# stripe

Dear Stripe community:

Charlie Munger described a two-part rule that works wonders in business, science, and elsewhere: 1) take a simple idea and 2) take it very seriously.

Stripe's mission is to grow the GDP of the internet. The core idea behind the company – one we endeavour to take very seriously – is that *we're still early in the journey of software-driven innovation*, and Stripe is an applied exercise in thinking through some of the corollaries of that. In particular, thanks to the new possibilities afforded by the internet, we believe that putting better – more global, easier to use, more flexible, faster, cheaper – economic infrastructure in the hands of companies and entrepreneurs will lead to a more vibrant and prosperous world. Remarkably, this journey was still in its infancy when Stripe launched in 2011. Thirteen years, and more than twice the number of internet users later, it's still early. The world of 2034 is going to look very different.

# What's happening at Stripe?

Collectively, the businesses running on Stripe passed the milestone of \$1 trillion in total payment volume in 2023, up 25% from the prior year. (US e-commerce, an imperfect but useful comparison, grew 7.6% last year.) At \$1 trillion, the output of businesses that run on Stripe sums to roughly 1% of global GDP. (Most Stripe users sell so-called "final" goods, which are those that count toward GDP.)

Stripe was robustly cashflow positive in 2023 and expects to be again in 2024. This threshold is important, because it allows us to invest for the long term, building what we believe our users need 10 years from now, without regard for the natural volatility of capital markets. In addition, Stripe customers can be confident that we provide stable, long-term infrastructure with a durably sustainable business model.

# Businesses make more money on Stripe

Online payments is, among other things, a conversion optimisation problem.

This is very different from in-person payments. Imagine you go out to eat at a restaurant: you *first* consume the service, and afterwards you'll work out payment, no matter how hard or easy. Even the most laborious payment experience is easier than washing dishes for the rest of the night, or being pursued by a spatula-brandishing waiter.

Online, things are different. People increasingly flit around the web in the fissures between other tasks, and they very rarely *have* to complete a purchase. In the face of hurdles – extraneous form fields, labyrinthine authentication processes, broken mobile flows – your competitors or just funny TikTok reels are both a mere swipe away. According to the Baymard Institute, around 70% of online shopping carts are

abandoned. While that assuredly involves cases where there was never actually an intent to purchase, it's clear that there's significant deadweight loss.

We obsess over eliminating barriers to internet purchases. Our optimised checkout suite now includes over 100 optimisations, from the very large to the very small. Even the smallest tweak to fine-tune the checkout experience benefits from Stripe's economies of scale, because we can amortise the fixed costs of complex improvements across more than a trillion dollars of transactions.

Here are a few recent examples:

- Our pre-built payment surfaces (Stripe Payment Links, Stripe Checkout) and flexible UI components (Stripe Elements) offer easy and fast ways to set up high-converting flows. They present a checkout that's personalised to the buyer based on their device type, location, language, the nature of goods being sold, and many more factors. All Stripe's pre-built UIs include mobile-friendly navigation, autofill, input masking, and mobile SDK support, as well as support for 42 languages, 236 regional address formats, dynamic postal code collection, and localised error messages. Together, these yield measurable gains even for purchases where one might expect a highly motivated buyer. Slack, for example, saw a conversion uplift of more than 3% just by upgrading to these optimised UIs.
- The online payment landscape is fragmenting, with new payment methods proliferating around the world (including the US). Over the last year alone, we've added support for more than 50 new payment methods, taking the total supported to over 100. Most recently, we added support for Swish, the Swedish payment method used by 8 million consumers. For the first time, companies can now charge Swedish consumers with their preferred way to pay without a Swedish subsidiary or bank account. In the US we added support for Block's Cash App Pay, helping our customers access a younger audience more than two-thirds of Cash App Pay's active accounts are Millennial or Gen Z.
- Payment Links are the fastest way to start accepting payments on Stripe with zero code and no website required, and they're popular among startups and large companies alike. This year, we shaved 300ms off the Payment Links render time, a change that brings even higher conversion.
- Even after the customer hits "buy", optimisations are possible. New issuers continue to join our Enhanced Issuer Network, where direct integrations with issuing banks enable us to do things like transmit out-of-band fraud scores as part of transaction requests, which reduce the odds of an errant decline by the cardholder's bank.

