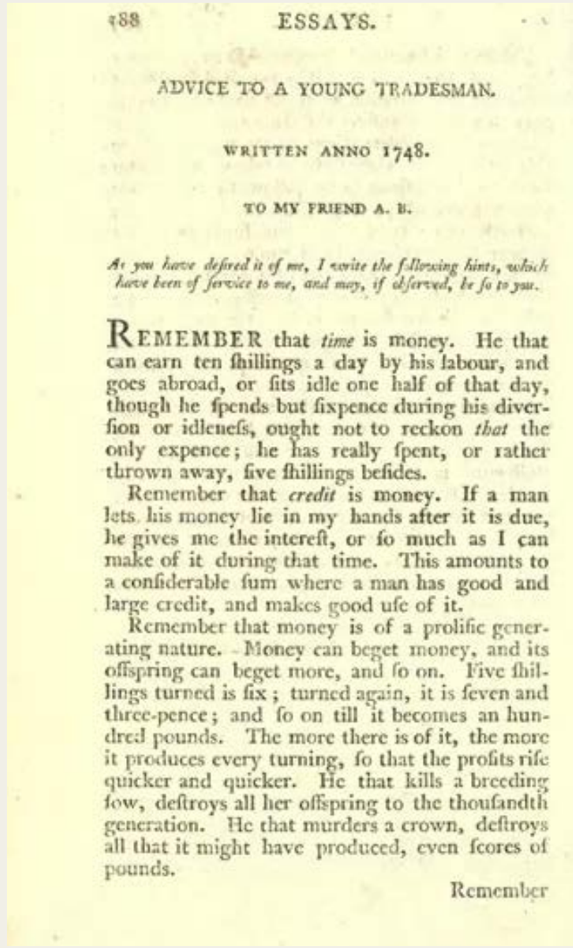
The simplest approach is based on looking at how much people have to be paid to work. The basic idea goes back to, at least, Benjamin Franklin.

"Remember that Time is Money. He that can earn Ten Shillings a Day by his Labour, and goes abroad, or sits idle one half of that day, tho' he spends but Sixpence during his Diversion or Idleness, ought not to reckon That the only Expence; he has really spent or rather thrown away Five Shillings besides."

A person could go to the beach or do some chores around the house instead of working another hour.

If they are willing to take $20 to work an extra hour, say for a gig job, then that must be more than the value of the hour doing something else. That wage-hour tradeoff is hard to identify in practice because many people have salaries or must work a fixed number of hours. Economists have found that the after-tax average wage rate is a good proxy for the value of time for the average person. Zip Recruiter says that was $26 in 2022. (Sounds about right. I did a careful calculation for my work on attention markets and found that it was about $19.65 in 2018).

The most extensive estimates of the value of time come from studies that look at the choice of different transportation methods. The U.S. Department of Transportation did a survey of these studies. Based on them, USDOT recommended using $13.60 for local personal travel and $19 for intercity personal travel based on 2015 earnings for the average person.



388 ESSAYS.

ADVICE TO A YOUNG TRADESMAN.

WRITTEN ANNO 1748.

TO MY FRIEND A. B.

As you have desired it of me, I write the following hints, which have been of service to me, and may, if observed, be so to you.

REMEMBER that *time* is money. He that can earn ten shillings a day by his labour, and goes abroad, or sits idle one half of that day, though he spends but sixpence during his diversion or idleness, ought not to reckon *that* the only expence; he has really spent, or rather thrown away, five shillings besides.

Remember that *credit* is money. If a man lets his money lie in my hands after it is due, he gives me the interest, or so much as I can make of it during that time. This amounts to a considerable sum where a man has good and large credit, and makes good use of it.

Remember that money is of a prolific generating nature. Money can beget money, and its offspring can beget more, and so on. Five shillings turned is six; turned again, it is seven and three-pence; and so on till it becomes an hundred pounds. The more there is of it, the more it produces every turning, so that the profits rise quicker and quicker. He that kills a breeding sow, destroys all her offspring to the thousandth generation. He that murders a crown, destroys all that it might have produced, even scores of pounds.

Remember

THE VALUE

of time depends a lot on the situation, so it isn't possible to come up with a "single" estimate even for an individual. An hour of work may be more or less pleasant. I can listen to the radio in the car or on my smartphone on the subway, so the time isn't all wasted. I think most people hate standing in line at checkout, so that wasted time is really costly.

As imprecise as they are, these estimates are much better than nothing. Take a typical case where they are being used. The federal government is considering investing your tax dollars in faster trains. They should factor in the value of time that citizens will be saving as a result. Maybe the investment is worth it, or maybe not, but it is hard to know without valuing the time.

Economists estimate the value of time for particular activities using surveys and other data, and these can inform business decisions on pricing and the ROI of time-saving products and services.

The Time of Your Life

Part of my decision to pay for using Instacart was based on avoiding risky physical contact during the height of the pandemic. I didn't want to lose the rest of my precious time. Like all of us, that meant that I needed to make a tradeoff between the value of life and money. Economists have used that insight to estimate how much people value their lives in the sense of not wanting to risk losing the rest of their time.

People make many decisions, just like the one I made, that result in small changes in the probability they may die. Often, these involve making tradeoffs between money and risk. They can, for example, pay extra for a safer car with lower fatality rates in crashes or take a job that pays more but poses a great risk to their lives. Economists have conducted scores of studies that estimate the implicit prices for the risk of dying.

Many of the studies, and the most robust, are based on looking at job decisions. The government collects and reports data on the risk of job-related fatalities across occupations and industries. It turns out that there is wide variation. A person is much more likely to die from working in construction than in an office. Economists would expect employers to pay people more to take on riskier jobs.

People would sort themselves into jobs based on their personal tradeoffs between money and risk. You may scoff that people behave so rationally, but it turns out massive amounts of data, collected over many years, based on several different methods, and in many countries confirm that people really do.

Economists have used data on occupational wages and fatality risks to estimate how much more people are paid for taking on greater risks of dying. The estimates vary over time as a result of inflation and increases in income. A review, based on 2017 data found that an employer would have to pay a typical worker another $100 a year to take a job where 1 in 100,000 workers die as a result of that job in a year. To summarize these results, economists calculate the "value of a statistical life" as the total amount of money that a group of people would pay to avoid one death among them. The answer is around $10 million. The U.S. Department of Transportation used $12.5 million for the value of statistical life in 2022.

These estimates are for the average person. A young person can expect to have a lot more time remaining than an older person. Another study found that, with an average value of statistical life of $11.5 million, twenty-somethings valued their remaining time at $16.1 million, those in their 50s at $10.3, and ones in their 70s at $3.7 million.

Don't be offended by these numbers. Yes, life is priceless, especially yours. The reality, however, is that people take their chances at the right price and pay money to increase their odds. And it all comes back to how people value their most precious asset — their time.

The Business and Profits of Time

I recently wrote about how friction fighters can make a fortune by identifying frictions in exchange and building businesses that solve them. Many frictions involve people or businesses having to invest their time in everything that goes into buying and selling.

Entrepreneurs and corporates can identify potential innovation opportunities by identifying these frictions and assessing the value of time they could save. With the right innovation and execution, big-time savings lead to big profits.

Instacart was hardly the first in the online grocery ordering business, but it became a winner by doing a better job of eliminating frictions and making the best use of time — and getting lucky from our misfortune.

Instacart's success depended on whether it could get households to order their groceries online and have them delivered rather than going on a shopping trip. To reach critical mass, it had to convince enough people to spend extra to save the time and hassle or going to the store for some of their shopping trips. Simultaneously, it had to persuade enough people to spend their time using its gig delivery app to shop and deliver those groceries.

It arbitraged the value of time between households and gig workers. It did well enough to sell more than $7 billion of groceries in 2019. Investors valued the company at almost $8 billion at the start of 2020.

However, that $7 billion of grocery sales was just slightly more than 1% of all grocery sales, and sales weren't growing rapidly. A big problem was inertia. People were just used to going to the supermarket and hadn't had much incentive to try online ordering.

THAT'S

where luck, misfortune, and the value of life came in.

Shopping at the supermarket or doing other things where people came into contact with others was like taking a risky job. People in their 40s had a 12 in 100,000 chance of dying from COVID-19, while those in their 50s had a 29 in 100,000 chance, and that risk rose exponentially from there, as many of us with aging relatives sadly know.

Consumers had new incentives to check out Instacart. COVID solved the inertia problem (watch for my upcoming post on inertia) for this multisided platform and helped spur its rapid growth. Of course, when the risks of COVID diminished, the value of using Instacart for life-preserving declined, which not surprisingly resulted in some people switching back to physical stores.

Instacart sold $29 billion of groceries in 2022. It fulfilled 263 million orders for households. If we take Instacart's estimate that they save an average of 1.4 hours and assume that the average consumer values their time at $20 an hour, then Instacart saved its customers $7.4 billion in 2022. It would be more if we accounted for couples who shop together.

Almost everything that Instacart does — from its back-end computer systems for supermarkets to its delivery gig business — is ultimately done to save households time.

They wouldn't get many orders if they didn't save time.

At one level, Instacart is a successful online grocery ordering business. Still, at another level, it is a successful time-saving business that got a kick-start from its opportunistic time-preserving business.

Look carefully, and you'll see lots of other businesses whose valuations and value to customers are based on saving or preserving time.

To find those opportunities, entrepreneurs and corporates should prospect for frictions that suck up a lot of time. And look at the increasing opportunities for innovations that preserve or extend our time.

David S. Evans is an economist who has published several books and many articles on the technology businesses, including digital and multisided platforms, including the award-winning *Matchmakers: The New Economics of Multisided Platforms*. He is currently the Global Leader for Digital Economy and Platform Markets at Berkeley Research Group. For more details on him, go to davidsevans.org.

CASE STUDIES: WHEN BEING FIT MATTERED AND WHY

Karen Webster

SEPTEMBER 14, 2020

WHAT INNOVATORS CAN LEARN FROM NETFLIX

Netflix **Co-founder and CEO** Reed Hastings **has written a** new book **about building the video-streaming powerhouse that now has nearly** 200 million subscribers **globally, as of the end of July. In the book, he** freely admits **that his formula might not work for every company.**

But the one thing that might work is taking a page from the innovation playbook that Netflix seems to have written and followed over the last 22 years.

It's the playbook on using technology and a new business model to turn something *that consumers didn't really want to do* into something *they no longer had to do*, while getting the same — or an even better — result.

For anyone seeking inspiration on rethinking their business and better serve their end customers in the face of, or despite, the global pandemic, they might want to consider that outcome as their innovation "North Star."

'I Don't Want To, But I Have To'

If you wanted to be among the first to see the sequel to the 2000 movie blockbuster "Meet the Parents" starring Robert DeNiro, Ben Stiller, Barbara Streisand and Dustin Hoffman, you had one and only one choice: stand in line at a movie theater ticket window, buy a ticket, load up on popcorn and soda and Junior Mints, and take a seat.

