

Vol. 1



Huge Moves™

2023

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# Huge Moves™

# 2023

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Photography by Weston Wells

# Editor's Letter

What is a huge move?

That is the question we sought to answer in the pages of this new publication.

In business and in life, huge moves are what define us. At Huge, this is not a catchphrase, but our purpose. We seek to help brands make huge moves in the world. But first, we must define what that means at this moment in time.

This inaugural issue features 10 Huge Moves for 2023. Expressed as 10 long-form features, each “move” covers the people and actions we believe will shape the world in the year ahead. We are grappling with some of the biggest ideas and issues of our time, including supply-chain innovation (p. 14), circular fashion (p. 22), modular design (p. 44), the evolution of smart contracts (p. 72), and the new realities of our modern workplace (p. 88).

This is not a moment to merely report what we see. We are going deep, with careful analysis and a considered point of view. We see the world through the lens of design and technology and embrace the drumbeat of humans and machines working together. We welcome technological progress with a healthy dose of skepticism, first questioning whether its breakthroughs will improve lives.

We've all struggled with the unexpected challenges of a global pandemic, and yet, ever aware of our common frailties, we can't help but be bullish on the future. At Huge, we believe in the power of storytelling. And with each new subject, we're telling stories about tomorrow. Preparation, after all, is a mark of resilience.

The cover of our inaugural issue captures this spirit. The images were created as a collaboration between human designers and artificial intelligence. A human prompted AI-enabled software with a few lines of text describing the concept of “moves,” which generated images conceived by the machine. Subsequently, designers took these images as inspiration and redesigned them to suit their own imaginations; what you see on the cover is the result of that exchange.

Huge Moves lives at the intersection of creativity and technology, and our inaugural cover celebrates this evolving identity.

But what would be the point of launching if the magazine itself weren't a huge move? It's huge because it rejects the notion that we can only absorb clickbait, and instead bets on our ability to embrace long-form storytelling. But most importantly, our content isn't an advertisement.

As opposed to branded content that is influenced or sponsored by a specific brand or company, our magazine is editorially independent. It has been reported, written and edited by professional journalists and experts in their respective fields — some of whom are on staff at Huge. Our intention is not only to provoke, but to earn your trust.

I hope Huge Moves fires your curiosity about the future and helps you prepare for it. More importantly, I hope it inspires you to make huge moves of your own.

Happy reading,

Jennifer Leigh Parker  
Editor in Chief, Huge Moves



# Mat Baxter on the Making of Huge Moves

Ahead of the launch of our debut publication, I sat down with Huge CEO Mat Baxter and asked him to help define Huge Moves. Here, an excerpt from our Q&A:



Photography by Weston Wells

## Why did you decide to green-light this magazine?

**Baxter:** We're advocates for storytelling. To brands, we'll say: "The best way to grow is to tell great stories and engage with audiences." All we're doing is exactly what we've recommended clients do for 20 years: Tell a great story, grow your business.

## Let's practice what we preach.

Almost no ad agency runs ads for itself. Isn't that the height of irony? If you really believe in the power of advertising, why wouldn't you spend it on your own business? There's a contradiction there that is pretty irreconcilable.

## Historically, Huge has been digital-first.

### Why publish a print publication?

It brings a degree of gravitas to the brand. It makes it feel more real and tangible. We're publishing the magazine in both physical and digital formats because that physicality adds meaning and a degree of confidence.

## We're producing an independent magazine, instead of sticking to white papers or pay-to-play branded content. Is that a huge move for this company?

Yes, because I'm not in control of what's being written. There's an independent voice for the brand that is unencumbered and uninfluenced by the agendas that exist in the business more broadly. We want an independent, objective editorial voice for the brand. We want to be provocative and audacious. And we want

that to be free from those business-centric concerns that often bleed into these sorts of things.

We've been very intentional in saying that Huge Moves should run as an independent, separate part of the business. It's producing compelling content that only has one objective — to engage with an audience.

## Do you believe that the craft of journalism can thrive within this context?

Of course. But it doesn't thrive when it's constrained. The craft of journalism is about an independent voice and objectivity. You can't have a journalist being directed; look at some papers where that's happened, where journalists are being told what to write and what's off-limits. Those outlets have lost all credibility, because they're not celebrating and living the craft of journalism.

## Each year, we'll publish the 10 Huge Moves we think will change the business world in the year to come. Is futurism part of Huge's DNA?

Oh, 100%, because you can only guide brands if you've got a point of view about where they need to go and what they need to do. That means you've got to have an idea of where the world is going. And so futurism is the mechanism by which you strategize for brands.

## You've got to stay ahead of the curve.

You do. This industry is all about looking ahead and having the skills, the talent and quite frankly the courage to look forward and plan in an accurate and hopefully inspiring way.

A lot of the most established brands in the world are the ones struggling the most with that. Their businesses have so much legacy and heritage, they haven't been able to look to the future and free themselves of the past. The days of brand pedigree and heritage playing a really important role in young people making a decision to buy a brand or not: Those days are waning.

## Do you see this publication as part of the overall transformation at Huge?

Yes, because it sets a beacon for the company to say: Here are some of the themes that are huge moves, and it provides that reference point not just for our clients, but for our own people.

If you don't know what huge moves look like, how are you meant to deliver them for your clients? It's as much about articulating and educating our own people as it is about educating our clients. There's a duality in that strategy. You've got to do both. Educate internally to facilitate externally.

# Contributors

# 20 23

### Ben Ryder Howe

Ben is an author and frequent contributor to the New York Times, The New Yorker, and other publications. He is a former senior editor of The Paris Review. For this issue, he penned the feature story "Wake Up Call," (p.14) capturing the human side of the supply chain crisis.



### Charlotte Kent, PhD

Charlotte is the assistant professor of visual culture at Montclair State University and an arts writer covering contemporary art, digital culture, and the rise of blockchain. Her story "Chasing Provenance" (p.72) is a deep dive into the world of modern smart contracts. (Photo: courtesy Danielle Ezzo)

### Ana Andjelic

Ana is a brand executive and author of "The Business of Aspiration." Named twice to Forbes' Top CMO lists, she is a widely read columnist, speaker and advisor. For this debut issue, Ana contributed a provocative essay on "The New Rules of Work." (p.88)



### Mary Holland

Mary is a South African writer based in New York. She has written for the Financial Times, How To Spend It, Architectural Digest, and other publications. She is also the New York correspondent for Monocle Magazine. Her story "Natural Beauty" (p.22) explores the future of circular fashion.

### Ian Volner

Ian is a published author of numerous books about architecture and design. He regularly contributes articles to The Wall Street Journal, Harper's, and The New Yorker among other publications. His feature "Out of the Box" (p.44) covers the modular design movement.



### Sean Pressley

Sean is a Brooklyn-based photographer originally from Charleston, South Carolina. Beyond portraiture, his practice explores broad socio-economic subjects such as labor, infrastructure, and commerce. His work has appeared in The NY Times, The Wall Street Journal, and Architectural Digest among other publications. (p.36)



### Weston Wells

Weston is a New York-based photographer who captured Huge staffers in their element, at work in Brooklyn, for this issue. "This assignment was such a gift as it was essentially portraiture of creatives. One of my favorite things to shoot!" His stunning portraiture has appeared in publications such as Esquire, Departures and How to Spend It. (p.6, 8, 110)



# Huge Moves for 2023

# 10

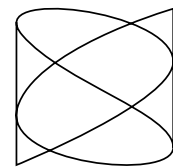
Our look at the most important people, businesses and ideas set to make a lasting and material impact on the world.





## Wake-Up Call

The global supply-chain crisis exposed catastrophic risks in the system of delivering goods. Will the first responders of tomorrow be men or machines?





Long before anyone had heard of COVID-19, Anne Snowden worried. One of Canada's top healthcare experts, Snowden spent a lot of time feeling anxious about supply chains, which she thought would be highly vulnerable to breakdown in a calamity such as a pandemic, jeopardizing the delivery of exactly the sort of goods (masks, antibiotics) that would be most needed in an outbreak. Cheerfully but with bracing directness (Snowden is a former nurse), she told people so — in lectures, journal articles and hallway conversations with colleagues at the University of Windsor, where she teaches at the business school. Almost no one listened.

"I could give a keynote talk. I could write manuscript after manuscript. It didn't matter. People said, 'You're just fear mongering. It's not that bad.' And I kept saying back to them, 'Really?'"

Today, as the global economy struggles to shake off exactly the sort of mass disruption she warned of, Snowden, who is also chief scientific officer at the Healthcare Information and Management Systems Society, says she takes little comfort in being right, except in one respect:

"People have finally figured out that supply chain matters," she says. "There's an awareness of the problem, and that alone is a great thing."

But that hasn't stopped her from worrying. On the contrary, she says, the same problems still exist, and "the solution isn't even close at hand." Moreover, "it's not going to be a small, easy, quick fix." The supply-chain crisis, the catastrophe lying in plain sight until COVID-19 forced the world to acknowledge it, has the potential to flare up once again even quicker than last time, leaving empty shelves, empty showrooms, stalled ports and crippled economies. That day when you went to the store and saw nothing but blank space where the tampons or toilet paper should have been could recur tomorrow. In fact, the woman who predicted it before sees it as likely.

Supply-chain issues are devilishly complex by nature: Goods are delivered on container vessels larger than the Empire State Building, traversing Odyssean shipping routes, yet somehow managing to meet precise, just-in-time deadlines. Such a system is inherently susceptible to paralysis and breakdown, and if the public doesn't realize it, so much the better from the perspective of producers hoping to provide seamless, friction-free buying experiences.

"Before the pandemic, nobody talked about it except for FedEx, UPS, Amazon and suppliers," says Jesse Searby, managing partner at Thomas H. Lee Partners, a Boston-based private equity firm with substantial investments in supply-chain-related businesses. "Now it's the topic of every boardroom."

Snowden wasn't alone in worrying about it before the pandemic. In 2016, an earthquake struck Taiwan, where nearly all the world's semiconductors are made, leading to shortages affecting a range of critical industries, from carmakers to Silicon Valley. The recovery was relatively quick, but many saw the incident as a



# F1

Photography: Unsplash

"At the end of supply chain is human life," she says. "My definition of supply chain is who lived, who died. The piece we've been missing is outcomes. And in order to track outcomes, you need a digital automated infrastructure."

Anne Snowden  
Chief Scientific Research Officer at HIMSS

warning. Questions about readiness and the vulnerability of a system balanced on a knife-edge were left unanswered.

The current, much larger crisis is estimated to have cost the U.S. and European economies up to \$4 trillion — in one year. Is the supply-chain crisis a design flaw? Is it a structural phenomenon built into a globalized economy? Are the solutions a matter of summoning the political will, or are they technical and technological? Did the pandemic yield any lessons?

Searby thinks it did. "Before the pandemic," he says, "we rarely saw machines replacing humans. Now you're seeing more conversation along the lines of, 'Is it time?'" Companies need predictable labor, and along with the supply-chain crisis we've had a labor shortage. So a lot of folks are making those choices."

Of course, faced with a choice between a toilet-paper shortage and the rise of the machines, some prefer the security of an older system. It's a lively debate. Critics contend that even if robots don't replace humans, they could drive down wages and reduce employee leverage. (Robots never get sick or demand raises.) Supporters, on the other hand, argue that automation is a job creator, increasing productivity and opening markets.