A few months ago, 100-year-old Tokyu Corporation launched TsugiTsugi, a flat-rate accommodation service to help fill vacancies at hotels and resorts during off-peak periods. The service initially struggled to add new payment plans, manage promotions, and handle recurring fees. Tokyu turned to Stripe, and, in two months, implemented Stripe Checkout, Stripe Billing, and Stripe Radar. The net result was a 20% increase in conversion.

This story isn't exceptional. Countless businesses can, and do, see similar gains. Stripe uses its \$1 trillion transaction scale to invest in many optimisations that increase revenue for the entire customer base. (Take a simple idea, and take it very seriously...)

# Not just payments, but revenue and finance automation

While global money movement is no simple thing, overseeing *how much* to charge *whom*, and *when*, can be equally intricate, and we're increasingly helping businesses orchestrate their overall financial logic. We first entered this space with Billing, which grew over time into our Revenue and Finance Automation (RFA) suite, bringing together Billing, Tax, Revenue Recognition, and more.

To give an example, say you want to charge \$50 per month for some product. For the sake of familiarity, let's imagine a mobile phone provider looking to bill for a monthly plan, though the example will work for many business models.

- Very few businesses have single pricing plans, so you will probably need a product catalogue to keep track of the \$50/month individual plan, the \$200/month business plan, and so forth. Plans should cost sensible amounts in each country that is, the \$200 plan in the US should probably cost €180 in Ireland, and not €183.57. (Which then raises the question: how frequently will you realign prices as currency rates move?) Complicating matters, many jurisdictions require VAT or other sales taxes to be included in the purchase price.
- Many subscription businesses start with a flat monthly charge but also bill based on usage: international calls might be \$2/minute, international roaming \$10/day, or extra lines \$10/month. This then means that you need a database that tracks usage events and turns them into a comprehensible bill.
- Customers don't wait for the first of the month to begin and end plans, so you'll probably need to manage prorating. (And you'll have edge cases, such as customers who switch from monthly to annual billing, and so on.)
- You'll almost certainly want to test and eventually deploy new pricing models as your product evolves. For tests, the system needs to enable different customers to receive different pricing for the same service. Furthermore, when you do roll out a broad change, you likely won't just want to change all customers overnight – you'll grandfather many customers into their old pricing. Your billing system will therefore probably need to track the entire history of your pricing matrix, running many different versions of your pricing scheme at once.
- You'll have to build a system for handling failed payments, striking a balance between not letting non-paying customers get away with not damaging hard-won customer relationships whose payment details occasionally lapse.
- Your customer service team will need to be able to view, explain, and modify almost every aspect of a customer's billing state.
- Customers in each country will want to pay with their preferred payment methods. Some are "push" payment methods (such as sending a bank transfer); some are "pull" (such as pulling money from a credit card). Only some of them support recurring payments. The set of payment methods is ever-expanding: Pix didn't exist five years ago and is now the most popular payment method in Brazil.

You can see why a seemingly simple proposition – "charge \$50/month" – quickly gets complicated for any business operating in the real world.

We frequently hear from both CEOs of large, public companies and fast-growing startups alike that *their billing systems are obstacles to their plans*. For example, in a recent conversation, a finance leader at one of the tech giants admitted that they, one of the world's most technically sophisticated companies, were slowing the international rollout of their cloud offering because they couldn't bill for it in new countries. Think about that for a moment: the bleeding-edge cloud offering was a tractable problem... but the payment collection wasn't.

While conversations like these initially surprised us, we have gradually come to realise that the reason all of this is hard is because what seems like a mere finance challenge is actually a much broader systems problem – one that touches most aspects of your product, business model, and core processes. If you build your billing infrastructure the right way, you can achieve the triple benefits of reducing your operating costs, growing revenue faster, and providing a better customer experience. And if not – well, you end up forlornly restricting your market coverage.