The sequel, "Meet The Fockers," released in December of 2004, was among the top-grossing films of 2005. It is also pretty hilarious. Watching it at home in the comfort of the living or family room wouldn't be an option until nearly two years later: August 22, 2006 when the DVD was finally released.

That's pretty much the way movies and DVDs rolled out for the better part of the early to mid-2000s.

Studios didn't release popular films like "Meet the Fockers" on DVD until 12 to 16 weeks after they had premiered in movie theaters. For popular first-run hits, the studios would drag it out much longer to maximize box-office sales and profits.

Netflix was founded in 1998 to give consumers a mail-order alternative to schlepping to video rental stores to get their videocassettes and, soon, their DVDs. The growing popularity of DVD rentals in the early 2000s introduced more competition into the market, making them more affordable for more consumers. That, in turn, increased demand for more DVD titles to satisfy the consumer's desire for watching video programming at home. At their peak in 2005 DVDs were a $16.3 billion business, representing 64 percent of the home video entertainment market.

In 2007, Netflix introduced streaming services to further scratch that consumer itch.

AS MORE PEOPLE

had fast broadband connections at home, the popularity of this new "video on demand" service increased. Apps on mobile phones and tablets with 4G connections introduced even more flexibility to consumers to watch movies and other video content anywhere they wanted.

Between 2008 and 2019, the DVD rentals market dropped like a stone. In 2010, Blockbuster declared bankruptcy, a decade after famously telling Netflix, which then had $5 million in annual sales, to get lost when they suggested that Blockbuster buy them.

In 2017, Netflix was reported to have had as many U.S. subscribers as cable television, covering 73 percent of the country's households.

In 2020, movie studios, motivated by the pandemic's hit to movie theatre attendance and the hockey-stick growth of streaming subscribers, reversed a decades-old rule that now only gives movie theatres 17 days, or three weekends, of first-run movie exclusivity, down from what was once a three-month head start.

Since January of this year, Netflix has added roughly 26 million new subscribers to its platform, globally, and 10.1 million in the April to June timeframe alone.

Netflix is the story of the classic, but the always so-much-harder-than-it looks, ignition strategy, laid out over more than two decades. A combination of forces — Netflix's own content and technology innovations and advances in hardware and software — helped them consistently attract more eyeballs. And those eyeballs helped Netflix buy more content — and more content helped get even more eyeballs. Cheaper and higher-quality HD flat-screen TVs, the near-ubiquity of fast broadband at home, and powerful tablets all turbo-charged consumer adoption and usage over time.

A LOT

has happened over the last 20 years to give consumers more ways to watch movies in the comfort of their own homes while giving content producers more incentives to offer consumers more choices about what to watch.

Today, consumers can pop open the Netflix app on one of the many connected devices that are now in the hands and the living rooms of almost every person and household in the U.S. — and a growing audience in every other part of the world — and binge-watch whatever they want.

Netflix the platform became the catalyst for a powerful yet subtle shift in how people could consume video content. They turned something *that consumers didn't really want to do* (go to the DVD rental store) into something they no longer had to do, while still getting the desired (or even better) outcome.

'I Don't Have To, But I Want To'

Over the last five years or so, we've seen confident, employed consumers in a very strong economy shift how they spend their money. Money spent on things gave way to money spent on experiences: going out to eat, traveling, going to concerts and other live events.

Those experiences didn't fall into the bucket of things consumers had to do, but what they wanted to do — and do with their families and friends. The experience was the product, and consumers were all in.

Until March of 2020.

The pandemic has largely put a pin in most, if not all, of those activities.

Take eating out in a restaurant.

When the physical economy locked down, so did restaurants. Sales plummeted, and many restaurants reported losing 80 percent to 90 percent of their sales overnight. They scrambled to offer takeout and curbside pickup to get some sales in the door.

Four times as many consumers used an aggregator to order food from a restaurant at the end of August than they did in March — but most will tell you that it's no substitute for the experience of being at a restaurant and eating that same food.

The one thing PYMNTS has heard consistently in the 10 studies of a national sample of more than 25,000 U.S. consumers, which have been conducted since March 6, is that consumers want to go back to eating at restaurants. As a close second to seeing family and friends, more than three-quarters of consumers consistently say that going to a restaurant is the physical-world experience they miss the most.

Not surprisingly, innovators are hard at work devising digital-first experiences for consumers making their "don't-have-to-but-want-to" decisions about going back to a restaurant, with the impact on their health an important driver of those decisions.

QR codes in restaurants, which show menus and put ordering and payment into the hands of consumers, have eliminated the need to touch a menu or the check in the plastic billfold that once defined the checkout ritual at the end of every meal.

Socially distant settings in largely outdoor dining areas have helped mitigate consumers' fears about the virus and brought consumers back to restaurants. Eager to break their quarantine routines, consumers are filling restaurants to whatever capacity they can accommodate, according to the requirements of the states in which they operate.

The question now for consumers, innovators and restaurant operators is whether this digital-first technology is enough to get the "don't have to but want to" consumer back into their regular Friday and Saturday night dining-out routines.

Just like ordering food from a restaurant isn't the same as eating it in the restaurant, neither is eating in a restaurant where the dining experience is now defined by COVID-protocols, many say.

Part of the dining-out experience is the experience: the vibe of a crowded, bustling restaurant scene, often with patrons crowded around the bar. It's a vibe that's impossible now with current capacity constraints.

Many COVID protocols also make the dining experience itself very different — bare tables, more restricted waiter/diner interactions — so that the ambiance-inspiring artifacts that consumers once enjoyed are no longer part of it.

As cooler weather makes outdoor dining less of an option — and the CDC has recently cautioned consumers that indoor activities, like eating in restaurants, carry a higher risk of being exposed to the virus — it's hard to know how or when consumers may feel comfortable, digital-first technology options notwithstanding, with getting back into their pre-COVID restaurant routines.

Dining out, though, is just one example of the consumer's "don't have to but want to" activities that brands can meet with digital-first solutions to keep consumers engaged.

Traveling, going to live concerts or attending sporting events are also areas where we've seen innovation emerge to meet consumers in their digital-first bubbles. Fortnite now hosts concerts inside of its gaming ecosystem. Live sports are still being played, but to a virtual and not physical audience. Consumers are buying or renting RVs or packing the kids in the car and traveling, while sticking close to home instead of flying on airplanes to faraway places.

Using innovation to move consumers more into the "want to" camp comes with a unique set of challenges, some easier to overcome than others. Consumers can still satisfy their wanderlust and get out and see new places. They can still watch the Pats on TV, like many of them always did. Piped-in fan cheers and field noise — and few shots of empty stadium seats — doesn't really degrade the home viewer's experience.

In other cases, like eating in a restaurant, digital is an important enhancement to, but not a substitute for, the experience that the consumer really, really wants to have.

And let's face it: For many physical activities that people didn't have to do, but wanted to do, it's been very hard to come up with solutions that make them want to nearly as much. And that's been a real drag on the economy, with no apparent solution absent a vaccine or other consistently implemented safety measures, which do not appear to be on the near-term horizon.

'I Have To, But I Don't Want To'

Here we are in September of 2020.

Walmart is testing the drone delivery of packages weighing less than 6 pounds into consumers' backyards.

Consumers can buy cars online and have them delivered to their driveways without ever talking to a car salesperson or going to a dealership to sign paperwork.

Sellers from anywhere in the world can list products on dozens of online marketplaces and reach new customers who would never find them any other way.

Consumers need a paper cashier's check for real estate closing costs.

What's wrong with that picture?

In the days before COVID-19, going to the bank to get a cashier's check to cover closing costs was always inconvenient, but was the means to an important end. Consumers may have grumbled, but they always made the time, went to the bank and got it done as instructed.

In the throes of a pandemic, the paper cashier's check is an example of unnecessary, time-consuming friction. Did I mention, unnecessary?

Of course, with enough digging around and persistence, banks may offer to process a wire to arrive the day before closing, but at a price. The bank that a colleague interacted with last week charged him $30 to send a "wire" from his account to the lender's account, which happened to be at the same bank. The funds were guaranteed to arrive before 3 p.m. the day before closing (which was at 4 p.m.), but not instantly.

HE SAID

he was more than happy to pay that fee, since it avoided what would have become an hour-long excursion to and from a branch to get that quaint paper artifact. The local branch near him was closed, so he would have had to drive much farther to a nearby town to complete that transaction.

Keep in mind: All the lenders cared about was making sure they had their money before signing on all of those dotted lines. They didn't much care how they got it.

A lot of consumers probably would have put on their masks and spent the time to hoof it to and from the branch to get a cashier's check. Maybe they didn't know they had an option (it took digging to find that option for that bank, I am told). Maybe they weren't sure the money would get there in time, or maybe they didn't want to spend the $30 required to process an electronic payment.

This is just one example of the "have to but really, really don't want to" category of activities that are ripe for innovation — and in need of digital-first solutions that satisfy all stakeholders.

In some situations, the absence of suitable digital-first solutions carries far greater consequences than spending a few hours trekking to and from a bank branch.

As we saw over the course of the pandemic, and even now, consumers who needed to see a doctor, didn't. Telehealth usage is up, but many patients remain concerned about going to the doctor's office for routine visits or to treat something more severe. As further evidence that consumers aren't going to the doctor, there are unspent balances in many HSA accounts. As doctors report, it isn't that people aren't getting sick or having strokes or heart attacks or other serious medical problems — they just aren't seeking treatment.

CONSUMERS WHO HAVE

to pay for their purchases in the store don't want to use cash, nor do they want to touch a terminal in any way. Not all consumers have contactless cards or feel comfortable using digital wallets to pay. Innovations such as online ordering for curbside pickup and QR codes for in-store checkout give consumers payment options that give them more control over their experience. It also keeps them from doing something they increasingly say they don't want to do: Go into stores to buy retail products. Nearly two-thirds of consumers still say that going into the physical store to shop makes them uncomfortable due to fears of being exposed to the virus.

Businesses don't want to be paid by check any more than buyers now want to send those checks. Moving money efficiently between accounts has been technically possible for a very long time — yet checks were easy for senders, and so receivers took them to get money in the door. The popularity of virtual cards has soared over the course of the pandemic, as both buyers and suppliers seek certainty around cash flow and the ability to move detailed data with the money being sent and received. Flexibility around terms and working capital now provide even more incentives for each side to get on board.

What makes many of these "have to, don't want to" situations so interesting is that they are rife with inertia — the sacred cows that have stuck around for years or more just because the status quo was familiar, and change seemed hard.

Yet, as the pandemic has exposed, it's also where the opportunity for digital-first innovation can be so profound.

Getting FIT® to Innovate

Two months ago, I first introduced the FIT® framework to provide insight into why consumers' and businesses' shift to digital has been so sharp over the course of the pandemic — and why so much of that shift seems so permanent.