BETA Technologies, a Burlington, Vermont-based startup, shows how cutting-edge supply-chain innovation has the potential to unlock new dimensions of the economy. BETA manufactures battery-powered cargo planes that can take off and land like helicopters and fly the distance between New York City and Boston on a single electric charge. The company has attracted nearly a billion dollars in funding, with investors like Amazon and customers that include UPS, which see the planes as potential green replacements for cargo vans serving the critical "last mile" in the supply chain. The Alia, BETA's Cessna-size single-engine turboprop, is decidedly human-centered, its cockpit manned by one or two traditional pilots. However, because BETA's aviation technology represents an entirely new way of flying, thousands of new pilots would have to be trained and employed, adding to an already booming job market.

Moreover, Blain Newton, chief operating officer of BETA, sees the plane as a potential catalyst for opening new regional and local delivery markets. "It's about moving things through a network," says Newton. "Ultimately,

you're building capacity and transporting more goods. Alia changes the entire topography of that network and allows more throughput to the existing system."

As an example, Newton cites Resonant Link, a "cool little startup" also in Burlington. Resonant Link builds ultra-fast wireless chargers for electric vehicles in medium-duty work roles. "Think of your phone charger, but for a forklift," says founder Grayson Zulauf. Charging cables operate at sizzling temperatures and are highly susceptible to meltdown, while wireless contact chargers power up more slowly and take up valuable space. Moreover, current technology typically requires a vehicle to go out of service while it recharges. Resonant Link, on the other hand, is pioneering technology that allows industrial fleets — robots and lift trucks — to power up as they work via charging networks embedded in factory or warehouse floors. Not only does the company's system make charging easier for operators, but their wireless charging system enables "more throughput" — Zulauf smiles as he says this — "with the same real estate and a smaller number of vehicles, and enables full autonomy as our customers work toward lights-out operation."

Resonant Link is also using its wireless recharging technology to develop a new generation of medical implants. Newton calls the overlap between healthcare and logistics "huge": In both areas, he says, the challenge is to increase accuracy through automation.

"Look at smart glasses," he says. "The technology was used by logistics and manufacturing companies for things like quality control through automatic bar-coding. Then it bled into healthcare settings, where it's been used to reduce medical error as meds are administered."

This doesn't go far enough for everyone, however. For Snowden, fixing the supply chain — if we ever get serious about it — means creating awareness of whether it is succeeding or failing, something the pandemic and all its attendant shortages made progress toward, though not nearly enough.

"At the end of supply chain is human life," she says. "My definition of supply chain is who lived, who died. The piece we've been missing is outcomes. And in order to track outcomes, you need a digital automated infrastructure."









Photography by David de Vleeschauer

Such an infrastructure would capture vastly more data than the current system, according to Snowdon.

"I can show you several hospital organizations in North America with a high level of digital maturity," she says. "Can they track and trace every product, every patient who receives that product, every team that delivers the care with that product to an outcome? Almost never. That data infrastructure doesn't exist. We don't have defined outcomes that are measurable or tracked, and therefore we cannot know."

Does such a system exist anywhere? In Taiwan, every citizen has a personal health record centrally stored in a national database. Health officials look at the records and decide, "OK, here's the 15% of our population most likely to have tragic outcomes with COVID," says Snowdon. "Before the pandemic they immediately wrapped home-care services around them. As a result, their deaths were in the single digits."

In the end, it boils down to leadership, says Snowdon. Is supply chain a priority? "If you're the supply-chain lead for an automotive company or an airline manufacturer, you have the corner office overlooking the lake. In healthcare, you're in the basement with a lightbulb hanging out of the ceiling."

Matthew Verminski, vice president of engineering at Desktop Metal, has spent decades in the supply-chain industry, including in a founding role at Kiva Systems, which became Amazon Robotics, the leading manufacturer of automated storage and retrieval systems in the world. Verminski, too, is cautiously optimistic about overcoming the challenges facing the system.

"There's a lot we can do, and a lot of people are trying to solve it," he says. "The challenge is to rebuild manufacturing capabilities in the U.S.," an area where he points to the leadership of Jeff Wilke, Amazon's recently departed Worldwide Consumer CEO. Wilke has launched a high-profile, well-funded bid to reinvigorate America's base of production with Re:Build Manufacturing, a Massachusetts-based company.

"The whole supply chain doesn't need to get rebuilt here," says Verminski, "but the closer you can get products to people, the better." He sees "a trend toward local," whether it's micro-fulfillment centers or agricultural startups building micro-farms near or even in cities. "There are significant efforts to make advanced technologies happen here."

Such efforts may end up impacting more than the availability of baby formula at Walmart. Automation has the potential to become the central issue of the coming decades, influencing not just the global economy but reengineering the social fabric. Forward-thinking business leaders such as Wilke, who is credited with growing Amazon from a company generating nearly \$4 billion in annual revenue 20 years ago to more than \$1 billion a day in 2022, have prioritized onshoring futuristic technologies such as 3D printing and advanced materials partly as a way to ameliorate the disruptions. Of course, technology has a way of proceeding on its own, or making us feel as if it does. But Snowdon says that even if you wanted to, you could never factor humans out of the equation.

"It's always about people and processes," she says, "then technology."

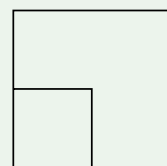






## Natural Beauty

How a modest Italian textile manufacturer called Manteco, in operation since the 1940s, has positioned itself to influence the future of circular fashion.







Archivio Manteco in Montemurlo, Italy



Final quality check

It was in 1943 that Marco Mantellassi's grandfather launched Manteco in Prato, Italy, out of necessity. The war was devastating the country, leaving it isolated and with no access to raw materials, except for a surplus of high-quality wool blankets and military garments. Enzo Anacleto Mantalessi saw a solution: to spin these threads into fibers that could be reused to create new textiles.

Eighty years later, Manteco still uses chemical-free processes to spin threads as a replacement for virgin fibers. The company has grown significantly, there's two co-CEOs (Enzo's grandsons) and new processes and materials have been innovated. And once again, Manteco finds itself at the forefront of a new necessity in clothing.

The fashion industry is at a critical point. The facts are clear: More than 8% of global greenhouse gas emissions come from the apparel and footwear industries, it's the second-biggest consumer of water and is responsible for 2% to 8% of global carbon emissions, according to the UN Alliance for Sustainable Fashion. Worse still is the increase in the purchase of clothes. The U.N. found that the average consumer buys 60% more pieces of clothing than they did 15 years ago. Each item is kept for only half as long, and every year more than 11.3 million tons of textile waste is disposed of in American landfills. Only 13% of textiles get recycled.

By 2025, two-thirds of the world's population may face water shortages, (according to the World Wildlife Fund), this will partly be because of textile production. For a mostly unregulated industry, where shoppers don't have access to the most basic information, like transparency and traceability of garments, the uphill climb to improvement can feel insurmountable.



Virgin wool fibers in the Manteco warehouse

While many brands are lagging, there is some progress. A wave of savvy suppliers are supporting fashion houses by investing in a circular economy through take-back programs and by innovating new fibers in more responsible ways. By providing luxury and fast-fashion brands access to innovative textiles and deadstock fabrics, there's mounting pressure on brands to buckle to the industry's most important new trend. These textiles could be game-changing, and already there have been some early adopters.

Danish cult brand Ganni, known for its forward-thinking approach to responsible fashion, has been collaborating with various innovative textile brands (including Manteco), even though it's not immediately favorable for their bottom line. "You need to partner with fabric innovators to help them mature and scale their offerings," says Nicolaj Reffstrup, founder of Ganni. "This requires investments without an immediate ROI, and as such — and this goes for anything that pertains to responsibility — you need to anchor your ambitions to your shareholders. Without their support there will be no profound progress," he adds.

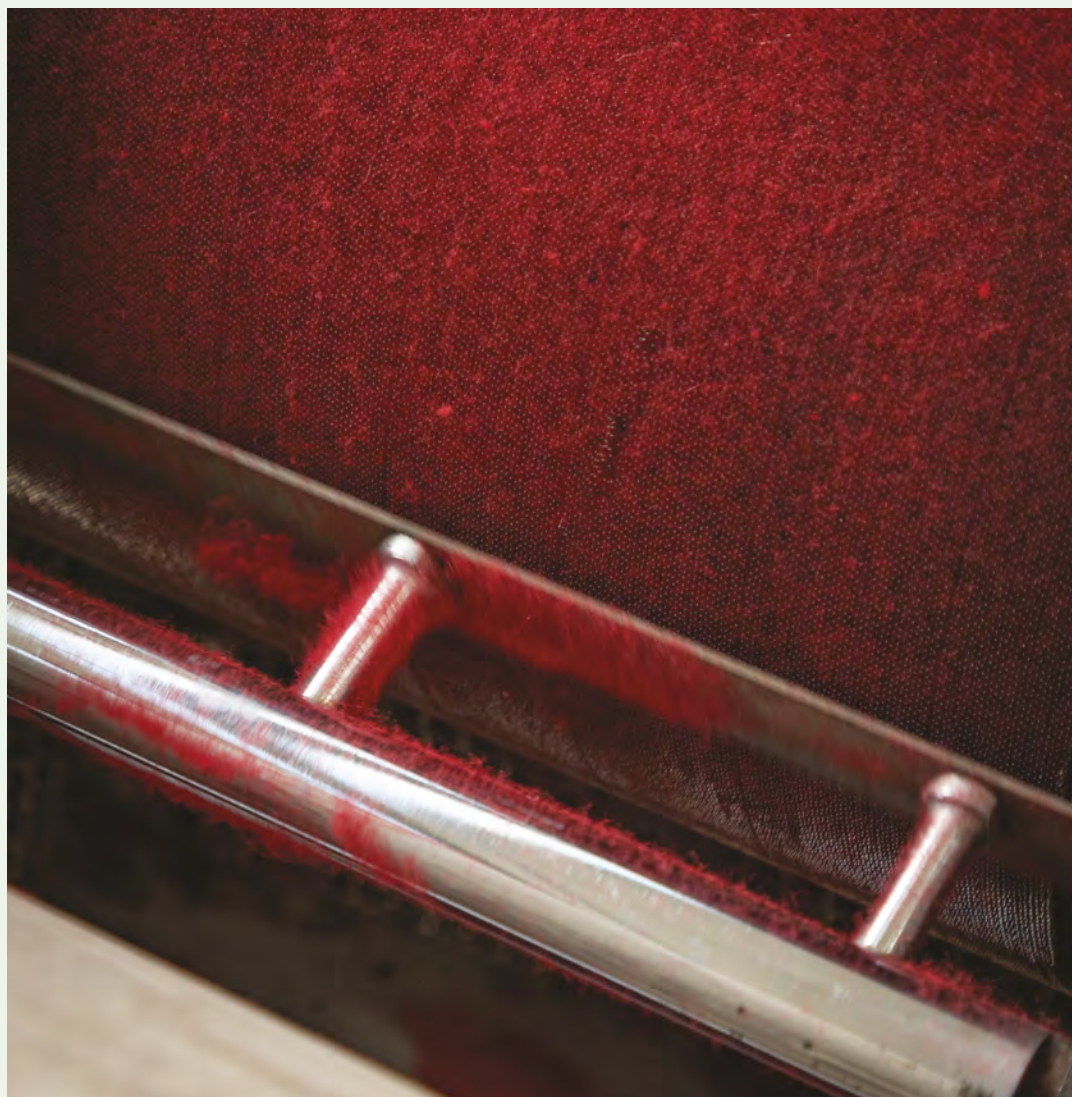
Manteco is proving luxury fabrics don't have to be produced from virgin fibers and has created a system where old cashmere and wool threads can be recycled into raw materials. Today, the need for this is arguably even more critical than when the company started out. "We have always relied on our heritage, but we have also kept an eye to the future. Research and innovation are key parts of our DNA, just like a circular economy and a sustainable approach," says Marco Mantellassi, co-CEO. Though the luxury supplier is not a household name, most people will certainly have heard of the high-end brands it partners with (including LVMH and Kering Group).