Our RFA products are grounded in billing systems, but have since grown to help automate much of the revenue pipeline. In just the past year, we added multiprocessor support for taxes (handling sales tax even for payments outside Stripe), launched no-code revenue recovery automations to reduce churn, and added subscription schedules to automate changes to subscriptions over time. All of these were top requests from our users, who collectively operate at enormous scale.

Businesses using Stripe for their revenue automation include Roblox, Figma, OpenAl, Atlassian, and Nasdaq. Overall, these products are being used by hundreds of thousands of businesses, and we expect the suite's annual revenue run rate to pass \$500 million over the next year.

# **Enterprise transformation**

The average tenure of a company's inclusion in the S&P 500 index has been shrinking over the past few decades: it was 61 years in 1958 and now sits at 18 years. This provides some empirical foundation for the basic intuition held by the CEOs of most large companies: reinvention is required.

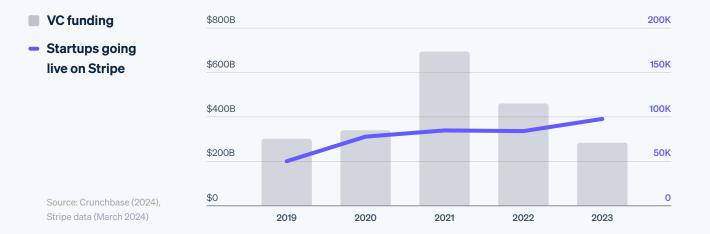
Our enterprise segment continues to grow rapidly, with more than 100 companies now processing more than \$1 billion per year with Stripe. Across these companies, we see an interesting set of patterns:

• Many firms are seeking to build a closer relationship with their customers and rethinking the role of intermediaries. For example, Zara saw its fast fashion garments being sold on pre-owned clothing websites, and decided to directly enable this with Zara Pre-Owned, which uses Stripe Connect to directly facilitate payments between buyers and sellers. In a similar vein, Ford chose Stripe to streamline after-market service, enabling it to transact directly with customers, and enabling payments to be seamlessly routed to the appropriate local dealers. Going a step further, Lotus partnered with Stripe as part of a strategic shift, enabling a direct-to-consumer sales model across Europe. By dealing directly with the customer, Lotus now owns the complete cycle, from order to delivery.

- Large companies are often weighed down by legacy tech stacks. These platforms are typically the
  result of many years of successful expansion, and hence shouldn't be condemned, but calcified
  technology arteries are a major long-term health risk. We see many businesses tackling these
  challenges head-on and reaping the ensuing benefits. For example, Hertz chose Stripe to unify its
  in-person and online payments, including its sub-brands such as Dollar and Thrifty, in order to improve
  its customer experience. URBN operates a set of global consumer brands including Urban Outfitters,
  Anthropologie, Terrain, and Free People. Across all its retail brands, URBN will use Stripe to streamline
  purchases at 600+ physical stores, accept bank payments, facilitate sales for curated third-party
  merchants, and more.
- New payment modalities are creating new opportunities. For example, Eventbrite and Alaska
  Airlines chose Stripe to implement Tap to Pay on iPhone. Eventbrite hosts typically don't own point-ofsale hardware, but thanks to our partnership with Eventbrite, an iPhone is all they need to establish a
  ticket office. To give consumers more flexibility and reduce costs, Airbnb and Uber chose Stripe to help
  guests and riders pay with their linked bank accounts.
- Meanwhile, media companies that have offered subscriptions for years are using Stripe to improve their customer experience. FOX Sports chose Billing for subscriptions in its new app; it saw involuntary churn drop while user retention rose by 54% in less than a year. Forbes recently started working with Stripe to grow its newsletter subscriptions with Billing. And Nikkei uses Billing for Nikkei ID, its digital platform.

# Startup formation continues despite shrinking VC dollars

Although VC funding in 2023 hit its lowest levels since 2018, we've actually seen record startup formation across Stripe. (Besides the US, the biggest increases have come from the Netherlands, Sweden, and Canada.)