The FIT® framework examines and quantifies the three vectors that influence the trajectory of innovation one way or the other: Friction, Inertia and Time.

In the case of the pandemic, given its unexpectedly long duration, consumers and businesses have become highly motivated to eliminate the friction of doing business in the physical world with physical payment methods and manual and paper-centric processes. They knew they lost a lot of valuable time as a result of that friction – but it was a hassle to go to the trouble of establishing digital accounts, methods and processes. That created inertia: They wanted to move, but just couldn't get over the hump. But keeping consumers and employees safe from being exposed to the virus, and mitigating the impact to business operations that paper-based methods introduced to a distributed workforce, got them over the hump — it countered that inertia.

The longer the pandemic remains — which, according to the latest PYMNTS consumer and small business research, could be until the end of summer 2021 — the less likely that consumers and companies will go back to the old ways of doing business.

Thinking that inertia will work in reverse means ignoring the reality of the jump discontinuity that the pandemic has created — and the new, digital-first path that consumers and businesses are now traveling.

The Netflix Innovation Inspiration

We've observed a rapid rise of innovation over the last six months, in an effort to help businesses of all types and sizes navigate the devastating impact of the pandemic.

Much of that innovation has been critical to keeping businesses operating by introducing digital into experiences that were once largely physical in some way.

Six, now going on seven, months into the pandemic, it's time to shift focus, and to take innovation up a notch or three by examining how the FIT® framework can help turn the things consumers don't want to do, into the things they no longer have to do to get a better outcome.

Eliminating friction and saving time, of course, is what all innovators strive to do; it's table-stakes for any successful company and essential for any platform worth its ignition strategy. But overcoming inertia is the hard part.

Introducing digital-first experiences to consumers and businesses that have to, and want to, do things is relatively straightforward — and overcoming inertia is an obvious payoff for embracing a new experience. And in many areas, shifts to digital had already started and the pandemic fast-forwarded its adoption, like ordering groceries, teaching kids, buying cars and settling on homes online.

But where innovation has the potential to make its greatest impact is where Netflix showed us how to forge that path: turning a "don't want to" into "a don't have to" experience.

The pandemic has created a new opportunity to break the inertia that has held innovation hostage for so long.

Innovators have greater incentives now to make consumers and businesses want to use digital solutions for things they have to do but don't want to do, and for things they don't have to do but want to do. It's now up to innovators to find those opportunities for digital solutions — knowing that if they succeed, consumers and businesses, having overcome that inertia, will happily leave the status quo in the rear view.

Karen Webster

MAY 24, 2021

THE INSTACART WAY TO INNOVATING IN THE CONNECTED ECONOMY

Would you be surprised if I told you that as many U.S. consumers now order groceries online as order restaurant food online?

Don't be.

According to PYMNTS' latest national consumer study fielded earlier in May, which surveyed a representative sample of roughly 2,300 adults, 17 percent of all consumers reported using digital platforms such as Instacart to order and pay for groceries instead of going to the grocery store to buy food. That's a whisker ahead of the 16 percent of all consumers who reported ordering restaurant food online or from delivery aggregators instead of going into a restaurant to order and eat it. It's a statistical dead heat.

THESE SAME

consumers also report using these digital channels with about the same frequency.

Fourteen percent of consumers said they order groceries online once a month using digital platforms including Instacart, as well as grocery stores that may be powered by Instacart or grocery stores that offer their own online ordering options. Fourteen percent of consumers also report ordering food online, including from restaurant aggregators such as Uber Eats or DoorDash, once a month. Maybe not surprisingly, slightly more consumers order food from aggregators once a week (17 percent) than groceries (15 percent). Consumers are using digital grocery platforms a bit more to stock up, and are using food aggregators to order what is needed in the moment.

More importantly, out of the consumers who said they are simultaneously doing more in the digital world and less in the physical world when it comes to ordering and paying for their food, roughly 72 percent said they'll stick with some or all of these digital habits moving forward – even as the physical economy reopens.

Projecting our sample to the U.S. population, there are roughly 45 million consumers — we call then them digital shifters — at the tip of the connected "Eat" ecosystem spear. And this Eat ecosystem — how consumers buy and pay for their food and where they eat it — is quickly becoming one of the most fascinating case studies for how connected economies develop, compete and scale.

Think about this for a minute.

Just 15 months ago, nearly all of a consumer's grocery purchases were done in a physical store. And food ordered online from restaurant aggregators was a tiny sliver of food ordered online from restaurants.

As the economy reopens, platforms such as Instacart, Uber Eats, DoorDash and Grubhub are crafting strategies to preserve the digital ordering tailwind fueled by the pandemic. At the same time, traditional brick-and-mortar grocery stores and restaurants are evaluating the habits of their digital-first consumers, assessing their own digital capabilities and contemplating their options to blend digital with physical without losing control of their margins or their customers.

At the same time, consumers have a newfound appreciation for their time, and a new definition for what they consider to be a source of friction.

IN MARCH OF 2020,

shifting digital was more or less a false choice.

Restaurants were closed, and even as grocery stores remained open, going to one was filled with friction and consumers didn't feel safe shopping there. Instacart powered online ordering from the grocery stores where consumers shopped — or where they wanted to shop, but found to be inconvenient. The company hired an additional 300,000 shoppers to fulfill the demand and overcome the grocery store's inability to shift online without its help. Restaurant aggregators drove business to restaurants that were otherwise challenged to make sales and that had even fewer options to manage the logistics of delivery.

These digital platforms gave grocery stores and restaurants a digital-first boost by protecting the health of consumers and employees, who were able to interact with far fewer people and thereby reduce their exposure to COVID-19. Although there aren't any hard data to prove it, it is clear they saved lives and reduced hospitalization.

Yet what defined success for consumers, restaurants, grocery stores and digital platforms over the last 15 months will be different as we look ahead. As health risks fade, how consumers use these digital and physical channels in the future will be determined by how well each ecosystem participant manages the three things that shape consumer and business behavior: friction, inertia and time.

Grocery Shopping: No Longer A Necessary Friction

Not many people say they absolutely love their trips to the grocery store, especially if that trip includes having a couple of kids in tow. Whether you live in the 'burbs or the city, it is a schlepp to the grocery store — inconvenient and a big time suck.

Grocery shopping in the store is also not an activity that digital converts are eager to resume as the physical economy reopens, even though it remains the predominant way that consumers buy their groceries.

According to the latest PYMNTS consumer study, coming in at No. 9 on the list of the top 10 behaviors that consumers want to maintain as the physical economy reopens is going back to the grocery store to buy groceries. Nearly tied for fourth and fifth on the list is ordering groceries online to pick up curbside and ordering groceries online for delivery. (The top two behaviors they would like to maintain, in case you're curious, is buying retail products online and working from home.)

Digital platforms — the store's own or the more than 350 grocery store brands and 25,000 store locations whose online experience is powered by Instacart — have saved consumers' time and delivered a great user experience.

Shopping histories save ordering time. Instacart gives consumers the option to link their store loyalty programs to their account and store choice, so ordering from Instacart doesn't come with the expense of losing out on store loyalty points — and the store doesn't miss out on the chance to capture loyalty club consumer data or build an email list of those who shop with their store on that platform.

Instacart's ad platform gives brands the ability to promote their products and offer discounts to induce purchases. Some of those inducements subsidize free shipping if consumers spend a threshold amount with that particular brand.

The Instacart Effect For Supermarkets

Instacart eliminates the biggest grocery shopping friction of all: drive time to and from the store.

Stores that were on the consumer's grocery store wish list but were nixed because they were too far away are suddenly back in their consideration set. That includes a variety of regional brands, Costco and smaller grocery stores.

The consumer who has found and shopped these new stores and done so without the friction of actually going there is likely to stick with that choice for at least some of her grocery purchases — unless she's had a bad experience. And that's particularly younger consumers: According to PYMNTS' latest survey, 60 percent of millennials and bridge millennials reported that they will continue to use Instacart for grocery purchases because of the convenience and time savings.

These digital-first grocery shoppers may not abandon going to the grocery store at all, but will likely shift some in-store grocery store purchases to other online, direct-to-consumer (D2C) brands with a unique product or compelling brand proposition. Or they may shift to their local specialty food purveyors, such as their local butcher, cheese shop, specialty grocer or seafood shop. Or to Amazon's "subscribe and save" platform for the bulky products and essential staples that are just easier to buy online and have delivered in order to never be without.

ALL OF THESE

dynamics create a more competitive grocery market. Consumers have more choice, and grocery stores have more incentives to woo consumers from more and different rivals.

When the competition for the consumer's grocery dollars is any store — not just the stores that are convenient for a consumer to drive to, and not just the brands they always used to buy in those stores — grocery stores and brands will adapt. They already have.

Desirable delivery windows will become more available, and deliveries will be on time. Policies around substitutions will be clarified upfront to avoid disputes and improve client satisfaction. Communication between the shopper and the consumer throughout the shopping experience will become more interactive and specific to customer requirements.

Grocery stores will market heavily to consumers who shop their stores via the Instacart platform to induce them to shop directly with them, even though Instacart still powers their online and delivery channel. The economics are different for the consumer and the grocer in this scenario, since one of the ways Instacart makes money is by marking up the in-store prices. Brands will compete for the consumer's spend by making offers contextual and redeemable in real time.

But the consumer's digital shift also changes the dynamics of the grocery shopping ecosystem, as grocery stores want more feet inside their stores, and want more control of the economics of their digital channels.

The "Instacart effect" for the grocery store is navigating this new shopping dynamic without creating friction for the same consumer they want to attract and retain. A consumer who is used to a friction-free digital experience with certainty about what's in stock, choice in whether and what to substitute, and the option to shop the physical and digital store in the way that best suits their preferences in 2021. A consumer who has proven that she is willing to pay for the convenience of a better digital online grocery shopping experience. A consumer who says she's not that keen to shop for groceries the way she did in 2019.

Grocery stores now face a new decision-making dynamic, too — at the same time that their inertia for change has been lowered, and the inertia for consumers making another change is now higher than before, given their level of satisfaction with their digital-first alternatives.

It's also a decision dynamic made more complex for grocery stores as the shift from current legacy systems to a native digital ordering and delivery experience is a costly, time-consuming and potentially risky big lift for grocery store execs. As is the inability to use data to better understand the behaviors of the consumers who shop their physical stores, other than knowing how much they spend and which SKUs they buy.

And few good options have emerged. For the same reasons that grocery stores don't want Amazon managing the ordering and delivery of their groceries, neither will they want another competing grocery store to do it.

Restaurant Aggregators at Greater Risk

For the very same reasons that Instacart has a leg up in the grocery segment, restaurant aggregators are at a longer-term risk in their own segment.

The biggest friction for consumers over the last 15 months has been their inability to experience restaurant food in the restaurant. After not being able to see family and friends, going out to eat is consistently cited as something consumers miss the most.