Through low-impact mechanical processes (one of which uses no water) developed in their on-site innovation lab, Manteco creates wool and cashmere textiles from old garments and fabric scraps gathered in the U.S. and Europe; these get hand-sorted at the mill according to color and composition (no dyes or chemicals are used in any of Manteco's products). One of their main secondary wool fibers is MWool, a high-end recycled wool made from a combination of pre-consumer scraps and post-consumer garments. Beyond using old textiles that would otherwise be landfilled, the fiber has an incredibly low impact. As converting fiber into fabric can create carbon emissions, companies need not only look at how to create circular textiles, but carbon reduction through energy efficiency. For a forward-thinking company like Manteco, this has long been a priority.

Through a life-cycle analysis report (with the Politechnic University of Turin), Manteco was able to determine that 1 kilogram of MWool has a carbon footprint of 0.1 to 0.9 kilograms of CO<sub>2</sub> equivalent (CO<sub>2</sub>eq), as opposed to virgin wool fibers, which release 10 to 103 kilograms of CO<sub>2</sub>eq. "We measure every single step of production and movement, defining the impact," says Mantellassi. "We saw that this was saving 99% of water and energy." Through their take-back programs (called Project 43 and Project 53) Manteco invites manufacturers to give back clothes or textile offcuts that haven't been used or sold. It's a service that's based on traceability. "We're giving brands the chance to solve a big problem, which is their unsold garments that cannot be repaired," says Mantellassi, adding that the company is also committed to transparency and works closely with their clients, providing not only the fabrics and valuable guidance but labels with QR codes that help shoppers understand how the product was made, every step of the way. "We want to give companies the chance to provide customers with as much transparency and traceability as they can. It's very important that it's a vision we can share together," says Mantellassi.

With traceability, not only are brands held accountable, but buyers can understand the path a garment takes before it winds up in their hands or on their doorstep, nudging them to make better choices. At Queen of Raw, an online marketplace for deadstock fabrics, the company is able to track and trace the lifecycle of textiles through innovative software and databases. Through the software, they've unlocked thousands of warehouses holding reels upon reels of deadstock fabric, while also automating an on-boarding process and centralizing everything in one place, in real time. "All we need is an email to add partners to the chain with immediate access to excess inventory globally," says Stephanie Benedetto, CEO and founder of Queen of Raw. These are then easily linked to companies (including Fortune 500 enterprises) which can manage excess inventory across their supply chain. "For every product that passes through our exchange, we know what it's made of, where it sits, who it ships to, whether it's recycled, reused or sold. It also generates a QR code, so the buyer can see whether this is certified deadstock," says Benedetto.



# F2

Post-consumer wool garments divided per color and composition.

"This stuff traditionally gets landfilled or burned. So by keeping it in circulation and allowing brands to sell it and make money, there is an impact I can measure on the blockchain and report on," says Benedetto, who has seen fashion companies also reuse the fabrics internally between in-house brands. And why wouldn't they? When brands purchase deadstock fabric, not only does it skip the landfill, but ultimately the companies save money, too. Many of the textiles on the Queen of Raw exchange are high-end, valuable stock ideal for luxury brands, but Benedetto is determined to infiltrate the fast-fashion sector, too. "Unlike many people in the sustainability community, I have to and want to work with fast fashion. Of course they are a big part of the problem, but they are also a big part of the solution, and I can't ignore them," says Benedetto, whose company signed a white-paper solution with H&M and has more deals in the pipeline.

"It takes multiple approaches," says Bédard, of addressing the fashion industry's toll on the planet. "It will require an adjustment for some companies' business approaches, especially the ones that have been so focused on producing disposable goods or pushing people to buy lower-quality items that they're wearing fewer times. It's going to require a shift in all those approaches in order to get to where we need to go."









Virgin wool spinning scraps that will be reused

“It will require an adjustment for some companies’ business approaches, especially the ones that have been so focused on producing disposable goods or pushing people to buy lower-quality items that they’re wearing fewer times. It’s going to require a shift in all those approaches in order to get to where we need to go.”

Maxine Bédat  
Executive Director at New Standard Institute

It’s true that fast-fashion brands are starting to follow suit, and this is thanks in part to companies that are producing more affordable, innovative fibers made from old threads. Renewcell is a Swedish company that produces a textile called Circulose®, developed through a process of dissolving pulp made of 100% recycled textiles, utilizing 100% renewable energy from Swedish hydropower. It was founded by an entrepreneur and two scientists, who discovered how to recover the cellulose from tattered high-cotton clothes that would otherwise go to landfills. The pulp offers an alternative to viscose fibers, usually produced from wood pulp, which requires almost double the resources, energy and water. Already the brand has worked with Zara, H&M and Levi’s, as well as fabric producers in Asia and Europe. By the end of this year, Renewcell will be producing at a commercial scale in its new factory: more than 120,000 tons of fabric per annum, all from textile waste.

Another new fiber made from post-consumer waste and textile waste is Infinited Fiber, which was founded in 2016 and already has two pilot sites in Finland. The fiber, called Infinna™, is made from textile waste that is made from 88% cotton, is collected and sorted, then goes through a six-step process — all fueled by renewable energy, which is readily available in Finland — before becoming Infinna, which feels similar to cotton. The company is still in its pilot phase but has worked with H&M and has an agreement with Zara’s parent company Inditex for more than \$100 million. Infinited Fiber has big visions to scale up the process by licensing the technology globally. Though they’re currently focused on using high-cotton inputs, they say that the technology will also work with many other cellulose sources, like used newspapers and cardboard and even agricultural discards like rice and wheat straw.





The warping of yarns at Manteco

Manteco has a few fast-fashion capsules in the pipeline and has collaborated with Zara, but an important pillar of the company is to produce long-lasting items.

“No matter whether something is recyclable or not, if it’s not durable, then you’re not going to get the sustainability you want. Sustainability is slow fashion because it’s something you keep in your closet. It’s something you pass on to your children,” says Mantellassi.

One of the company’s most recent innovations is VITA, their most durable fabric yet, which is held up against strict performance standards in pilling, abrasion resistance and tensile strength. “It’s five times stronger [than standard testing protocols],” says Mantellassi. “With VITA we can create quality that lasts for a long time.” And not just for fashion but in other areas like the automotive industry, too.

There’s a strong argument to be made that we should be investing in garments rather than obsessively consuming everything we see on Instagram, but we also have to be realistic. “Avoiding consumption will always be the most responsible choice; however, unfortunately,

there’s nothing indicating that the industry growth is slowing. Fashion isn’t going away,” says Refstrup. Benedetto has the same thinking, in that only by acknowledging the realities of the industry can we tackle the issue. “Everybody in this community wants to talk about how we have to change consumption. And yes, we do, but if we want to solve this we’re not going to change consumption overnight. We have to meet consumers where they are. I’ve always said that we should keep waste in circulation longer and allow companies access to buying and selling deadstock. Yes, ultimately I want brands to have less waste, but

I want to meet them all here,” she says. It’s also not entirely up to consumers. How can we expect people to know how their garments are produced if they can’t access basic information on traceability? “There’s a lot more education that needs to happen, but it’s also about recognizing that we can’t require individual consumers to get a Ph.D. in choosing a pair of jeans,” says Maxine Bédât, director of New Standard Institute, a non-profit that pushes for a more responsible fashion industry. “It really is a regulatory issue that needs to be solved. That’s what regulators should be doing; that’s their job.”

Much like the automotive industry, which has benefited from both preempting and adapting to increased regulation, Bédât sees fashion following a similar trajectory. For now, companies will need to take bold approaches and weigh up the ultimate environmental costs over short-term profit maximization.

“Behaving responsibly short-term will cost money, and there’s no immediate ROI,” says Refstrup. “Hopefully, longer-term partnering with innovative materials suppliers will allow them to mature their offerings until they achieve commercial viability.” With suppliers offering more responsible options that make it easy for both luxury and low-end brands to pivot, excuses are running out.

“Leadership in companies would be wise to get ahead of these issues,” says Bédât. “Not just because it’s the right thing to do for their business but because it’s the right thing to do for society.” Now more than ever before, it’s a necessity. And companies like Manteco don’t see any other way. “It’s so important to reuse what we have already created,” says Mantellassi, with a sense of urgency in his voice. “Only through take-back programs can we try to save the planet.”



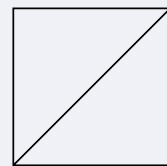
“No matter whether something is recyclable or not, if it’s not durable, then you’re not going to get the sustainability you want. Sustainability is slow fashion because it’s something you keep in your closet. It’s something you pass on to your children.”

Marco Mantellassi  
Co-CEO, Manteco



## Back in Business

As travel demand roars back, outpacing supply around the globe, premium seats remain a critical profit driver in commercial aviation. Here, an inside look at the battle for business class.







Eric Zipkin, president, and his brother, David Zipkin, co-founder and chief marketing officer of Tradewind Aviation at the Million Air FBO in Westchester, New York. Photo by: Sean Pressley

This is a David and Goliath story. It's about the little guys punching above their weight, stealing market share from the big legacy carriers — but Goliath isn't giving ground willingly.

First, you need to meet Eric and David Zipkin, two brothers who are markedly modest in the flashy business of private aviation. Back in 2001, they co-founded Tradewind Aviation with just one plane, an eight-seat Cessna Caravan turboprop. As David recalls: "I remember the day we picked up the Cessna in Maine, sat on the plane and kinda looked at each other and said, 'Now what?'"

Since launching, they've never done a roadshow to attract investors, and they've never tapped the capital markets. "We never wanted the debt, and we didn't want to grow beyond our britches," adds David, at ease in a gunmetal-gray designer suit that matches his chief-marketing-officer polish. His comments come amid a field of overleveraged airlines with investors to answer to on a quarterly basis. Often, the result is overextending flight capacity and underdelivering on service. The fact that Tradewind is self-financed takes some of that pressure off.

David has to raise his voice to be heard above jet engines taking off from the busy private wing of New York's Westchester airport called Million Air. It's a gauche name for a fixed-base operator (FBO), known in the industry as glorified gas stations, but this particular location, which features a golf simulator and ski-lodge-style lounge, was built by the Texas-based family behind the Mary Kay makeup empire to service a wealthy clientele. As Eric quips, "The more fuel you take, the more welcome you are."

Today, Tradewind operates private charters to more than 100 regional destinations, plus scheduled shuttle service throughout the Northeast and Caribbean with just 23 planes. Twenty new Pilatus PC-12 aircraft are ordered and on the way, at a list price of roughly \$6 million each. It took until now to grow like gangbusters. "We were deeply in the red for four months during COVID. Everyone was. Fortunately the business came back very strong," adds David.

When asked whether they're taking market share from legacy carriers, their answer is yes. Eric, the president of Tradewind, even quantifies it: "Ultimately an 18% reduction in capacity on the legacy side is very close to an 18% increase in demand for us, because for every airplane, a certain percentage of those travelers are potential customers of ours."