Perhaps as a result of the tighter funding environment, entrepreneurs are focusing on monetising faster and enabling profitable growth as soon as possible. Startups founded in 2022, the most recent year where we have a full year of analysable data, are 60% more likely to start collecting revenue within their first year, and 57% more likely to process \$1 million within their first year, than those founded in 2019.

Checkout and Payment Links are the most common products used by startups on Stripe, because they combine power with simplicity. This year, we've made Checkout and Payment Links more customisable, with custom fields to collect tailored information such as delivery instructions or order numbers, support for no-cost orders, new buy buttons, limits for subscriptions to avoid duplicative subscriptions, and payment link limits, such that a payment link expires after a specific number of payments. With Embedded Checkout, we've also found a way to implement a very long-time feature request: you can now place Checkout directly on your site, without a redirect.

Today, one in six new Delaware corporations incorporates with Stripe Atlas, and, to date, the 50,000+ companies that have started with Atlas are on track to collectively earn \$5 billion a year in revenue. We continue to make Atlas the simplest way to start a startup, now filing your 83(b) tax option election for you – a critical tax step once easily missed by founders. We're also seeing more cross-border founding teams in the businesses being built with Atlas: this year, a record 21% of new companies with multiple founders have founders residing in different countries. For example, the founders of Dust Moto, an electric dirt bike company, reside in Oregon and London. They are set to release its first bike, the Model\_1, in the summer of 2025.

In 2023, the influx of AI companies onto Stripe grew even larger. Twice as many AI companies went live on Stripe compared to 2022, including new trailblazers such as Perplexity and Mistral. They join leaders such as OpenAI, Anthropic, and Midjourney, which continue to expand their offerings and launch new products with Stripe. Aggregate revenue from AI companies grew by 249% in 2023, and, of course, AI was a major tailwind for countless companies across Stripe that do not self-identify as "AI companies" per se.

Although headlines inevitably index on the most legible figures, such as declining venture dollars, our net assessment is that the startup ecosystem is more vibrant than ever before.

# How we engineer for reliability

Reliability in the payments industry has historically been a rather sorry state of affairs:

- Payment companies did not adopt the leading high-availability practices of technology companies. Payments APIs were flaky and had lots of scheduled (and unscheduled) downtime.
- Payment companies often made breaking non-backwards compatible API changes with little warning, causing confusion and downtime for their customers.
- Businesses were forced to integrate multiple payment providers to achieve acceptable reliability.

Our view is that Stripe should be the most reliable part of a business's stack. During Black Friday / Cyber Monday 2023 (BFCM), the highest-load part of any year, Stripe maintained uptime in excess of 99.999% while processing more than 300 million transactions. Total BFCM volume was \$18.6 billion – our largest four-day period to date – and more than 31,000 businesses had their best day ever on Stripe.

Teams at Stripe work tirelessly to deliver this industry-leading reliability, and we decided we should share a little about how they accomplish it. Because many outages at internet companies are in some way triggered by a change gone wrong, we can do so by walking through how new code gets deployed at Stripe – something that happens to one of our core API services approximately 400 times in a typical day.

Once a change is code-complete, it is evaluated by a battery of around 1.4 million tests. Stripe uses half a million CPU cores to execute more than 6 billion test runs each day. Tests ramp up in scope: from simple style checks, to unit tests that verify each component in isolation, to integration tests that verify that end-to-end systems work as expected. (These tests are often designed to exercise edge cases. For example, we ensure that all code works correctly at unusual times – on a leap day, or during a leap second.) Needless to say, if the change fails any tests, further deployment halts.

Once we've shown that a change works in theory, it's time to ensure that it works in practice. Changes are rolled out carefully and incrementally, like one of those progressive allergy tests that involves first rubbing the peanut on your skin, then touching it on the edge of your lip, and then just nibbling the peanut to see if you break out in hives at any point along the way.