Restaurant aggregators filled that void for consumers, but in so doing introduced their own set of frictions for diners and restaurants. And restaurants are much less happy with delivery services than supermarkets are with Instacart, because the economics don't work in their favor.

Consumers who order food from aggregators want their food at a specific time — not within an uncertain two-hour window. That narrows the consideration set for consumers to restaurants that are part of the aggregator's platform, and that can fulfill the order at the time most convenient for them. With too few options and too uncertain of a timeframe, consumers may continue to order online for pickup, but using the restaurant's app or website or good old-fashioned telephone. In fact, the majority of the online orders placed today are not delivered, but are picked up by consumers, and ordered directly from the restaurant.

Savvy restaurateurs that want to avoid the costs of using aggregators have helped influence that dynamic. Not all menu items are available on restaurant aggregator sites. And many have marked up the price of the food on those menus and delivery fees to defray the cut taken by the aggregators when consumers place their orders with them.

At the same time, restaurants have new options for managing online ordering and delivery via their own systems. Cloud-based POS and ordering platforms integrate online ordering and delivery capabilities into the restaurant software systems. New ecosystems, like Google Ordering, offer a new option to fill the online order funnel by capturing and converting search traffic. In much the same way that restaurants use Open Table for bookings, QSRs, fast-casual and on-premises restaurant establishments are matching their use of aggregators to times when the business they get is mostly incremental.

For consumers, ordering online or directly from the restaurant is a familiar behavior that has been made easier over the last 15 months by the innovations that restaurant software platforms have enabled. Restaurant operators realize the power of digital, and want to keep it in the mix across the entirety of the restaurant journey – for food ordered online for pick up or delivery and at the table – to make the restaurant ordering experience more satisfying and within the guest's con-

trol. As restaurants continue to refine their own online capabilities, and new commerce ecosystems emerge to help fill the incremental ordering funnel, restaurant operators will rely less on food aggregators and use them opportunistically.

The delivery part of the experience is the void that aggregators fill today. It's also the part of the experience that others with logistics expertise and a supply of drivers could help fill.

Maybe even Instacart.

The Value Of A Framework

Frameworks are what separate good strategy from chasing trends or monitoring the competition out of context. For instance, successful matchmakers — the cornerstones of the platform economy — use the ignition framework to design strategies to get critical mass on both sides of their platform, and a business model that delivers both growth and profitability.

The framework for the connected economy adds another layer to that. It systemically evaluates how friction, inertia and time variables influence the consumers' behaviors, and therefore the structure and strategy of the digital platforms that will power it. As we have seen over the past 15 months, the inertia that was once the obstacle to change across the connected economy fell away, because it was either impossible or too risky for consumers to stick with their ingrained physical ways. Digital platforms provided access to the physical world products and services with much less risk, thereby countering the inertia. And once they made the move, they discovered that they saved time and encountered less friction.

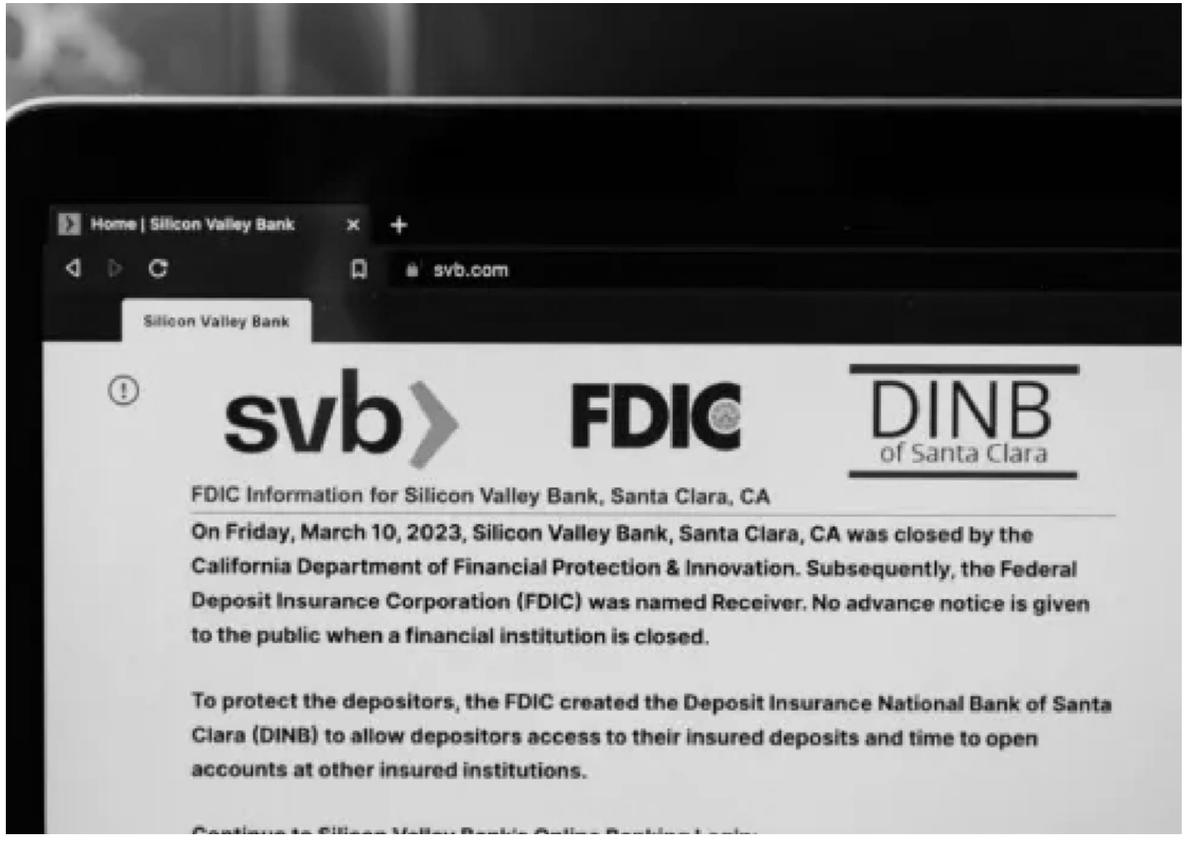
Now it's time for entrepreneurs to apply this framework — one PYMNTS calls the FIT® Framework (for Friction, Inertia and Time) — to find the next opportunity for an Instacart to revolutionize a physical sector. Entrepreneurs can discover these by looking at places where there is significant friction for consumers and businesses, where substantial time savings can be achieved and where it is possible to overcome inertia — for consumers and the businesses that wish to serve them.

My bet is this will lead to the next decade of innovation for the connected economy.

Karen Webster

MARCH 13, 2023

THE SILICON VALLEY BANK STORY NO ONE HAS TOLD



It's almost an eerie coincidence.

Nearly three years to the day that the World Health Organization declared the novel Coronavirus a global pandemic, Silicon Valley Bank collapsed. The mass exodus of deposits that fled the bank in the 48-hour period between the time that SVB filed its 8K and the time the FDIC shut it down gave Americans a real-time view of what happens when there is a run on a bank.

Except this time, the bank run was led by the CEOs and founders of startups who are using technology, data, the cloud and payments to change the world — worried that their deposits would vanish.

Ironically, the venture capitalists behind many of these startups stoked the bank run that brought SVB to its knees. Between 2020 and 2022, Silicon Valley Bank's deposit base nearly tripled, growing from $60 billion in 2020 to roughly $175 billion in 2022. Flush with cash, VCs poured capital into startups with big ideas who found SVB much more eager to do business with them than traditional, risk-averse banks. In many cases, banking at SVB was part of the terms and conditions for getting loans. SVB claimed it banked 50% of U.S. startups, and no one doubts that it was the main bank for tech startups.

To protect their investments, VCs sent mass emails to their portfolio companies on Wednesday and Thursday of last week to pull their deposits. Some very quick-on-the draw startups managed to do that successfully. For most, the weekend was one filled with uncertainty about if, when and how much of their deposits would be recovered.

An auction by the FDIC of SVB assets on Sunday failed to produce a buyer. Shortly thereafter regulators said they would release all funds to SVB depositors today (March 13). SVB's balance sheet will be used to make depositors whole in an effort to keep the contagion contained and restore confidence in the financial system, regulators said.

However, that contagion has already spread to another bank. NYDFS Superintendent Adrienne Harris said that her agency took over Signature Bank yesterday (March 12) in an effort to protect depositors. The $110.6 billion bank which banked crypto companies was declared insolvent. That situation continues to develop.

Today, Silicon Valley Bank is no more. Many stories have been written about the shoddy risk management of SVB's CEO and executive team, their glaring blind spot to the obvious shift in startup market dynamics, the regulatory shortcomings that gave SVB the wiggle room to operate more aggressively, and the obvious client concentration risk that drove the depositors' rush to liquidate and that ultimately caused the FDIC to declare it insolvent.

Here's a story that hasn't been told.

When COVID Moved In, Innovators Stepped Up

Where were you when the world shut down in March of 2020?

Everyone remembers **that day**. No one was prepared to navigate the palpable fear of being exposed to a deadly virus that was spreading uncontrollably and the abrupt, overnight shutdown of the physical economy. I remember walking home from the PYMNTS office in downtown Boston during the early afternoon of March 27th past shuttered storefronts — I was literally the only person on the street in a part of town that was always vibrant, bustling and filled with office workers and tourists. It seemed surreal, like being in a movie about the apocalypse — except without the lights, camera, action and Hollywood producer.

Almost overnight, the world was forced to shift dramatically to digital — and all the inertia on the part of consumers and businesses to adopt digital ways to access and pay for products and services simply disappeared.