Tradewind's Pilatus PC-12 airplane at the Million Air White Plains terminal in New York.

Photo by Sean Pressley

## The Trillion Dollar Question

To be clear, there isn't a solid consensus on exactly when corporate travel will return to its former glory days, if ever. Some sectors need to pound the pavement and see customers, while others can operate virtually. But the data is bullish. Most industry forecasts show corporate travel ramping back up within two to four years, including the Global Business Travel Association (GBTA): "The global business travel industry continues its progress towards full recovery to 2019 pre-pandemic spending levels of USD \$1.4 trillion."

The question is: Who gets that money? It's been a turf war ever since U.S. airlines accepted more than \$50 billion in federal aid, and two years later still managed to anger hordes of passengers during the summer of 2022 hellscape of lost luggage, canceled flights, staff shortages and mass delays in what seemed like every traveler's worst nightmare. Amazingly, all this customer dissatisfaction has not put a dent in demand. In 2021, U.S. airlines generated more than \$193 billion in operating revenue, up from \$131 billion the year before, according to the latest data from Statista.

This scenario is playing right into the hands of the airlines that can offer a better experience. So it's no surprise that on this rainy day in September, the hangar outside the Million Air lounge is crowded.





## Come Fly With Me

In the private and semiprivate category, the leading players (NetJets, Wheels Up, XO, Aero, Tradewind and others) are hustling to increase capacity and targeting C-suite clients in this brave new world of “bleisure” travel. They’re capitalizing on a marked shift in consumer-spending behaviors.

This segment aims to take the pain points out of flying, mainly by offering significant time savings and streamlined check-in processes. In many cases, you can simply drive up to the airplane 20 minutes before takeoff, show your ID and board. Hello, Mr. Bond.

The hassle (and viral risk) of large crowds is also completely removed from the equation, because private carriers aren’t flying wide-body jumbo jets. Their planes typically carry from six to 20 passengers, which means that they are cleared to take off and land at smaller regional airports, with shorter runways. A Boeing 757 can’t do that.

Pricing, too, is more accessible now than many realize. “With our turboprops, eight people sharing the flight is really not much more expensive and is actually sometimes cheaper than going business class on an airliner,” adds David.

One-way seats on Tradewind’s 11 scheduled routes throughout the Northeast and the Caribbean range from \$320 to \$895, depending on dates and destinations. And no membership fee is required. Comparatively, a one-off initiation fee at Wheels Up is \$2,995 in addition to hourly flight rates. Wheels Up membership is required and buys you 12 months of air time.

But there’s a catch. This level of affordability inevitably means more flight traffic, which comes at an environmental cost. The airline industry’s emissions track record is dismal. Experts say commercial air travel — all air travel is commercial, if money changes hands — accounts for about 3% to 4% of total U.S.

greenhouse-gas emissions. And the United Nations expects airplane emissions of carbon dioxide to “triple by 2050.”

Though nearly every new plane model touts greater energy efficiency, progress comes in fits and starts. For example, in March, NetJets secured the right to purchase up to 150 electric vertical takeoff and landing (eVTOL) jets. In September, United Airlines announced a \$15 million agreement to buy 200 electric air taxis from Eve Air Mobility, with the option to purchase 200 more. For the time being, these ventures remain grounded because the Federal Aviation Administration (FAA) has yet to certify electric planes as safe for commercial use.

Airlines can’t independently control their electric outcomes, which begs another question: What about the travel experience can they actually control?

Photography: Unsplash

“The legacy carriers have very little that they can control,” says Eric. “It’s really just the seat and your ego in many ways. That’s it. By virtue of sitting up front, you’re not stripping away the inconveniences that you share with the back, which is the long boarding process, the hassle of getting to the airport early and everything else.... We control everything but the weather.”

It’s a hyperbolic statement, but the battle for business travelers shows that the more the experience can be controlled, the more market share can be won... But of course, you can’t win without pilots.

## The Pilot Shortage

The labor shortage facing the aviation industry has been nothing short of a crisis since the pandemic sent thousands of pilots, considered front-line workers, into furlough or early retirement. Now, the whole industry is scrambling to get them back.

For their part, the Tradewind brothers are paying 30% more for pilots now than they did before the pandemic. “We need to attract more people to become pilots, and we need to train those people. You’re going to see more airlines working to break down the financial barriers to becoming a pilot,” adds Eric. He mentions the United Airlines Aviate program, which aims to hire more than 10,000 pilots in the next decade, according to its website. JetBlue also launched JetBlue Gateways, which partners with Aviation Accreditation Board International (AABI) accredited colleges and universities to offer multiple trajectories for pilots in training. “Those programs are at the leading edge right now.”

Tradewind is one of the partners in the JetBlue Gateways program, actively engaging in the training and hiring of new pilots.

## Business-Class Only

In the long-haul category, another small but mighty operator is quietly stealing market share from bigger players. It’s called La Compagnie, a French boutique airline that took its first flight in 2014, and since then has achieved what many have tried and failed to do — operating “business class only” service with a competitive cost structure.

La Compagnie’s round-trip flights from Newark airport to Paris, Nice and a new route to Milan cost around \$2,400, which, on average, is about 20% to 25% less than business-class seats on legacy competitors like Delta, Air France and United. (Prices on La Compagnie used to be even lower, but rising fuel costs now translate into higher ticket prices across the industry.)

These flights include lie-flat seats, “bistronomic cuisine” (Franglais for a four-course meal, complete with wine and dessert), high-speed Wi-Fi and a fresh white pillow and blue blanket that no one will charge you extra for using.

According to La Compagnie president Christian Vernet, the business has returned to profitability. Mainly that is thanks to cost savings on jet fuel, due to the efficiency of its two new narrow-body aircraft, the A321neo. Jet fuel is typically the largest variable operating cost for an airline — more expensive than maintenance or crew, according to the FAA. “The fuel burn on a typical New York to Paris flight is about 30% less than the one we had in the past when we flew the Boeing 757s. That’s a significant difference in variable costs,” says Vernet. Currently, the airline operates all flights with only two Airbus airplanes, though Vernet says his plan is to ramp up: “We want to increase to 10 airplanes, four to six years from now.”

He’ll need robust revenue to do that, and so far this year, revenue has been increasing. La Compagnie’s sales in 2022 were 20% higher than the same time period in 2019, pre-COVID. Its average load factor — the percentage of filled seats on its fleet during a particular time — hit a high of 83% during the summer months. Because a better experience sells seats.

*Bienvenue à bord de l’A321neo.* It’s a sleek, narrow-body aircraft with only 76 business-class seats, cast in powder blue and bright white. The cabin vibe is calm, even zen, as if you’re in a spa about to get a facial. (The ambient temperature and lighting are subtly adjusted throughout the flight to support rest before landing in a new time zone.)

The in-flight promo video calls this “the plane to be” before running the most relaxing safety briefing ever, which entails two attractive people in white spandex performing yoga poses while explaining how to use an oxygen mask. You’re offered real Piper-Heidsieck Brut Champagne, not prosecco (which some business-class cabins, which shall remain nameless, get away with). Then suddenly you’re in the clouds, cocooned in a pink and purple sky, with all those New York dramas behind you. As if on cue, the lighting dims and you’re invited to put up your feet, watch a curated collection of indie French movies, or listen to a guided meditation from Petit BamBou, the Francophile’s answer to Headspace. At touchdown, you’re delivered to Paris via Orly airport, avoiding the behemoth that is Charles de Gaulle.

To be fair, small airlines like La Compagnie aren’t trying to service the masses, and therefore they can offer a very different product compared with legacy carriers. The difference is that the big carriers try to serve all markets, often within the same aircraft, by segmenting passengers into economy, premium-economy, business and first classes.

As Vernet sees it, “We have long-haul airlines that offer very low fares for no-frills service. And the major airlines have to fight against that on a daily basis. This is significantly impacting the revenue they generate from the back end of the plane. So they need to pay attention to the revenues generated from the front end, from the business-class seats.”

They’re not going to give up on selling the premium seats without a fight — because they can’t.



### Legacy Carriers Fight Back

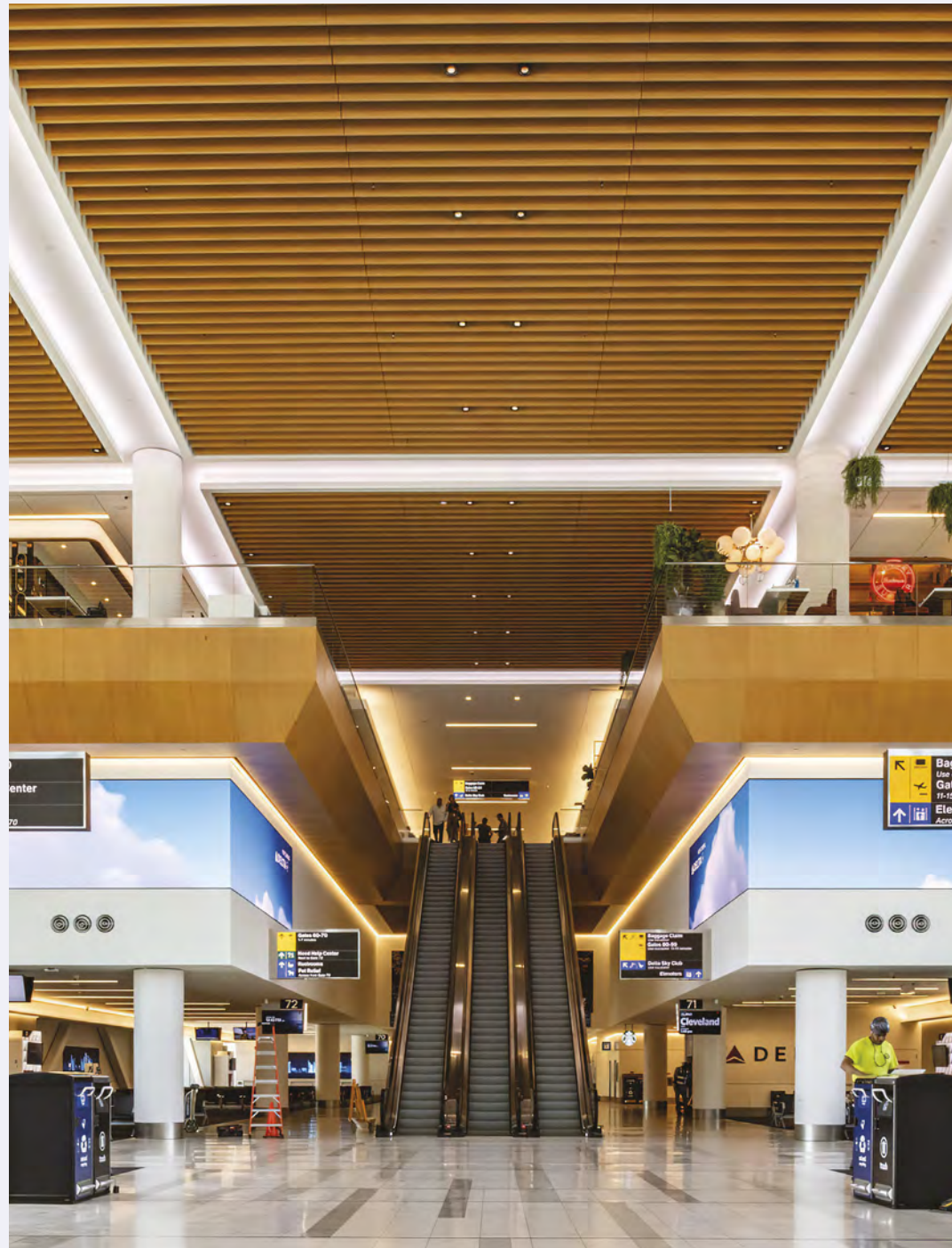
If this were a cinematic David and Goliath story, this would be the bottom of the second-act climax. Just when you think David might have a chance — a titan named Ryan Marzullo calls in the infantry. Four billion dollars' worth of infantry, to be exact.