Changes first go to pre-production, a mock production environment with synthetic API traffic designed to mimic realistic integration patterns. Here we check that the change can not only be safely rolled out to production, but also that it can be safely undone if required. Following this, the change then rolls out to a single production machine with a small sliver of traffic, before gradually advancing to 0.5%, then 1%, then 5%, then 20%, and so on, of actual production traffic – with pauses along the way to observe the effects (no swollen tongue!). We roll all changes out to test-mode API traffic before hitting live-mode traffic.

Each progressive rollout is inspected against 55,000 different metrics. If at any moment the system detects anomalous telemetry, the machines running the new code are automatically withdrawn from the pool and traffic is redirected to machines running an older, known-good version.

So, that describes Stripe's current approach to deploying changes, and why our reliability has historically been best in class. But Stripe was only 99.999% available last year – what happens in the other 0.001% of cases? When something does go wrong, either through the failure of systems outside Stripe or because a problematic change slips through the net described above, we declare an incident.

Through automated monitoring, we aim to detect as many incidents as possible, and our systems can automatically remediate many incidents by invoking redundant rails or enabling emergency fallback capabilities. Even with those automated systems in place, we inspect every incident manually, and have dedicated operations staff on call 24×7. (On average, 520 calls per day go out to our staff.)

The immediate fix is only the beginning of resolution – we scrutinise incidents and extract the systematic changes we should make. Defence in depth is the core principle of our high-availability work. To illustrate, let's look at the most significant recent issue which happened on 8 February 2024 between 21:46 and 21:52 UTC (as shown on status.stripe.com). It affected a small subset of traffic – the three most affected

users had 39, 15, and 12 failed payments, respectively. Still, this was the biggest incident of 2024 so far and we take it very seriously.

In this incident, an erroneous change rolled out all the way to 1% of the critical tier of traffic. As is common for incidents in highly redundant systems, multiple problems had to coincide for users to be affected. We addressed not just one but all of these problems, creating multiple defences and giving us confidence to continue innovating quickly for our users.

Reliability is just one pillar of our platform fundamentals. We expend even more energy defending Stripe against all sorts of malefactors, with similarly comprehensive mechanisms for detecting illicit activity across our platform, and for ensuring that our customers need to spend as little time as possible worrying about them. To avoid assisting attackers, however, we typically choose to say very little regarding the specifics.

# New progress in technology

Anton Howes argues that an "improving mindset" kickstarted the Industrial Revolution. "It was not a particular skill or some special knowledge, but a frame of mind – a lens through which they perceived the status quo as being imperfect, and then sought to rectify those imperfections." He describes how Edmund Cartwright, the Anglican cleric best known for inventing the power loom, was a Renaissance man who also developed agricultural machinery, fireproof building materials, and a horseless carriage, while also pursuing discovery in medicine. Various economic historians have shown that the degree to which societies foster such a cultural orientation can play a big role in determining larger economic outcomes.

We bring this up because one of the most gratifying aspects of building Stripe is witnessing the explosion in entrepreneurship and innovation that has occurred over the past 15 years, reflecting greater global adoption of this improving mindset.

We used to wonder if the trends we were seeing merely reflected a composition effect, where new companies are simply becoming more likely to use Stripe. There is certainly some of that, but we're now convinced that there is also a broader boom in firm creation: everyone from Y Combinator to the Bureau of Labor Statistics agrees.

Because Stripe disproportionately works with businesses inventing new things, we thought we'd share a few sectors that caught our eye over the past year.

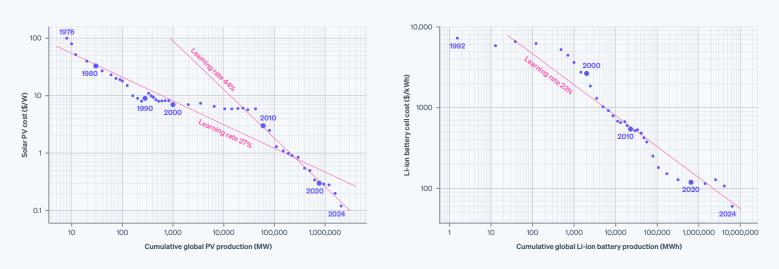
# Clean energy and carbon removal

BloombergNEF estimates that the world deployed 444 GW of solar energy last year, which is greater than all the nuclear grid capacity in the world today. In the US, this translated to around half of all new capacity added to the grid coming from solar.