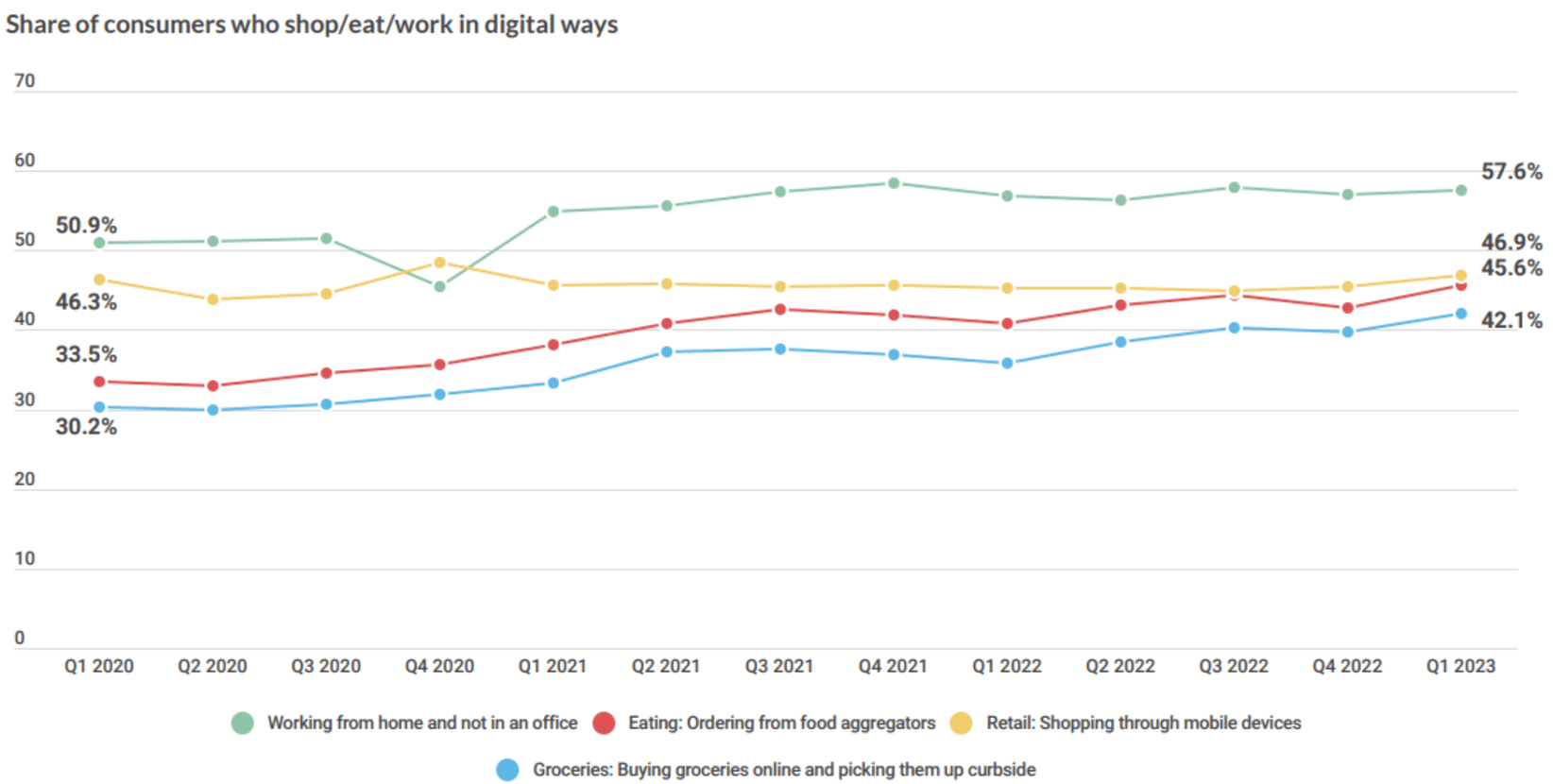
Innovators that had spent the better part of the last decade paving the path to a more digital and mobile economy became the world's lifeline. Mobile phones, easy-to-use apps, websites and digital payments made that digital shift less onerous and more age-independent. Many seniors went online for the first time and were able to get food and medicine delivered to their doorsteps — a tribute to the efficiency of the technology and the seamless user interfaces and experiences those innovators had created. Businesses reprioritized investments in digitizing the office of the CFO to pay their people and their vendors, collect payments and monitor cash flow.

We all shudder to think how things might have turned without the efforts of those innovators — and the investments made in them by VCs and strategic partners years before the Black Swan called COVID swam into our global waters.

Naturally, those whose businesses and business models were natively digital saw their business shoot up and to the right. Those whose weren't partnered with startups to fast-track their own digital shift. Still others reprioritized their own internal digital transformations. Government stimulus for consumers and businesses drove consumer spending and kept the lights on at many small businesses. Digital payments took off, and the payments ecosystem flourished. New businesses emerged to capitalize on the newfound consumer and business appetite to become digital. The collective focus was on using tech, the established payments and financial services ecosystem and connected devices to eliminate the risks and uncertainty of doing business in the physical world.

Three years later, the physical economy has reopened for business — but digital is now embedded in the DNA of consumers and businesses.

Consumers may have returned to stores, but PYMNTS data suggests that just as many continue to shop online as they did during the pandemic. Despite Census Data reporting to the contrary and pundits poo-pooing the pandemic digital shift as a blip, PYMNTS analysis shows that the pandemic did, in fact, accelerate the online shift when it comes to retail shopping and spending, making it a durable part of the consumer's day-to-day.



Source: PYMNTS
Connected economy series, February 2023
Sample size varies with each month; N = 2,869: Whole sample for February 2023, fielded Feb. 1, 2023 - Feb. 6, 2023

The physical world is now an extension of our shift to digital, not just another channel — whether we are working from home, ordering groceries, banking or watching a movie. High earners and younger consumers are the most digitally transformed, but digital's reach and impact are relatively consistent across the population in the U.S. — and becoming that way in every other part of the world. Embedding payments and credit into these digital experiences offers choice and eliminates friction for consumers and merchants. For others, it creates an important and inclusive onramp to the digital economy.

Businesses continue to digitize their payables and receivables processes, moving away from paper processes and payments. Whether it is disbursing instant digital payouts to consumers or businesses, making vendor payments at scale more efficient for payors and payees, moving the industrial economy business online or creating new business payments networks to make payments between buyers and suppliers more efficient with greater choice, the conversations about ditching the paper check are not about "if," but "how" and "how fast."

Thanks to innovators — who until late Sunday night were pondering their own futures in the wake of SVB's collapse — there is no going back to party like it was in 2019. The world is not digital-only, but it is very clearly digital-first, here in the U.S. and almost everywhere in the world.

But.

HUBRIS INSIDE

the Echo Chamber Got Louder and Innovators Lost Their Way

Well before SVB shuttered, startups — and FinTechs in particular — were navigating a different existential crisis.

The pandemic-fueled digital shift turned the startup funding crank to unprecedented levels. Investors, fearful of missing out on the "next big thing," threw caution to the wind and produced term sheets in a matter of days just to get the deal. Sequoia Capital and its investment in FTX is the poster child for that behavior, but that VC had plenty of company.

As a result, startups raked in funding with great-looking decks and lofty valuations. More startups followed, and then more after that. Customer acquisition was the name of the game, and VCs gave startups the checkbook to play that game. What's wrong with spending $500 to acquire a customer that might churn three months later? Nothing, if instead of the viability of the business and business model, the KPI (key performance indicator) is the number of accounts.

Or changing the world.

As in literally changing the world: To live in the metaverse, pay using cryptocurrency, mint NFTs and use them as cornerstones of a new digital economy, transacting over decentralized, permissionless networks that were smart because developers said they were.

Who wouldn't be tempted to invest in the face of compelling data? A 2022 McKinsey report said that by 2030 — a little less than 7 years away — the metaverse could be valued at $5 trillion with big consumer use cases in banking, retail and eCommerce. In 2022, $120 billion was plowed into metaverse companies, up from $57 billion in 2021 and $29 billion in 2020.

IN JANUARY

2022, NFT Marketplace Open Sea raised $300 million on a $13.3 billion valuation. Chainalysis now reports that the size of the NFT market at the end of 2022 was $44 million. Pundits say that those who got in the NFT game early did well. How insightful.

Crypto is the poster child for the investor craziness and funding bubble. An odd bundle of technology, a business model, and ideology, cryptocurrency enthusiasts have been claiming it is going to change the world for thirteen years and counting, with frequent twists and turns on just how it is going to do that. Crypto startups attracted $30 billion of VC capital each year in 2021 and 2022. Then crypto trading fueled by speculation plummeted, exposing FTX and other crypto fraudsters and revealing the instability of stablecoins. Most recently, Circle's USD coin broke peg on Saturday when it was disclosed that more than $3 billion of capital is tied up at SVB. A crisis in confidence produced a run on USD, and its future remains cloudy as company executives publicly calm currency holders and its prospects for recovering its money at SVB grow more certain. Before the FDIC news, Circle had recovered from its low of $0.88 and was trading under a dollar at $0.9717. This morning, it was trading at $0.9895.

These dynamics created a startup ecosystem that became highly interdependent on the success of each other to stay in business. Startups became service providers to other startups whose VC-powered bank accounts drove sales to complementary businesses who counted these startups as their customers. The herd mentality ruled — what one VC did was good enough for the other. VCs invested in similar businesses to grow the pie and then consolidate share later. And as we know, half of those startups banked at SVB

The herd mentality became infectious outside of the startup ecosystem, leading other businesses to divert time and money away from initiatives that solve real-world problems and toward things that possibly never would. If VCs were investing billions into these things, why shouldn't they?

So the beat went on. Capital was plentiful and, for a while, cheap. In 2020 and 2021, VCs that wanted to take the time to do more diligence found themselves on the wrong side of a deal, so they didn't. Businesses that couldn't show scale at speed and at all costs found themselves on the wrong side of getting funded.

Everyone knew, of course, that the decade-long streak of free and easy money and low inflation was destined to end, and that the valuations of businesses with no easy path to profit couldn't be real. And that the consumer was unnaturally strong because of the lasting effects of the stimulus money and low unemployment. And that businesses without a "there" there wouldn't survive.

Seasoned and serial entrepreneurs who had seen this movie in 2008 or the early 2000s recognized the warning signs flashing early in 2022 and started their own pivot to profitability. Many others didn't until they were forced to.

Until March 10th 2023, alive and well in their own Silicon Valley echo chamber, SVB believed that there would forever be more money, more funded startups to replenish those who may have washed out or burned cash to take themselves out, just like always. IPOs and big paydays were right around the corner. How could they not be?

Had the FDIC not prevailed, SVB's collapse would have hastened the failure of some of the startups that bank there, those who likely wouldn't have made it anyway For a while, they will live to see another day.

The larger tragedy would have been the hit to the innovators with great businesses and solid business models with real prospects for profitable growth and scale. The ones working the phones last weekend trying to figure out whether they could survive without the capital they needed to run their businesses and the infrastructure they used at the bank to power their businesses and support their clients. Happily, they will live to see another day, too.

THE LESSONS TO BE LEARNED

Looking back over the last several decades, there is one thing we know for sure. Entrepreneurs have come up with powerful ideas that have enabled them to build businesses that make the everyday lives of people and businesses so much better while building fortunes for themselves and their investors. That's the American dream — and what makes our economy and our country the envy of the world and inspires innovators to dream those dreams.

We also know that the digital transformation is in its early years of sweeping through the traditional economy. PYMNTS research of 15,000 consumers in 11 countries every quarter over the last year shows the breathtaking adoption of digital — even though, as a global economy, we are not even a third of the way to having digital become a part of every one of the 37 routine activities we track.

Sudden twists and turns take us to a new level. That appears to be the case with AI which, as others have said, has reached an inflection point. As infatuated as we are now with ChatGPT, the potential for AI to improve outcomes in business, in healthcare, in the industrial economy, in credit and lending — in every facet of our economy — is breathtaking in its potential.

More so than I can remember, today tech investing seems to be driven by hype and buzzwords, with too little thought into whether startups have a plausible solution to a real problem that people and businesses have and that can lead to enough demand to sustain a profitable business.