Marzullo is the managing director at Delta overseeing the design and construction of its gleaming new \$4 billion Terminal C at LaGuardia Airport, which opened in June. It's just one part of the Port Authority's ambitious \$25 billion plan to revamp all three of New York's major airports.

As we walk through this 1.3-million-square-foot, 37-gate terminal, Marzullo shares details of Delta's objectives: "Notorious as it was for poor service, LaGuardia had a compact, quick, in-and-out appeal because of its proximity to Manhattan. And we wanted to maintain that for our business customers. We designed this new terminal for speed and efficiency," he says, striding through the space wrapped in 25-foot floor-to-ceiling electrochromic glass (smart glass that tints to reduce glare) like he owns it. Because, in a sense, he does.

Speed and efficiency in a place like this requires advanced technology. So Delta contracted a cloud-based automation-software company called Iconics, which specializes in the management of large-scale transportation and shipping facilities. It's an overarching platform, gathering real-time, encrypted data on the entire terminal's mechanical systems, optimizing the performance of heating and cooling and flagging problems before or as they occur, so staffers can respond quickly. To give you a sense of the level of IoT tech involved, Microsoft and Google also partnered with Iconics to monitor their campuses. "This is probably one of the most advanced terminals in the country because of the systems we've implemented here," says Marzullo.

This is, without question, a major upgrade to the disgrace that was LaGuardia (frequently ranked as one of the worst airports in the country). The trip through security and to the gate is clean, spacious and clearly marked with digital signage. By year-end, OTG, the company that operates LaGuardia's food services, is expected to launch a new app enabling travelers to place an order from their phones and pick it up on the go. If you want a latte delivered to your gate, for example, that's going to be possible.



Courtesy Delta Air Lines

# F3

“The global business travel industry continues its progress towards full recovery to 2019 pre-pandemic spending levels of USD \$1.4 trillion.”

Global Business Travel Association (GBTA)

But the massive price tag on this terminal doesn't equate to a better business-class flight. Even the lounge can't change that. The new Delta Sky Club at Terminal C, which Marzullo calls the "flagship" lounge, seats nearly 600 guests over a sprawling 31,000 square feet. (It will comprise 35,000 square feet once the outdoor Sky Deck expansion is opened in 2024.) It's the opposite of exclusive.

During our tour, the large but very crowded Sky Club looked like a cafeteria, with two food buffets, lounge-area charging stations and nice views. It's a noticeable gaffe that major carriers are making, covered recently in "The Democratization of Airport Lounges" by the New York Times. This trend certainly doesn't suggest the return to a golden age of travel that the Frank Sinatra music piping through this concourse tries, but fails, to capture.

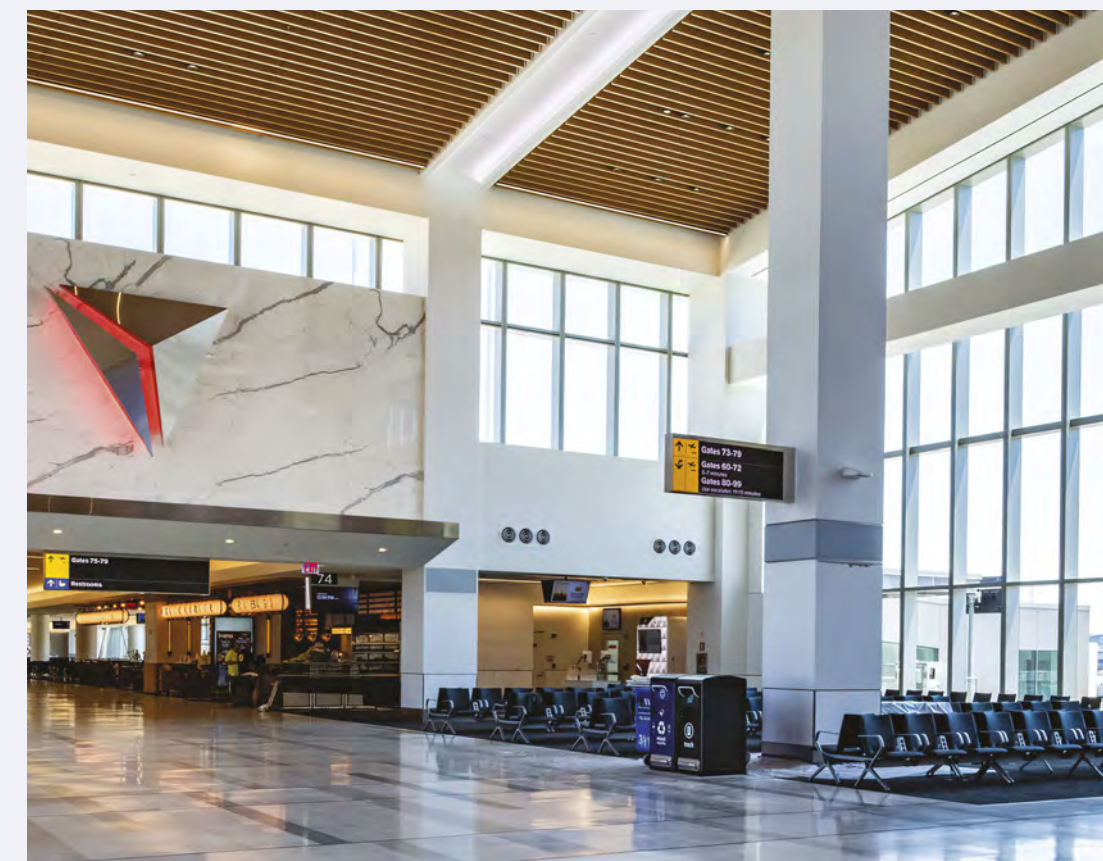
There are hard economic reasons to go high-volume on these clubs, mainly to do with the fact that New York real estate is very expensive, and Delta is the general

contractor with a budget to manage. Government funds didn't build this terminal and won't save Delta from return-rabid investors. (As previously reported, Andrew M. Cuomo, then New York's governor, persuaded Delta Air Lines to spend as much as \$4 billion on Terminal C.)

The economics required to build an "ultra premium club" for Delta One first-class passengers work better over at John F. Kennedy International Airport, given the higher spend expected from transcontinental passengers. This first-class club is expected to open in early 2024. Marzullo adds: "That's for our transatlantic customers.... When it opens, it will be a very big deal."

To its credit, ever since Ed Bastian came on board as CEO, Delta has been considered the most tech-savvy airline in America by industry insiders. It was, for instance, the first carrier to roll out fully operational facial-recognition technology in Atlanta and Detroit, enabling Delta SkyMiles members to scan their face at bag drop and boarding instead of using a physical passport.

Courtesy Delta Air Lines







### If You Can't Beat 'Em, Join 'Em

Delta is also the carrier partnering with Wheels Up in a move to attract high-net-worth clients. The partnership is a joint-loyalty program, in which Wheels Up members will be eligible to accrue miles in Delta's SkyMiles loyalty program and earn status upgrades, among other perks. "Together, Wheels Up and Delta will democratize the industry to make private flying and the private flying lifestyle accessible to significantly more individuals and businesses around the world," said Wheels Up founder and CEO Kenny Dichter in a press release.

Ironically, Dichter's rarefied product isn't based on democratic principles at all. Business class is still expected to be a premium product in the eyes of consumers, and the revenue we're seeing flow into private carriers reflects that. With this much competition in the market, you can't really fake it.

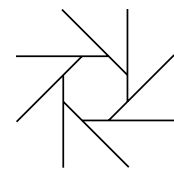
In the battle for business, the victors will be those that can offer not just a better seat, but a better experience.





## Out of the Box

Modular design threatens to disrupt the construction industry — in a good way.







# F4



Of the modular buildings now in development, Forster's Manhattan project is the closest to completion, with all 184 units, which were fabricated in Eastern Europe, presently sitting in a Brooklyn dockyard waiting for their big moment. Set to rise on Sixth Avenue, Marriott's AC Hotel New York NoMad will be a 26-story hospitality tower featuring 168 luxury guest rooms as well as a full range of amenities.

If the popular conception of prefabs is bare-bones buildings for bare-bones people, the Marriott AC is anything but. Crisply modern, with minimalist wood-accented interiors, Forster's first fully prefabricated project will fit right into its swanky surroundings in the NoMad neighborhood. But its greatest appeal is its ecological bona fides, which bear out the promise that modular advocates have always claimed. As Forster puts it: "Imagine you're a drone, looking down on the site." Conventionally, countless tractor-trailers would be streaming toward the construction zone, clogging traffic while burning gallon after gallon of diesel. For the modules, the supply chain is a smooth and almost truck-free glide from the source materials, through the factory floor in Poland, to the seaport in Gdańsk, and then onto the ship that brings them to the States. All that remains now is a quick trip to midtown, where crews will fuse the units together without having to tinker with their fully equipped interiors and mechanical systems. The result will be "a lot less time spent on the building on-site," Forster notes, with fewer worker commutes making for a still-smaller carbon budget.

Reduced transportation is the most obvious advantage of modular, but eliminating waste is another key selling point. "You're putting a building together like a car, so you're in total control," says Nile Berry, director of strategy for Assembly OSM, another ambitious newcomer to the modular scene, founded in 2018. The kind of control Berry is talking about is precisely the opposite of the conventional construction environment, where design flaws, procurement problems and simple human error mean that as much as 30% of materials brought to the site can routinely end up in the garbage. Assembly is determined to change that, producing modules whose prefabricated components can be inventoried, tracked and altered down to the smallest bolt or the last doorknob, all courtesy of a sophisticated 3D digital design program called CATIA. Borrowed from the aerospace industry, the software combines design, engineering and manufacturing inputs to imagine (and ultimately produce) astonishingly sophisticated systems with absolute precision.

"The way we usually build buildings is brutally inefficient," says Danny Forster. The architect — 45, mid-stature, bespectacled — may seem an unlikely figure to level such stern criticism against an entire industry. But he's certainly seen enough of it: Before establishing his New York City-based firm Danny Forster & Architecture in 2010, Forster came aboard as the host of Discovery Channel's *Build It Bigger*, a position he would hold for five seasons and that would see him visit (and occasionally, terrifyingly, ascend) some of the world's largest structures. Now, he's a spokesman for something else: prefabricated modular buildings, an architectural dream that's long haunted the professional psyche but that, as Forster notes, "has never quite come to fruition."

To understand why — and why this time may be different — it helps to have a little terminology. "Prefabricated building" refers to any structure whose major components are produced at a remote facility, then assembled at the job site. "Modular" is a variety of prefab where the components come preassembled as discrete, all-in-one units, ready-made rooms that can be stacked together to make a bigger whole. There are, of course, shades of gray: Many buildings are at least partially prefab; some prefabs are only sort of modular; there are prototypes and one-offs galore, some dating back even before the glory days of factory-built housing following World War II. The whole field is, admittedly, a slightly wonky corner of the construction industry, one with its own culture and its own technical argot.