There are two facts that in our opinion remain underappreciated. First, solar is increasingly the *cheapest* energy solution. We're fans of the visualisation below, showing the virtuous cycle between

manufacturing scale and manufacturing costs: cheaper solar results in more demand and more manufacturing, which further drives down costs, which results in even more manufacturing, and so on. This is known as the learning curve, and solar has been experiencing an exponential improvement. Small annual changes compound, and costs in both PV and batteries have fallen roughly tenfold in the past decade. Given that solar is already out-competing many other energy sources, the prospect of another order of magnitude cost improvement – and solar becoming difficult for other energy sources to compete with – will be very disruptive indeed. (Texas, not generally known for EV-driving progressives, deployed more solar than California last year.)

Second, the battery learning curve is proving just as durable as the solar curve. While batteries can benefit many forms of electricity generation, they're highly complementary to solar in particular, because they alleviate its inherent intermittency, and thus lower its effective cost further.



#### Source: Casey Handmer (2024)

Businesses on Stripe are at the centre of these changes in the energy sector. Barcelona-based SolarMente allows households to adopt green technologies such as solar panels, energy storage, and heat pumps with €0 upfront investment, making adoption an economic no-brainer. Utah-based Paleblue has invented better rechargeable batteries so we can finally stop throwing away billions of disposable batteries each year. Lithium demand is also growing with the increasing transition from petrol-powered cars to electric vehicles. Lilac Solutions aims to access new lithium reserves by harvesting lithium from brine in natural deposits of salt water.

So, we should feel very optimistic about our trajectory towards being able to generate abundant clean energy close to the source of consumption. The other side of the carbon equation is carbon removal, both to offset those last tricky emitters such as cement production, and to remove historic over-emissions. Luckily, there is progress to report there too. Importantly, carbon removal is not carbon offsets, where you pay someone to tell you that they would have otherwise emitted carbon but now won't. Carbon removal means mechanically sucking carbon out of the atmosphere. It's a nascent space: when we set out in 2020, we were the first-ever buyer for three of the four companies we purchased from. The positive feedback we got from these companies inspired us to launch Stripe Climate, which is now used by tens of thousands of businesses to buy carbon removal. Since then we've joined forces with like-minded partners to found Frontier, a \$1 billion advance market commitment (AMC) to show clear demand and accelerate the development of carbon removal technologies down the cost curve and up the volume curve. In part thanks to an order of magnitude more purchases from private companies as well as the US Government, carbon removal companies are progressing quickly. As just one example, in 2022 Frontier became the first customer of Lithos, buying 640 tons of carbon removal. Lithos harnesses the natural ability of rocks to absorb CO2 by spreading ultra-fine basalt on farmland. This year, as part of a \$57 million offtake from Frontier, Lithos is on track to deliver more than 25,000 tons – a 40× scale-up in just two years.

### Robotics

There is a sense of change in the air in the world of robotics. Transformers and LLMs are allowing for better agentic behaviour, perception is finally good enough for many real world uses, and actuators and batteries keep improving.

Scythe Robotics has tackled the tedious task of mowing the lawn with autonomous, electric lawn mowers. (And getting rid of ghastly two-stroke lawnmower engines in the process! Due to having worse combustion than a four-stroke car engine, a single hour of operating a petrol-powered mower produces the same amount of smog-forming pollution as driving a petrol-powered car 300 miles.) Matic is delivering the first fully autonomous robot vacuum that finally works (and can mop!). It uses better cameras and sensing to build a full 3D model of the home and not bump into everything in its path. Richtech Robotics built a squad of robots including a production arm, a waiter, a hotel delivery robot, and interactive robot bartenders, baristas, and chefs. Manna Aero is finally making drone delivery happen, supplying coffee