It's time to go back to serious analytical work, to frameworks for assessing the probability and profitability of innovation, at scale, in a timeframe that is relevant for people and businesses. I've written about the value of such frameworks many times, and developed many of my own. Our FIT framework and ignition frameworks have helped guide our view of innovation over the last two decades. It's why we said in 2014 that Apple Pay's innovative digital wallet would be slow to adopt and ignite, why merchant-driven payments schemes are dead on arrival, and why Early Warning's digital wallet probably is too.

There will be backlash in the aftermath of the SVB and Signature Bank failures, hearings on Capitol Hill and everywhere else in the world. There will be recommendations to tighten the regulations that allowed SVB to operate without adequate risk management controls. President Biden has already said that "those responsible" for the SVB collapse will be held accountable.

A harder issue, though, is how to address the herd mentality — and the echo chamber — which accentuates risk and makes it unpopular to take the opposite view.

An unfortunate outcome of the collapse of two banks whose demise was the result of their own bad decisions would be to have the herd mentality shift to putting the brakes on funding good startups with great ideas more generally. It would be a shame for investors to think that the bloom is off the digital rose just because their big bets on bad moonshots, perhaps deservedly, never got off the launchpad.

Instead, I hope we set aside the metaverse for innovation that solves real problems in the real world. Innovation that doesn't seek to literally change the world in which we live, but to make living in the one we have better, healthier, smarter, more diverse and equitable.

Karen Webster

MAY 22, 2023

WHY GENERATIVE AI IS A BIGGER THREAT TO APPLE THAN GOOGLE OR AMAZON

The conversation over the last three years about the shift to digital has been largely about the share of consumers who once did most things in the physical world and who now do more of those same things online.

The *more interesting* conversation is how this shift to digital has reframed the competitive landscape.

New tech has moved the application of digital beyond smartphones and apps to new ecosystems that blend the physical and digital worlds and can be accessed by a variety of connected devices, including cars and voice-activated speakers and earbuds. Many traditional industry sectors are being disrupted by these digital competitors, some new and some old, who appear to have come out of nowhere to take share — and grow it.

For instance, airline CEOs never gave a minute's thought to Zoom, Teams and similar apps as competitors for the business traveler's dollar until client, prospect and staff meetings shifted almost exclusively to online video channels during COVID. Those channels remain a CFO-friendly alternative to frequently hopping on a plane to visit clients or staff in person, reducing both business travel expenses and airline profits

Car OEMs never thought of Amazon, Apple, or Google as competitors until they saw the opportunity to monetize the cockpit and the user experience while in the car and decided they should create their own car-centric apps and ecosystems to fight back.

Grocers used to think of Whole Foods as their only Amazon grocery competition — and with its small share and Whole Paycheck reputation, they didn't worry too much. Until Amazon Subscribe & Save put a noticeable dent in center-store sales, and now has 7.1% of U.S. consumers ordering products and having them delivered for free this way, according to PYMNTS data.

Then there's OpenAI's ChatGPT.

Its public launch with GPT in November is a disruption like no other we've seen in the modern internet age. Unlike the digital competitors who may have been hiding in plain sight, slowly chipping away at traditional players' market share, ChatGPT came out of nowhere, it seemed, with the potential to change the world.

In a matter of six months, GPT has monopolized nearly every conversation among CEOs, boards and investors about whether it's a threat, an opportunity to fast-track a new way to do business, or both.

Ever since, news reports suggest that Google and Amazon have pinned their respective GPT-anxiety meters now that OpenAI, with Microsoft's support, has created a new way to build and scale computing's next big thing.

I'm not so sure.

For one thing, six months since OpenAI's debut is much too early to predict winners and losers, especially since we know that both Google and Amazon have invested heavily in AI and LLM for many years.

For another, I don't think that winners — at least not the Big Tech winners — will be crowned because they are successful in disrupting search, but because they have been successful in disrupting how search is monetized using large language models.

Winners won't try to force-fit the old cost-per-click model into these new innovative content platforms, but create new models that embed commerce into search and monetize that conversion.

IT'S A MODEL

that potentially favors Amazon and Google more so than Microsoft, given the existing scale of each of their platforms to consumers and businesses globally — the hundreds of millions of tokenized and embedded payments credentials that can enable a transaction and complete a sale today and their cross-platform access to the billions of consumers with smartphones.

And one that puts Apple at risk.

Cupertino's stance on privacy and user data, and its closed ecosystem, may have Apple winning the hearts and minds of consumers but losing the Generative AI war, despite having a 58% share of the U.S. smartphone market to Android's 42%. Unless something changes, Apple may end up playing the role of smartphone, mobile OS and App Store, just like it does today — with an App Store that comes chock-full of everyone else's GPT app innovations.

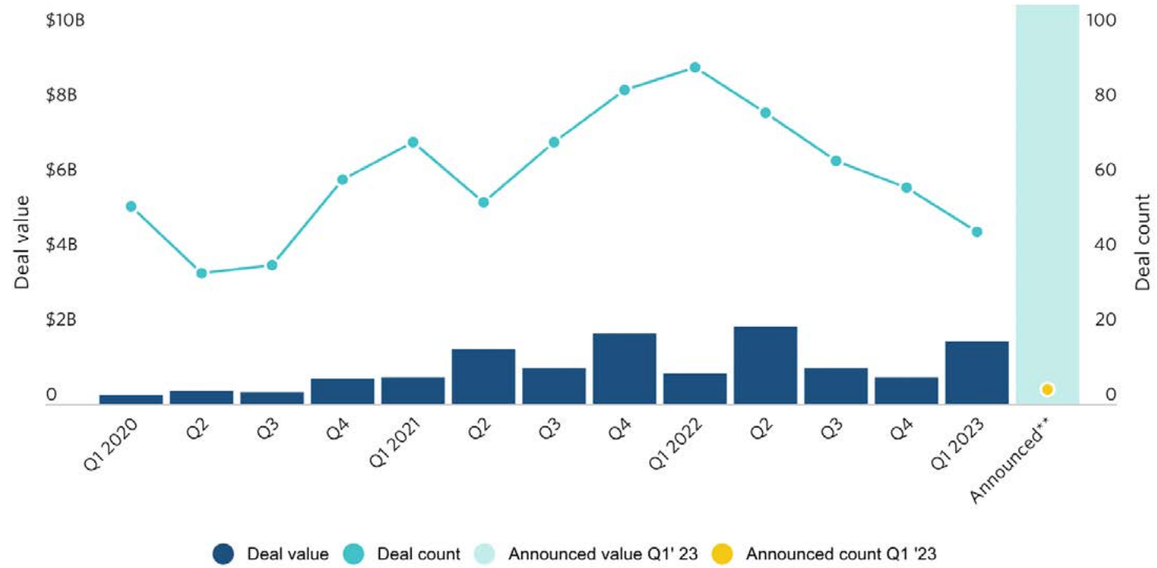
It's already happening. OpenAI's GPT app for iPhone users is now available in the App Store.

Everyone's 15 Minutes of GPT Fame

You know the ChatGPT story well by now.

UBS says it's the fastest growing consumer application of all time, capturing 100 million users in just two months with 28 million visits a day to its site by the end of January. Pitchbook reports that in Q1 2023, $1.7 billion was invested in 46 Generative AI startups, with another $10.68 billion announced but not yet closed. VCs report that seed rounds for GPT startups can go as high as $15 million and start at $5 million. Those are very big seeds.

VC deals for generative AI



Source: PitchBook data
Geography: Global
*As of 4/1/2023
**Includes Microsoft's reported $10 billion investment in OpenAI

Countless press releases tout the various applications of GPT tech to businesses — PR newswire says it has published about 150,000 of them since January. The CE 100 Index, the PYMNTS stock index of the 100 listed companies that are leading the transition to a more digital, connected economy, has seen a boost as companies announce the integration of GPT models into their businesses and the market takes notice. Personally, I have never seen more announcements about company products that start with the prefix "AI" — even for companies that I know that have always used AI as part of their tech.

AI, especially Generative AI, has become the ticket for everyone's 15 minutes of fame.

The Big Tech GPT Landgrab — Google

Nowhere has the GPT spotlight shone brighter than on Google and Amazon. Microsoft's $10 billion investment in OpenAI immediately set off news accounts about Bing finally being able to gain share in search — and the advertising dollars it generates.

Whether that's wishful thinking or reality remains to be seen.

ChatGPT isn't exactly Microsoft's first attempt to use AI to make Bing more competitive. It has invested billions in Bing since its launch in 2009. There's not much to show for any of those dollars spent — at least not so far. Google's search share in the U.S. remains almost 15 times that of Bing's (Google at 89% to Bing's 6.3%).

For Microsoft and Bing to win, they must convince users — tons of them, and pretty soon — that it is better, and then they must show merchants that they can drive more sales their way. And then convince Apple and Samsung to ditch Google for Bing to power their search. That's probably not happening anytime soon.

That said, Google has cause for concern when it comes to search and and how to monetize it — which is its giant cash machine today, and largely the result of advertising. Q1 2023 results showed a continued decline in ad revenue from search as the combination of Apple's privacy blockers and economic conditions throttled results. Google, it was reported, "nervously" rushed out an announcement for Bard, its Generative AI platform, on February 6, 2023 to arrest market concerns that Microsoft might out-search the search giant. Of course, this wasn't really news — Bard has been in development at Google since 2015.

Understanding Google's plans for commerce using Generative AI is perhaps even more fundamentally important than how it will use Bard to make search more efficient, authentic and reliable. Google has been more cautious in its public statements about Generative AI to manage expectations while Bard gets smarter and better behaved.

But the Generative AI ticket that Google needs to punch is getting people to start more of their product searches there. Google may have more search traffic overall than Bing — but depending on whose source you believe, anywhere from half to 65 percent of searches for products start not on Google, but on Amazon.

That's not news or a new fight for Google. Nor are its aspirations to become a payments and commerce force. Over the years, Google's focus has been on using Chrome to make checkout easier with form fill and capturing and storing tokenized payments credentials there to expedite online checkout. It's been less successful in monetizing the GPay and Chrome ecosystem in other, more proactive ways.

The story that's yet to be written is how Bard and its Generative AI models are pointed at moving Google away from an ad-based search platform to a contextual, commerce driven ecosystem — how Google will use Android to distribute Bard and its Generative AI derivatives, and how Cloud will embed those capabilities into other applications and use cases.

The Big Tech GPT Landgrab — Amazon

Then there's Amazon. The Economist wrote in 2019 that AI has been a core element of Amazon's strategy since 1999, when Jeff Wilkie joined the firm. The strategy then was to use data and AI to improve Amazon's operations and logistics to the benefit of the consumer. Of course, no one would recognize what they were using back then as AI, given the rapid development in that area. But AI in some form and voice are the DNA of its Alexa voice operating system. According to a study of nearly 3,000 U.S. consumers conducted by PYMNTS in April, 60 percent of U.S. consumers want Alexa to become even smarter as the idea of a smart virtual assistant to simplify the complexity of the daily grind becomes more appealing.