It's now a critical corner. The United States is in the grip of an intense housing crunch. Especially in the nation's cities, prices continue to spike, thanks chiefly

to a supply deficit that now stands at roughly 3.8 million homes, a shortfall not seen since the end of World War II. As if on cue, prefab is enjoying a renewed vogue.

Modular startups, some backed by major corporate investors like Google and Meta, are now flooding the market, and the White House has announced a new initiative that would give the sector its largest boost since the 1940s. This time, however, the need for low-cost, quickly built structures is paired with something else: the rapid advance of climate change and the imperative to reduce the industry's carbon footprint. The U.N. Environment Program estimates attribute 38% of the world's total energy-related carbon footprint to buildings and construction.

As luck would have it, modular might just be able to hit that bird with the same box-shaped stone — and a daring group of entrepreneurs and designers are betting big that it can. Forster is one of them. Since leaving his TV gig, the architect has cranked out projects ranging from office interiors to hotels via his namesake practice, and has now turned his attention to launching MiTek Modular, a joint venture between Forster's firm and MiTek, the construction services company backed by Berkshire Hathaway. While that enterprise develops, Forster's office is forging ahead with modular projects, including one in San Francisco and one in Manhattan, using existing production facilities and industry-standard Autodesk software. "It's a great opportunity to take some of the intelligence and digital assets we have and push them into construction," says Forster.

Danny Forster & Architecture's design for Marriott's AC Hotel New York NoMad in Manhattan, which will be the tallest modular hotel in the U.S.

Photography: 842 Sixth Avenue, courtesy Danny Forster & Architecture



As a spinoff operation of major New York City–based design firm SHoP Architects, Assembly has also taken care to ensure its digital interface is especially designer-friendly, adaptable to whatever aesthetic whims the company’s outside client-collaborators might dream up. “You can get down to the molecular level,” says Berry, a strategy the company believes will create better buildings without the carbon-boosting leftovers.

To prove it, Assembly is starting work on a modest residential low-rise on an empty site in Brooklyn’s Fort Greene neighborhood. “It’s a landmarked area,” says Berry — not an intuitive context for hypermodern modules, but one that Assembly’s architecturally minded program will navigate with ease, creating a brick-masonry façade to complement the historic urban fabric surrounding it. Designed by Assembly’s in-house team, the building will be prefabricated at the company’s expansive factory space in Harrison, New Jersey. Already the facility has turned out a successful prototype apartment module, and the company expects the Brooklyn project to start production in the next few months, with on-site work to wrap up next summer. The real test, as Berry notes, will come when the crews show up and start hooking the modules together. “With typical buildings, there’s so much interpretive work,” he says: Contractors are left to puzzle over blueprints, leading to unused, unrecyclable drywall and insulation foam. In Fort Greene, if everything goes according to plan, the modules will arrive as fully finished packages with everything from ACs to lighting built in, ready to assemble with no fuss, no muss, no environmental mess.

The estimated percentage of carbon generated by buildings and construction globally, according to the U.N. Environment Program.

38%

The average amount of materials that end up in the garbage during conventional construction.

30%

The number of homes Plant Prefab will be able to produce in 2023.

800

The closing argument for modular as a potential solution to the global carbon crunch isn’t so much about what goes into these prefab structures, but what comes out of them. Launched in 2016, Plant Prefab in Rialto, California, specializes not in high-rises or apartment buildings but in custom single-family homes, using what founder Steve Glenn refers to as a hybrid model, combining modular frames with prefabricated panels installed on-site. As Glenn points out, construction is only one part of the ecological equation for builders in the prefab space. “In terms of efficient energy use, efficient water use — you don’t automatically get those,” he says. Day-to-day operations account for nearly a third of the built environment’s carbon impact, making overall performance a key factor. “Lots of companies aren’t as focused on that,” says Glenn. “With us, it’s in our core DNA.”

For Plant Prefab, reducing the lifetime energy consumption of their modules doesn’t mean reinventing the wheel. “It’s just about making the right decisions,” says Glenn, “choosing the right fixtures, the right

appliances.” In one recent project, a suite of small houses in the California ski resort town of Olympic Valley, Plant Prefab managed to oustrip the state’s stringent Title 24 efficiency requirements by deploying the same energy-saving features used in conventional construction for years now. High-insulation walls and windows, LED lighting, fully electrified heating appliances: All the tried-and-true techniques for reducing the carbon footprint of nonmodular buildings can yield equal effects in modular ones. While meeting the lofty in-house standards that Plant Prefab has applied to all 150 of its projects to date (“even the ones where our clients didn’t really care,” jokes Glenn), the Olympic Valley houses also include custom elements that make the best of the Lake Tahoe area’s unique climate, with broad eaves to reduce solar heat load in summer and huge windows to maximize sunlight in winter.

With so much going for it, you might well ask why modular prefabrication isn’t already the building world’s go-to method for achieving both its ecological and production-volume goals.





The façade of Danny Forster's high-rise modular tower in San Francisco is patterned with steel mesh to emphasize depth, shadow and texture.

Custom town homes designed by Metro Design Group and prefabricated by Plant Prefab.  
 Photography: Courtesy Plant Prefab



On the one hand, as all the recent entrants into the prefab market are only too aware, the field is littered with the corpses of companies that dared greatly. Most recently, there was the spectacular collapse in 2021 of California module-maker Katerra, an ambitious, vertically integrated startup that was dubbed “WeWork 2.0” by some industry wags after it raised \$3 billion in capital only to go bust after scarcely six years. As a cautionary tale of prefab pipe dreams gone wrong, Katerra highlights the errors of going too far, too fast.

But on the other hand, companies can thrive in the sector if they’re prepared to “find ways of working with all the other groups you have to work with,” says Glenn, pointing to longtime modular outfits abroad and their demonstrated ability to team up with designers, fabricators and others. For the same to happen in the U.S., modular companies will have to take a similarly collaborative tack — while also persuading their would-be collaborators, as well as the public at large, of the benefits their design technology is uniquely poised to deliver.

Climate-wise, this argument is hard to beat. “If you make things more efficient, you can get a better carbon

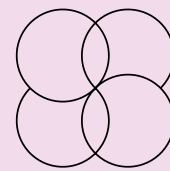
footprint,” says Forster, and efficiency is where modularity truly shines. For his upcoming San Francisco project, Forster expects the total fabrication could take as little as nine months, with the 29-story tower rising in a fraction of the time of a comparable structure built the old-fashioned way. When Plant Prefab’s new factory in Arvin, California, comes online in 2023, it will be capable of churning out 800 homes a year. At the same time, Assembly’s factory model — able to be replicated on a regional basis, reducing the distance to prospective building sites — can produce six modules per day. Says Berry, “That’s why modular is the future of construction.”

It’s impressive. But it all depends on whether this time really is the charm, the moment when the housing-starved real estate market is so primed for mass construction that modular can at last achieve the economies of scale that it’s always promised on paper. If it does, the billions already invested in the modular sector will be nothing compared to the profits it could reap in the years to come.



## The Great Super App Race

The true promise of the super app is creating a living digital economy – and charging everyone rent. Can anyone in the western world pull it off?





In late 2010, a team of seven software engineers in China were given a project to create a mobile application for text messaging and photo sharing. They released the project in January of the next year, but a direct competitor – MiTalk – already had roughly 5 million users, and was focused on a similar premise.

A few months later, the team finished a new feature, inspired by the success of another app called TalkBox: the ability to record and send audio snippets. At the time, the experience of typing on mobile keyboards wasn't designed with non-Roman alphabets in mind, and Pinyin – a system to transliterate Chinese to make it easier for users to text – was not yet widely adopted by older generations. Suddenly, the simplicity of sending short voice messages to friends and family became a 'killer feature,' causing downloads of the app to skyrocket.

Of course, those seven engineers worked for Tencent, one of China's leading internet companies, and the new application was WeChat. When it launched, Tencent's desktop messaging program QQ, akin to AOL Instant Messenger, had over 600 million active accounts. Today, WeChat has over one billion daily active users — more than the combined populations of the United States and the entire European Union. WeChat Pay, originally designed as a solution for managers at Tencent to give 'red packet' gifts to their employees in celebration of Chinese New Year, has more users than Apple Pay, and processes more than one billion transactions per day ranging from in-store shopping to consumers paying their utility bills. WeChat Work, with similar functionality to Slack and Microsoft Teams, has over 75 million users – more than six times the estimated number of users on Slack, which Salesforce acquired in 2021 for \$27.7 billion.

## Rise of the Super App

Synonymous with WeChat's rise is the nebulous concept of the "super app," which has fascinated business leaders ever since. Since 2018, mentions of super apps in quarterly earnings calls have risen almost 500%, according to market research firm CBInsights.

In April, Uber's regional boss in the U.K. Jamie Heywood made headlines when he announced the company aims to become "a one-stop-shop for all your travel needs." In August, the online real estate marketplace Zillow announced its "vision for the housing super app" during a second quarter earnings call. "We have turned the page... to focus our efforts on building a single platform of integrated digital solutions that will serve more customers in our funnel," said Zillow CEO Rich Barton. His stated objective is to "increase transactions, and to increase revenue per transaction."



Outside of North America and Europe, the super app has become a cornerstone of corporate strategy and core to the investment thesis for public institutions and venture capitalists alike. Gojek, a Southeast Asian platform with a roughly \$30 billion valuation — and a list of investors that includes Meta, Visa, Sequoia Capital and KKR — brands itself on the homepage of its website as "an operating system that unbundles the tyranny of apps." It can be used for ordering food, setting up prescription delivery, hailing a ride, or booking a massage, and the company has experimented with service lines for everything from house cleaning to salon appointments.

In Kenya, Safaricom and Vodafone's joint venture M-PESA has over 41 million customers who perform over \$300 billion in transactions ranging from money transfers to loans, buying insurance to shopping in stores, and offers functionality similar to Gojek and WeChat by letting businesses create 'mini-programs' inside their app to engage directly with consumers. Grab, a Singaporean app that provides food delivery and transportation services in the vein of Uber, has based their entire roadmap on a "super app strategy" as has Yummy in Latin America. In South Korea, the

company Yanojla, with business lines ranging from transportation to hotel bookings and cloud computing services, is preparing to go public – turning founder Lee Su-jin, a former janitor, into a billionaire in the process.

Finally, in the realm of reality television, one of the most prominent rationales for acquisition in Elon Musk's and Twitter's on-going "will they or won't they?" soap opera has been the notion of transforming Twitter into a super app. During a panel for the "All-In" podcast in May, Musk said:

"If you're in China, you kind of live on WeChat, it does everything. It's sort of like Twitter, plus Paypal, plus a whole bunch of other things. And all rolled into one ... great interface. It's really an excellent app... It could be something new, but I think this thing needs to exist."

Whether or not you can actually imagine yourself booking at Delta flight, reading a paid newsletter, or paying a friend for dinner through Twitter, the allure the super app has dominated discourse since Blackberry Founder Mike Lazaridis popularized the term, referencing it at his 2010 keynote address at the Mobile World Congress conference in Barcelona.