Richtech Robotics ADAM

and sandwiches from autonomous drones to patrons in its two pilot sites in Dublin and Texas. Its drones can make 7–8 deliveries per hour, fly at speeds of 50 mph, and cost one-tenth of what a human delivery would cost. Bright Machines has over 100 microfactories, made up of robotic cells strung together to create assembly lines. These microfactories manufacture and inspect a variety of goods, from electronics to home appliances, and can significantly cut production costs. Dexterity started in a Stanford lab, and quickly developed into a full-stack warehouse robotics company with deft robots, which can work alongside humans for companies such as FedEx to pick products, move pallets, pack boxes, and handle complex manipulations in unpredictable environments.

### Farming

Everyone knows about the astonishing growth in agricultural productivity driven by twentieth-century advances such as the Haber-Bosch process. But did you know that per-acre corn yields in the US have grown by around 30% since 2000? Improving mindset! There are still many opportunities for refinement in our agricultural technologies. By marshalling data more effectively, these improvements often reduce costs while also reducing fertiliser, pesticide, and water use.

FarmHQ from the Skagit Valley in Washington state upgrades traditional irrigation systems with remote monitoring and control via a mobile app, giving farmers finer control over water movements. Under typical irrigation conditions, FarmHQ saves 500,000 gallons of water and reduces farmers' labour and input costs by \$2,000-\$5,000 per device annually. Aerobotics, based in South Africa and San Francisco, uses drones and AI to help farmers assess the health of trees and citrus fruit. And while agricultural production was historically limited by land as input, OnePointOne is using aeroponic techniques that don't need land. (Aeroponics has the additional benefit of growing plants faster with less water and fertiliser.) It runs a 12,000-square-foot vertical farm in Arizona that produces 250 times more plants per acre than a traditional farm.

### The abundance of beauty

What determines the extent to which the things we introduce into the world are beautiful? There are no simple answers, but human capital and simple cost are two major constraints. Talent networks explain why bread in France is better than bread in Florida, and cost considerations explain why modern buildings have plain finishes rather than elaborate mouldings.

Recent technical advances address both of these bottlenecks, and may make beauty more ubiquitous in both grand and prosaic ways. Thanks to Midjourney's beautiful Al images, every menu can feature custom illustrations (even if the food changes every day). Suno provides surprisingly good Al-generated music – we see the possibility of infinite intricately-tailored songs. Runway not only lowers the barrier to entry for creators, but also increases their productive output - a video that would have taken five hours to capture and edit now only takes five minutes. With The New Black, you can create that custom azure seguin trouser suit you've been thinking about. And Monumental Labs is building Al-enabled robotic stone-carving factories to create highly ornamented classical structures on a mass scale. Perhaps we'll eventually see the return of columns, gargoyles, or even the emergence of a new type of elaborate architecture. Importantly, many of these businesses couldn't exist without the scale afforded by the internet economy. Training these models is time-consuming and expensive, and it's only with a vast customer base that it makes sense to invest the capital costs that ensure that marginal use can be close to free.



Monumental Labs

### Join the conversation

The improving mindset is a powerful thing. The internet economy is seeing tremendous progress thanks to it, and we try to bring it to our small corner at Stripe to deliver better financial infrastructure through many small investments that compound over many years.

If you share our interest in the possibilities of the internet, and technology-driven improvement more broadly, we would love to host you at Stripe Sessions, our in-person annual conference, on 23-25 April, at the Moscone Center in San Francisco. You'll hear from businesses building on Stripe, and we'll share updates on our own progress. You can register at sessions.stripe.com.

We sadly lost Charlie Munger last November. Few better articulated a complete philosophy of business: an interdisciplinary mindset, patience, due regard for incentives, relentless elevation of substance over appearances, an uncompromising view of integrity, and, above all, mutually beneficial value creation as a lodestone. We just republished Poor Charlie's Almanack, both in print and, for free, online. We recommend his wisdom to everyone who's curious.

Best, Patrick and John