Also in April, Amazon announced the rollout of a suite of Generative AI tools. In addition to using Generative AI to make product searches on the Amazon marketplace more efficient, Amazon is embedding Generative AI tools into AWS so that businesses can build and scale their own GPT use cases using its Bedrock platform. Amazon's expansion into other connected ecosystems like healthcare, grocery, restaurant delivery, streaming services and gaming (remember, it owns Twitch) gives Amazon a number of adjacent ecosystems and content to enable with its Generative AI capabilities.

More recently, Amazon announced that its AI-powered voice assistant, Alexa, has taken a step closer to being Alexa everywhere a consumer wants to take her. In addition to new Echo devices with and without screens suitable for home use, Alexa is now available in earbuds, glasses (not smart glasses, but those with sensors that allow a noise cancelation conversation with Alexa), and a USB plug that takes Alexa inside the car, whether or not the car OS is powered by Alexa.

Amazon Pay is both a payments and identity credential that powers conversion on the Amazon platform, and increasingly off it, as more merchants participate in its Buy with Prime program. Amazon Pay has reinvented store checkout with biometrics and no-checkout checkout in its smaller-format grocery stores.

As a commerce platform accessible to anyone with a smartphone and the Amazon app, it's easy to declare Amazon the player with a running head start to connect search with commerce, since that's its business today. Unlike Microsoft, Google and Apple, it is a commerce platform with embedded credentials and a ton of data that it can use to make its models smarter and results more relevant to the user. Even AWS, which reported slowing growth, is likely to have a new lease on life as companies clamor to leverage its Bedrock platform and other Generative AI tools to embed LLM into new experiences for their end users.

What Amazon doesn't have is any control over the mobile operating systems and handset OEMs that host its app — and neither does Microsoft. Amazon's Fire Phone was a disaster, mostly because it wasn't better than — or even as good as — existing products that users liked and used. The decision to fork Android made it more challenging for developers who needed to create three versions of their apps, instead of just two — and for a device that had few users. The user/app developer virtuous circle never got off the ground.

Unlike Apple's iOS and Google's Android, both of which can (pretty much) force their apps on the phone because they own the OSs, Amazon depends on users and user downloads to claim real estate on those home screens and dictate how it is used. That hasn't been much of a problem, so far — but it could become one if Apple and Android decide to use Generative AI to impose new rules that govern how they appear and how much it may cost to operate there.

The Big Tech GPT Landgrab — Apple

Then there's Apple. We have three data points on Apple's current market position and thinking on Generative AI.

First, during Apple's Q2 2023 earnings call earlier in May, there were the usual vagaries when asked about Generative AI and Apple's plans. Analysts didn't probe further when told by Tim Cook that Apple is "thoughtfully" considering the application of Generative AI and won't comment on product roadmaps.

Second, it's been reported that Apple has posted 100 job openings for engineers with Generative AI experience. Although we don't have any definitive word from Apple HQ on Generative AI, it seems that — of the current crop of Big Tech players — Apple may be the one scrambling the most because they are the furthest behind.

Three, Apple seems fine with having Generative AI apps in the app store.

It's possible that one of the reasons that we may not have heard much from Apple on the topic is because it is a tough one for Apple to navigate.

Apple is no AI novice or lightweight. It's neural network uses AI — and its own AI chip — to improve the iPhones' computational efficiencies so that users have a better experience. But for Apple to compete in the Generative AI space, it needs loads of data. Apple has made a point of stating that it only collects enough data about a user to maintain their accounts. So, it doesn't have much today, other than what people search for in the App store. And that's not much.

Collecting more data isn't straightforward. Apple would have to figure out a way to thread the needle, balancing the image of the platform that protects users' privacy and doesn't collect and monetize their data with a desire to be a player on the Generative AI stage. And to be able to do that on a global scale, where iOS share is dwarfed by Android.

Also not straightforward: getting consumers to think of — and use — Apple as a commerce platform, which also includes using Apple Pay to pay for purchases. The latter has been a struggle for Apple both on and offline. Going on almost nine years after its launch, PYMNTS data shows that cards at checkout in the store are used almost 31 times more than Apple Pay, which accounts for a tiny 2.1 percent of retail sales. Apple Pay's growth over that time has averaged about .25 basis points per year.

It's also not obvious that consumers think of Apple as a commerce platform, even though they use the iPhone to access apps that connect them to commerce. As commerce becomes more distributed across connected endpoints that cross platforms and operating systems, smartphones will become one of the ways — but not the only way — in which consumers interact with apps and ecosystems. Those interactions could even become device-agnostic over time — where Apple, as a closed ecosystem, has built an inherent disadvantage.

It's tricky. It may mean that Apple is relegated, perhaps not happily, to playing host to GPT apps in the app store — at least for the foreseeable future. And maybe being the de facto regulator to make sure harmful GPT apps don't get loose.

WHAT'S NEXT

Many of you reading this have played around with GPT and are amazed by its power and potential. Me, too. You may even be a little bit scared of how many industries, including your own, will be changed when these large language models are more refined.

I decided to use it to help with this piece. Not in writing it — which would have saved my Sunday and produced something not nearly as brilliant :) — but in the image that I used to accompany this piece.

I put into DALL-E a few prompts: disruption, technology, change, Big Tech, future. What you see is the best of what was generated after several iterations — but at least it only cost me only a few cents and a few minutes to produce. I know it's not the greatest image.

Most interesting about the selection of results was that most of the images depicted disruption as rearranging the letters used to spell the word disruption. Disappointing, since rearranging words and spelling seems an elementary interpretation of the concept — and a rather underwhelming way to depict the future of a technology that holds such great potential.

Karen Webster

JULY 17, 2023

FEDNOW'S FUTURE AND WHAT THE TRIPLE CLOCK THEORY SAYS ABOUT IT

Four days from today, the Federal Reserve's instant account-to-account payments rail will go live. FedNow's launch on July 20 will bring the number of real-time rails in the U.S. to two. The first real-time rail to go live was RTP®, operated by The Clearing House, in 2017.

Judging by the barrage of press releases and PR pitches received by PYMNTS over the last several weeks, the launch of FedNow is to payments what the Red Sox winning the World Series in 2004 after an 86 year drought was to baseball: an historic milestone that was a long time in coming.

In many ways, July 20 begins the countdown to ubiquitous instant account-to-account payments in the U.S. TCH with RTP® has been live for six years and counts 274 financial institutions and 65% of U.S. deposits connected to its rail as important milestones of its own. But as even TCH and its member banks will admit, traction around use cases has been scattered, the number of transactions low. TCH with RTP® hasn't yet achieved the critical mass needed to ignite its payments platform. The introduction of FedNow creates competition for RTP® volume and potentially the real-time payments infrastructure for new use cases like merchant payments.

SO, IT SEEMS, THE RACE FOR INSTANT PAYMENTS IN THE U.S. IS ON.

In addition to the U.S. Treasury, FedNow says that 56 "Early Adopters" are certified and ready to move money over its rails at launch. The profile of those early adopters leans heavily to small FIs — 41 of the 56 are FIs, many with profiles like 1st National Bank of Yuma, Buffalo Federal Bank and Consumers Cooperative Credit Union with assets of $550M, $174M and $2.8B respectively — even though four TCH founding members, J.P. Morgan, Wells Fargo, US Bank and BNY Mellon, are also ready to roll on Thursday. There are fifteen technology providers like Adyen, Fiserv, FIS, Jack Henry, Finastra and ACI that banks and FinTechs can use to connect to the FedNow rails.

So, it seems, the race for instant payments in the U.S. is on.

Like any good competitive rivalry stimulated by a new entrant, the watercooler talk now is about how long it will take for either or both networks to reach the point where they support a large volume of transactions and use cases to drive those transactions and ignite real-time account-to-account payments in the U.S.

Knowing that answer — or even how to guess — will depend on the clock you're using to time the race. The Triple Clock Theory

The Triple Clock Theory

Humans have been measuring time for more than five thousand years. It was 1500 BC when the Egyptians invented sundials and water clocks to, among other things, track the blocks of time between sunrise and sunset to better schedule the arrivals and departures of ships bringing goods into the country.

It was the Sumerians who created the base 60 numerical system in the 3rd millennium BC which would become the basis for timekeeping today: Hours were comprised of 60-minute intervals and minutes of 60 second intervals. Mechanical clocks that followed in the mid-to-late 1200s were perfected over the subsequent three hundred years, making it possible for time to be measured systemically and consistently with precision everywhere in the world.

We measure time because there is a finite amount of it — in a day, in a week and over a lifetime. People use time as an organizing construct to manage their daily lives. Athletes count time because they want to beat their personal records. The amount of time that it takes for big things to happen makes news: whether it is how long it takes to capture escaped convicts or how long it might take for inflation to hit the Fed's 2% target.

THE TRIPLE CLOCK THEORY ANALYSIS HELPS COMPANIES ANTICIPATE RELEVANT MARKET DYNAMICS TO RESET THEIR INTERNAL CLOCKS.

People want to make the most of their time because it is the most precious asset they have. Wasting it is low on everyone's list.

Counting time in the business world is how economists and business leaders measure productivity: the minutes, hours and days needed to complete a task, and the number of people required to deliver the expected outcome. Like people, businesses want to optimize how their workforce's time is spent and are loathe to waste it, even though by some accounts we all waste 24 billion hours a year in unproductive meetings. At least we did until people could multitask under the table with mobile phones or when their cameras are off during Zoom calls.

But it turns out that businesses, themselves, have their own internal clocks — a measure of keeping time often set by how long they've been in the market, the maturity of the markets in which they operate, the number of competitors vying for market share and the tech they use to power, manage and measure their business performance. These internal clocks set the pace for how decisions are made and how effective businesses are in creating a market advantage by continually innovating the products and services that their customers value and want to use.

The Triple Clock Theory (TCT) is an original framework that my consulting colleagues and I have devised to help businesses understand the pace of their internal clocks so that they can better assess whether their clocks could be cleaned by rivals seen and unseen — pardon the pun. But more importantly, the TCT analysis uses data-driven analysis to help companies anticipate relevant market dynamics to reset their internal clocks to prevent that from happening.

TCT posits that an ***incumbent business clock*** operates at a slower speed than a ***new entrant clock*** when introducing a product or service into the same competitive market. The rationale is as obvious as it is simple: Incumbents have created the market, acquired customers, created barriers to entry and have the assets — and a running head start — to sustain and grow their lead. Once a big incumbent machine gets its gears in motion, its momentum carries it forward, at least in theory. Incumbents assume that their clocks don't have to move as fast because they have a big lead — until, of course, they see faster-paced competitors nipping at their heels.