## Mentions of "Super Apps" in Global Earnings Calls

Source: CBInsights





### Scaling the summit

WeChat has had substantial structural advantages. While features to meet new people accelerated initial growth – and popularized the QR code in China – being able to import contacts from the desktop program QQ solved the network effect problem (“if my friends aren’t there, why would I use it?”) commonly faced by new social platforms. The Chinese government’s tight control of online discourse and monitoring of traffic created protectionist advantages for Tencent by blocking foreign competition, including the banning of Facebook in 2009.

“China was a unique place in time when WeChat came up,” notes Emeka Ajene, a Nigerian-based former Uber executive, author of Afridigest, and founder of the transportation platform Gozem. “It’s a bit of a walled garden, and there’s some picking of winners and losers with the government putting their thumb on the scale. It’s very hard to [follow WeChat’s path] and say: okay, I want to start with chat, and I’m going to beat WhatsApp, who’s already there. You’d need a real value proposition.”

But WeChat has also been a beacon of innovation: “Official Accounts,” (OAs) became hubs for business presence, and mini-programs enabled third-parties and software developers to build rich functionality on top of WeChat, including tracking shipments, paying bills, browsing a product catalog, ordering a taxi, looking up account information, or booking reservations.

Compared to the concept of mobile applications today, what WeChat represents can be better understood as an operating system that just happens to live on top of the existing operating system installed on your phone.

In this analogy, WeChat provides some base functionality itself – like Apple’s iTunes, Wallet, or Mail – but the main value is providing the infrastructure for an ecosystem of businesses to build their own functionality (Apple’s developer tools) in hopes of accessing a large base of consumers (Apple’s app store). Mini-programs act as lower-fidelity mobile apps, enabling surprisingly rich functionality, like streaming games or tv shows.

This functionality creates a positive feedback loop: extending the value proposition of WeChat itself, which leads to the acquisition of more users and increased engagement with existing users – which then leads to more engagement by outside businesses on the WeChat platform. WeChat doesn’t need to build itself – it only needs to provide the tools for others to build, because access to its consumers incentivizes others to fill the void.

“A super app allows developers to create use cases that reach beyond the original use of the platform,” says Cliff Kuang, designer and author of the new book User Friendly. “WeChat was a chat app, but it’s all these other things, not because WeChat developed [that functionality] – but because they created a platform where developers can extend the functionality of WeChat and meet users where they are.”

All this begs a question: do you really need a super app? Many of the internet giants – Amazon and Alphabet, Meta and Alibaba, don’t have a single app to rule them all, but rather a tapestry of interconnected, yet differentiated, digital platforms and products. Businesses who focus on one monolithic app, like Snapchat and Bytedance (Douyin in China, TikTok in the the rest of

the world), are at best incrementally increasing their ‘suite of services,’ with minor advances in eCommerce shopping, payments, and creator tools.

Are Amazon and Google not “super” because they don’t have a super app? In effect, they are digital conglomerates – the Sears and GE of the 21st century. Do they not claim their cut of all digitally-related economic activity? From cloud services (AWS, GCP) to eCommerce fulfillment (FBA), from hardware (Kindle, Echo, Ring; Nest, Pixel) to digital advertising, to ownership of search (Google), video (YouTube; Twitch & Prime Video), and product discovery (Amazon) – both dominate our digital experience in North America and beyond.

Each operates platforms that cut across content, commerce, and utility in their own unique ways. “There’s less whitespace in the west,” says Ajene. “There’s behemoths in almost every vertical. Markets like Southeast Asia and Latin America and Africa have smaller revenues per user. Plus, there’s fragmentation. There are 54 countries in Africa. They’re very unique. You have to go market by market.” The combination of variation and size of markets requires a different approach. “There are fewer competitors. So you can aggregate users over a bunch of different verticals and extend the lifetime value of that user.”

What a super app like WeChat enables is not just expanding beyond a specific lane like content, commerce, or utility – the latter being the lane that many of the more recent self-declared super apps fall into, especially those starting in transportation or payments – but it also offers a multiplicative increase in services and offerings by enabling first-party, third-party, and consumer to consumer interactions and inventions.

This is the true value proposition of a super app strategy. Not just category expansion, like Uber moving into other forms of transit. Instead, providing the infrastructure upon which a full-fledged, many-sided digital ecosystem is built – and being able to claim a portion of all economic activity.

# F5

### Traditional Platforms vs. Super Apps

Regardless of offering, most digital businesses operate one business model. Super apps enable them all.

Direct Platform Control	Standard Platforms	Super App	
	Business to Consumer <sup>1</sup>	Chase Bank	WeChat Pay
	Multi-sided <sup>2</sup>	Amazon	Official Accounts
	Traditional Marketplace <sup>3</sup>	Youtube	WeChat Channels
Open-ended ecosystem	Consumer to Consumer <sup>4</sup>	Snapchat	Moments

- 1 Supply (products, services, and content) produced and controlled directly by the platform.
- 2 A connection of supply (1st or 3rd-party) with demand (users), quality controlled by the platform.
- 3 A connection of supply (mostly or all 3rd-party) with demand, with minimal quality control.
- 4 Platforms that enable pure consumer-to-consumer (C2C) exchange and engagement.

### The next generation of super apps

In late 2020, Facebook expressed a ‘distributed’ super app strategy, with WhatsApp Chief Operating Officer Matt Idema stating a vision where “Instagram and Facebook are the storefront, [and] WhatsApp is the cash register.” Since then, they’ve consistently explored commerce and marketplace offerings, but in the grand scheme of their earnings, eCommerce has been a rounding error compared to advertising.

If you look closer, there are examples in the West of an “operating system on top of an operating system” that began with a social-and-content orientation, like WeChat, as opposed to a utility like payments or ride-sharing. They’re video games. Roblox and Mine-craft offer fully realized creator tools that extend the underlying functionality of both platforms and enable monetization, including billions of dollars in virtual transactions. What began as content evolved into commerce, and for those developing social networks inside the gaming world, it has also become a utility.

In many ways, this appears to be where Meta, née Facebook is heading.

“So much of this is constrained by the initial conditions of why someone is using your app,” says Kuang. “A lot of people realize they don’t necessarily have the license from their users [to become a super app]. Is anybody going to use Uber to plan their next vacation? Second Life was really interesting because people were just hanging out. Maybe Minecraft becomes that. If you miss out on the next computing platform, you miss out on the next 20 years.”

In New York Magazine, the entrepreneur turned author Scott Galloway recently quipped “every time you hear Zuckerberg say metaverse, swap in super app and the plan sounds less stupid.” If the next super apps do lie in the metaverse, Meta’s start has been ominous – they’ve already been criticized for high transaction fees hobbling a nascent creator economy in “Horizon Worlds,” the pre-installed virtual world in their Oculus headset.

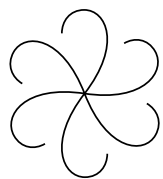
While the door for super apps may be closing in two dimensions, the virtual window is just opening in three.

**Holden Bale is a Group Vice President and Head of Huge’s Global Commerce Practice.**



## Can Self-Driving Be Self-Sustaining?

Autonomous technologies might revolutionize driving — but only if their promise can be reconciled with the bitter realities of the car business.





The automobile has shaped society for over a century, spawning suburbs and highway systems, fueling the massive petroleum industry and influencing foreign policy. For most of that time, a car's motive power and directional inputs came from its driver's hands and feet. But times are changing. Autonomous vehicles (AVs) have the potential to displace human-piloted cars and trucks, making the movement of people and goods more efficient and less detrimental to the environment. At scale, autonomous fleets could completely transform the rules of the road.

Of course, if you've been following AVs' slow, rutted path to adoption, this was all supposed to happen years ago. And recent events, including the abrupt shuttering of an industry-leading AV company, Argo AI, in October, demonstrate that autonomy is hitting some big roadblocks. This raises fundamental questions not only about when a fully autonomous future may be realized, but how. And though there seems to be two avenues for AV innovators to travel, only one appears to be open.

### Overpromise, Underdeliver

With self-driving cars, many automakers have promised the moon but have failed to deliver. Tesla, General Motors, Waymo, and Honda all missed self-imposed deadlines to have AVs operating at scale on public roads by 2020.

In the florid parlance of market research firms, AVs have been stuck in a "Trough of Disillusionment." The Gartner Hype Cycle technology-adoption curve defines this trough as a critical point where new innovation "does not live up to its overinflated expectations, [and] it rapidly becomes unfashionable." From here, new innovations either progress or fail. The research holds that new technologies go through four phases: the Innovation Trigger, Peak of Inflated Expectations, Trough of Disillusionment, and the Slope of Enlightenment, before hitting the hallowed Plateau of Productivity, when "the real-world benefits of the innovation are demonstrated and accepted."<sup>1</sup>

Major AV players are burning through billions hoping to reach that plateau — and turn a profit. General Motors recently revealed that Cruise, its AV unit, has lost nearly \$5 billion since 2018. After Cruise started charging the public for rides in San Francisco in June 2022, GM announced a month later it had lost \$500 million on the gambit in the second quarter of 2022. For those keeping score, that's more than \$5 million a day. the gambit in the second quarter of 2022. For those keeping score, that's more than \$5 million a day.

The Trough of Disillusionment is broad and deep, and threatens to swallow century-old incumbents whole. That may partly be why outsiders, not the old garde, have been maneuvering so vigorously to reach the plateau first. Even for them, progress — let alone survival — is not assured.



# F6



### A Failed Bet on Partnerships

Argo AI, one of the most respected and well-capitalized AV startups, received a \$1 billion investment from Ford at the beginning of 2017 when the firm was less than one year old. In 2020, Volkswagen separately disclosed a \$2.6 billion investment, and began working with the team on vehicle co-development projects. As these alliances demonstrate, Argo AI's business model was built on partnerships with the incumbents.

Argo AI relied on these automakers and other household name brands to leverage its technologies, either wholly or in part, and develop ride-sharing or delivery service models off of them. Though Argo AI's approach led to small-scale testing successes (Domino's pizza deliveries in Miami, for example), it was never proven out at scale. Competitors like Alphabet's Waymo and Amazon's Zoox, meanwhile, have not relied on partnerships, instead looking to their parent organizations for their mandates and their money.

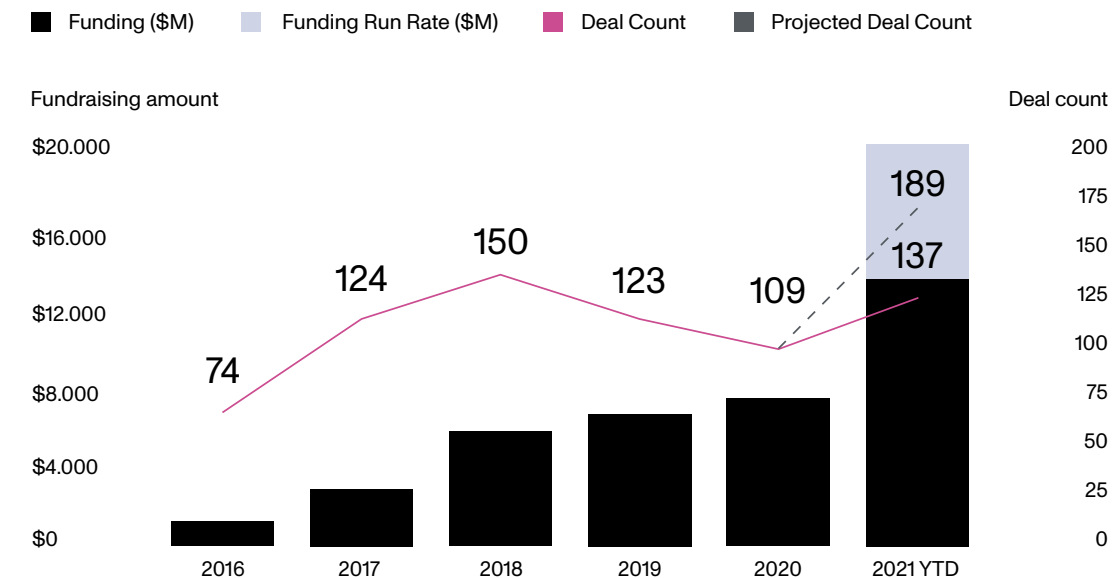
Abruptly and surprisingly, Argo AI shuttered in October when Ford and VW pulled their funding. Swept up in the fallout, competitors rushed to reassure markets

and their investors that Argo AI's demise was not a referendum on AVs' viability. But little could combat the counterpoints fired by some of the most powerful voices in the industry. Jim Farley, CEO of Ford Motor, said on a Q3 earnings call that it was redeploying its Argo AI investment toward nearer-term autonomous technologies that it viewed as more commercially viable. "It's estimated that more than a hundred billion has been invested in the promise of level four autonomy," he said during the call, referencing the level at which a vehicle can operate without human intervention — precisely the bleeding edge where Argo AI had staked its entire business. "And yet no one has defined a profitable business model at scale."