THE TRIPLE CLOCK THEORY ANALYSIS HELPS COMPANIES ANTICIPATE RELEVANT MARKET DYNAMICS TO RESET THEIR INTERNAL CLOCKS.

As newbies, challengers' clocks must move rapidly because they face a different reality: They lack clients, market position and the deep pockets to lollygag around. New entrants typically use different tools to help their clocks operate at a faster speed and shape their competitive advantage. Those tools could be anything from a new business model, pricing framework, data or payments capabilities, or user experience. Sometimes powerful new entrants bring all of that wrapped around better and more agile tech that makes switching easy and eliminates friction that still exists in how business is done in that market. They are also leaner so they can move fast.

Then there is the third clock, the ***technology clock***, which is one of the sources of market disruption or competitive opportunity for both incumbents and new entrants. The technology clock can either speed up or slow down their respective internal clocks. New, breakthrough tech can create a better, faster and cheaper way to deliver the same product or service — or spawn new challengers that use it to leapfrog existing players. Predicting who will gain the most from the influence of the technology clock on their business is not always obvious since the technology clock does not always advantage new entrants.

Generative AI and LLMs are the most recent example of this third technology clock, but there have been others over the years. Most interesting about the Gen AI clock is its ability to not only change the pace of business, but the fundamental ways in which business is done.

In a matter of a few short months, the intellectual value of its potential has been internalized by every business worldwide. Open-source models are eliminating the barriers to entry that often come along with accessing and integrating powerful tech into business.

Both are fast-tracking Gen AI's own path to critical mass and ubiquity.

WATCHING

the Real-Time Payments Clock

In 2017, it was the real-time payments technology clock that set out to disrupt how money moved between bank accounts in the U.S. and the rails that, until then, cleared and settled those transactions.

Fundamentally changing the speed for clearing and settling payments was the promise of the first new U.S. payments rail in 40 years, RTP®. The press release announcing the launch described the participation of its then twenty-five owner banks, the biggest of the big in the U.S., along with their expectations of introducing a host of new scenarios using real-time payments and new markets that would see it as a differentiating value proposition for their own products and services.

The stated goal then was to reach ubiquity by 2020 — meaning that every financial institution in the U.S. would be connected to RTP® rails and use it to innovate client-facing payments in those three years post-launch.

The internal clocks at both the Fed and TCH will run a lot faster now that there's competition for real-time payments transactions.

Six years later, the U.S. remains a long way from ubiquity and adoption of account-to-account real-time payments even though 11 times more banks are members of the RTP® network today than at launch and nearly two-thirds of U.S. bank deposits are connected to it. Being connected means that those banks can move transactions over it — if they develop use cases around it and promote them.

Of course, adoption and use go together to a degree. It is hard to get substantial transaction use without widespread network adoption. But ubiquitous adoption doesn't guarantee widespread transaction use, which requires use cases that banks market and customers buy.

Now, most people in and around the payments ecosystem say that the introduction of FedNow will move the U.S. more quickly to that real-time payments ubiquity. The CFPB's desire to accelerate open banking in the U.S. will create more demand for real-time account-to-account payments and move more banks to connect to a real-time network. Merchants, who for decades have tried to find alternatives to card rails for accepting payments, may view FedNow as that alternative.

All of those dynamics will likely quicken the pace of the internal clocks at both the Fed and TCH now that there's competition for real-time payments transactions. I don't think its market entry necessarily gives FedNow an edge.

THE INTERNAL CLOCKS AT BOTH THE FED AND TCH WILL RUN A LOT FASTER NOW THAT THERE'S COMPETITION FOR REAL-TIME PAYMENTS TRANSACTIONS.

The FedNow Real-Time Payments Clock

In many ways, it makes the march of both rails to ignition — which requires ubiquitous adoptions and widespread use for transactions — more challenging.

For FedNow to scale, early adopters will have to see success — and see it quickly.

Igniting a new payments network requires volume and scale — and how quickly that happens is vital. Having early adopters connect is one thing, but having them transact is another, as the TCH experience shows. If that takes too long for whatever the reason, early adopters will lose interest — and the traction necessary to create the network effects that drive scale will slow. They will likely shift to other real-time payments alternatives.

The less obvious part of the FedNow challenge is the current lack of interoperability between FedNow and RTP®. Unlike the two ACH networks that are also operated by TCH and the Fed, there is currently no ability for a bank to originate a real-time payment on one rail and a bank not connected to that same rail to receive it. Also notable at the FedNow launch are the number of big banks that aren't connected, at least not yet, but are part of the TCH RTP® scheme — including Bank of America, Citi, and PNC.

ACHIEVING REAL-TIME PAYMENTS UBIQUITY IN THE U.S. WILL REQUIRE THAT EVERY BANK IN THE U.S. — ALL 10,000 OF THEM — BE CONNECTED TO BOTH TCH AND FEDNOW RAILS.

IN THE absence of interoperability, achieving real-time payments ubiquity in the U.S. will require that every bank in the U.S. — all 10,000 of them — be connected to both TCH and FedNow rails. Persuading banks to do that will require the availability of use cases that are compelling enough for consumers and corporates to integrate and support. That seems ambitious and even improbable, particularly since most banks haven't adopted either network.

More likely is that the big banks and technology partners connected to both will create that missing ubiquity by becoming the real-time payments orchestration layer for banks and other third parties. The decision they then face is how to route transactions.

Since pricing over the network is identical, those decisions will hinge on transaction limits, fraud and security protections, acceptance and the preference of their partners, whose real-time payments use cases today may already be satisfied by existing RTP® rails.

It will also rest with which rail can support important future use cases like Request for Payment, given its potential to ignite mainstream real-time payments use by consumers for bill pay — and in a timeframe that is relevant for end users. The consumer protections required of that use case remain a work in progress for FedNow.

That's not to say that TCH and RTP® have a cake walk to critical mass and ubiquity, either.

The RTP® Real-Time Payments Clock

The lack of an effective RTP® ignition strategy at launch is why connectivity to two-thirds of bank deposits hasn't turned into 100% connectivity, more transaction volume, and a more powerful set of use cases at scale. RTP®'s biggest competitor today isn't FedNow, but Same-Day ACH and wires, both of which have ubiquity and deliver a faster payments outcome that banks know how to monetize. Push to debit transactions over card rails support instant payouts for B2C use cases like insurance claims and gaming payouts and check the instant payments box for those use cases using money mobility rails — and on a global scale.

There's also inertia on the part of corporates who haven't yet invested in real-time payments integration because they aren't sure that every bank account they want to send money can receive a real-time payment. Until they move their ERPs to the cloud, their batch-based ERP systems don't allow them to post payments in real time either, muting their sense of urgency.

TCH WITH RTP® AND THE FED WITH FEDNOW MAY BOTH THINK THEY CAN OPERATE ON A SLOW CLOCK.

Larger corporates see its potential in solving for the nuisance "edge case payments" that are today mostly sent the old-fashioned way with checks but need the ubiquity problem solved first. Banks, corporates and FinTechs could decide that the workaround for the instant ubiquity challenge is to offer choice — RTP® or FedNow will become one of several options, but not the only way to clear and settle good funds instantly.

Watching the Clock and Getting to Critical Mass

The FedNow launch on Thursday makes the U.S. unique in the world to have both a central bank and private sector instant account-to-account payments rails. The rationale for the introduction of FedNow was to create a redundant set of rails so FIs have a choice, much as they do when processing ACH transactions today.

In some ways, TCH with RTP® and the Fed with FedNow may both think they can operate on a slower clock –and for different reasons. They are owned and run by large incumbents with staying power and money. They have important relationships that they can leverage to drive volume and scale. But unless one of them can get to ubiquity quickly and banks develop and market use cases to move large volumes of transactions over these rails, both could stall.

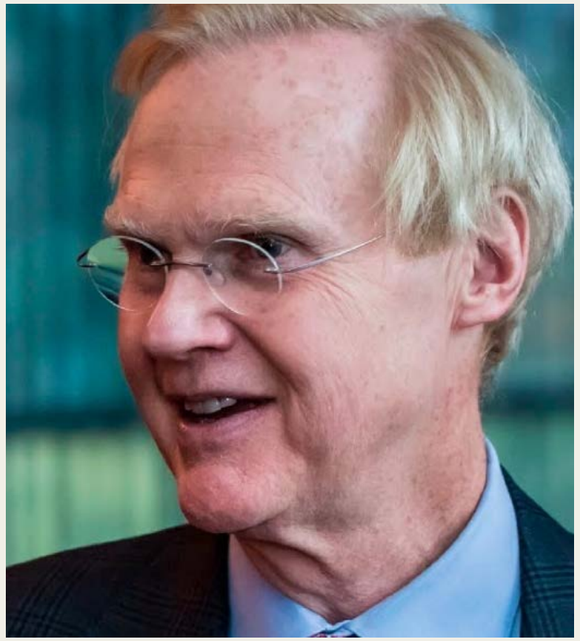
That's where the technology clock comes in — as well as the fast clock for smaller and more nimble rivals who may use technology to create something better, faster and cheaper.

As they say, only time will tell.

ABOUT THE AUTHORS

DAVID S. EVANS

Is an economist whose work on platform businesses, the digital economy, financial services, and antitrust economics is widely cited. He is the author of nine books and more than 150 articles on those and other economic topics.



Evans uses his research to advise companies, from early-stage firms to the largest global digital businesses, and for testimony before courts, legislatures, and regulators in the US and abroad. He regularly speaks to global audiences on digital transformation, platform businesses, and antitrust.

Evans is the Global Head, Digital Economy and Platform Markets, at Berkeley Research Group (BRG). He is also the founder of Market Platform Dynamics. He taught at the University of Chicago Law School from 2006-2016 and the University College London from 2004-2022.

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KAREN WEBSTER

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Webster is a frequently sought after keynote speaker and prolific author of articles on innovation, platforms and the digital economy. She has a long history of consulting, having served as the Managing Director of Global Marketing and Planning for Price Waterhouse Coopers's US$6 billion management consulting practice and as COO for the US$200 million economic consulting subsidiary that is part of the MMC family of companies. Webster also served as an adjunct faculty member at her alma mater, Johns Hopkins University, where she holds a master's degree in marketing and developed and taught graduate level courses on business-to-business marketing.

Webster is a passionate philanthropist and served as a member of the Board of Trustees at the Dana Farber Cancer Institute and Chairman of the Board of the Susan G. Komen Advocacy Alliance. She lives in Boston with her husband and their two amazing canine companions.

ABOUT

PYMNTS

PYMNTS is where the best minds and the best content meet on the web to learn about “What’s Next” in payments and commerce. Our interactive platform is reinventing the way in which companies in payments share relevant information about the initiatives that shape the future of this dynamic sector and make news. Our data and analytics team includes economists, data scientists and industry analysts who work with companies to measure and quantify the innovation that is at the cutting edge of this new world.

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