Blame it on short-termism or a lack of conviction, but Ford, VW, and other automakers are answerable to shareholders who may not take such a sanguine view of self-driving cars, particularly amid a protracted computer chip shortage and signs of global recession. The question becomes, did Argo AI just pick the wrong partners, or is partnership itself the problem?

### Autonomous Driving Funding Jumps in 2021

Disclosed Deals & Equity (\$M), 2016 - 2021 YTD (09/22/21)



<sup>1</sup> Gartner® "Hype Cycle™ for Artificial Intelligence, 2022" by analysts Afraz Jaffri, Farhan Choudhary





"The question becomes, did Argo AI just pick the wrong partners, or is partnership itself the problem?"

## The Walled Garden

Argo AI's Autonomy Platform was a comprehensive product suite that included software, hardware, HD maps, and the backend communication and logistics support necessary to power full-service self-driving operations at scale. Robust though it may have been, the platform needed vehicles on which to run — and for that Argo AI needed partners. That's why Ford and VW were so vital to realizing the startup's Level 4 autonomy ambitions.

In contrast, Tesla Motors has been the Apple-like walled garden of the AV world, developing proprietary hardware and software to support its own vehicle fleet. The centerpiece of its strategy is the controversial Full Self Driving (FSD) capability, which has been blamed for several fatal crashes. Tesla has about 2.5 million cars on the road worldwide, harvesting data and creating "knowledge" of their surroundings for other Teslas to reference as they pass over those same roadways. Some analysts say Tesla's lead on AV tech is unassailable, and Elon Musk's pledge to license FSD to outside manufacturers may be the biggest existential threat to would-be usurpers.

Even as the US government reportedly conducts a criminal investigation into crashes involving FSD and its famous feature suite, Autopilot, Tesla's notoriously volatile stock may be down but it hasn't cratered. This relative stability can be seen as proof that the market has already priced in the potential ramifications of such legal actions. By literally moving fast and (allegedly) breaking things, Tesla may have shown the industry the only viable way forward for AV technology.

## The Profit Motive

Though AV technology is nascent, that hasn't stopped a number of blue-chip brands from racing to explore its real-world applications.

Before shuttering, Argo AI partnered with Walmart to test a modular approach to delivery systems and services. In a city with multiple Walmart locations, fleet managers could tap different capabilities of the Argo Autonomy Platform. Suddenly, with a more pinpoint

view of the transportation logistics system, rebalancing inventory within nearby stores became possible. Of course, there's also the matter of the national shortage of truck drivers; an autonomy system would obviate the need to staff up, especially amid seasonal surges. Hyundai-backed Motional, meanwhile, has partnered with Uber to develop autonomous delivery fleets for the Uber Eats service. Tech-festooned Hyundai IONIQ 5 hatchbacks began plying the streets of Santa Monica, California, last May.

Granted, it's one thing to drop off cardboard boxes and pizzas, quite another to drop off passengers. Yet even if people are not ready to hop aboard the AV hype train, big brands have proven they're more than willing. For AV developers and the brands they partner with, that early adoption may signal a boon to customer service down the road.

## Service with a Robo-Smile

The promise of AV technology is not, of course, limited just to the vehicles that carry it. Customer experience is also along for the ride.

Setting aside their potential public safety and environmental benefits, AVs' clear mission and mandate is to reduce friction between brand and customer. Think about how a 5G provider positions itself. The telecom doesn't create the immersive fan experience or the technology to perform remote surgeries with pinpoint accuracy, but it makes it possible. Similarly, AV firms positioned themselves as drivers of an autonomy-fueled revolution in customer service.

And therein lies the promise of profit.

GM CEO Mary Barra says Cruise could eventually generate \$50 billion a year in revenue from ridesharing and other services "by 2030." Leadership that's committed to the cause — and that helps shareholders stomach billion-dollar writedowns year after year — may be the difference-maker in the AV stakes.

But Motional, Waymo and Zoox are also vying for a slice of this revenue that has yet to materialize. The question becomes, is Argo AI an isolated case or a cautionary tale?

Despite losing its backers, Argo AI was broadly respected. Its technology showed promise. Its leadership was approachable and deeply knowledgeable. The company also made a point to foreground safety — both for passengers and other road users. However, folding the same week that news broke of an alleged US government probe into claims of crashes stemming from use of Tesla's Autopilot and FSD capabilities clearly sends a chilling effect through the field.

Where does the AV industry go from here? At the moment, nowhere fast.

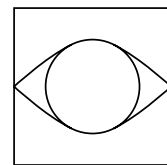
**Doug Newcomb is a mobility reporter for Automotive News.**





## You're Getting Web3 All Wrong

Set aside the decentralization debate for a moment, and instead let's ask the next big question: What could an internet owned by users really mean?





# F7

What if you could take out a loan against your future earnings potential?

What if an art museum could sell you a digital version of a physical artwork that updates as restorers learn new things about it?

What if you could take out equity on your home without a bank's approval?

All this is part of the promise of Web3. Using smart contracts, tokens and decentralized identity, Web3 could transform our experience as digital beings. It could add liquidity to assets that historically have had no marketplace. And it could change the lifetime value a brand provides to its customers.

"The amount of time that we spend on our screens is obviously increasing," says Gardner Loulan, who co-founded Reach, a company focused on empowering individuals around their data. "So there is clearly the need to cater to a digital community more and more."

Globally, people are now averaging more than seven hours a day online, according to market research firm GWI, a 13% increase since 2013. Meanwhile, venture capital giants like Andreessen Horowitz and Union Square Ventures are banking on the increasing importance of our digital lives with major investments in Web3.

But some detractors are crying foul. The slew of startups behind crypto and blockchain sometimes seem to repeat the problem Web3 purports to solve, leaving them open to a fundamental criticism: What they're calling decentralized is actually still centralized.

"I don't think the people talking about this understand the words coming out of their mouths," says Jon Hackett,

group technology director at Huge. "When they say decentralized, they just mean moving away from the mega platforms."

Let's break that down: Blockchain decentralizes the ledger but not always the tools we use on top of it. And since the interoperability of Web3 assets isn't solved yet, we're still locked into systems that control our information with opaque usage rights buried in fine print few people read, much less understand.

This leaves gaping questions over whether an entity is decentralized or simply centralizing power in the hands of a new, smaller group — which Twitter founder Jack Dorsey has publicly warned about. While he may be right, this whole debate is obscuring the question that businesses and brands must ask themselves: What should or could be decentralized? And how can you prepare for the shake-up?

## Defining Web3

Proponents will tell you that Web3 is the next evolution of the internet. The first flavor was read-only; then Web2 evolved with read-write, which led to the rise of social media; and now Web3 brings the opportunity for read-write-own by incorporating a decentralized blockchain.

The term Web3 was first coined by Gavin Wood (co-founder of the Ethereum blockchain platform) and is broadly defined as a blockchain-integrated internet, though others simply refer to it as "an internet owned by users." This has led some to hold onto the term Web3 while dismissing the idea that blockchain is the only technology that can support it. In fact, the broader term "distributed ledger technologies" (DLT) is considered more inclusive.

## How would an internet owned by users work?



"They're circles in a Venn diagram. If Web3 is a big circle, then blockchain and crypto and decentralized apps are circles inside or overlapping that circle, but they're not the same thing," Hackett adds.

Embracing the broader DLT definition means we don't have to debate (for the moment) whether blockchain is good or shitty technology or solves a meaningful problem with trust. Instead, we can ask the big, simple question: How would an internet owned by users work?

To answer that, we will explore the benefits and weaknesses of enabling portability and control over a user's data and assets across three major topics: personal identity, banking and loyalty.

## Decentralizing Identity

Many companies today capture and profit from people's data, but often this is done with minimal awareness or consent. Web3 promises to treat people's personal data as an asset for them to own.

Loulan calls this "data dignity" — something the Reach app has been trying to deliver in the Web2 space since it launched in 2019. For him, Web3 is the future solution. "The blockchain infrastructure layer is a mechanism that at its core is promoting individual or community sovereignty."

Turning your personal data into an asset creates liquidity and a market where today there's a sense of mass powerlessness.

"I prefer the idea that we're giving control back to the people who actually own these things of value, and then letting them determine how they let people access that value," says Rob Krugman, chief digital officer at the fintech firm Broadridge. Krugman envisions a world where the individual can explicitly decide who to share data with, what data to share, and whether that "informed" entity can retain or share that data. This system could also extend to other assets. For example, if the title of your home were tracked by the blockchain, there would be no more title search and no more title insurance.

"What everyone talks about now are cryptocurrencies and NFTs and other things that are somewhat financially related, but it could also be information about yourself," Krugman explains. "It could be your health records. Really anything that has a perception of value you should now have control over."

If that sounds scary for brands, it should, as so many trade in the data of their customers. And yet the brands that begin engaging in a space where the individual has these kinds of options could be the brands that win over the next audience. It's a new kind of user-centrism.

"Soulbound tokens," which are essentially nontransferable NFTs, are one tool for enabling personal data ownership. Future-use cases are theoretically endless: These tokens could help you avoid fraud by validating your identity. Colleges could issue tokens instead of diplomas. Musicians might issue a soulbound token to their first 1,000 fans, thereby creating a digital record of who loved them before they were cool.





## Decentralizing Banking

Cryptocurrency has had major ups and downs. Brands from Gucci to Tesla have embraced it, saying they'll accept digital currency. But in many cases, it has seemed like little more than a grab for headlines and cred with a young crowd.

Krugman argues, however, that crypto makes a lot more business sense than just that — especially with stablecoins, which benchmark their value against an external thing (such as a commodity or currency) and not just hype or market demand. “There are hundreds if not thousands of cryptocurrencies right now. The vast majority are going to disappear,” he predicts. “I believe that stablecoin, which is actually backed by collateralized assets, is going to become a real big thing.”

As the name suggests, stablecoins remove much of the speculation of the market, making them more appealing for day-to-day transactions. In addition, brands accepting stablecoins (or any cryptocurrency) benefit from an improvement in operational efficiency by reducing third-party payment costs. “The cost of doing payments is very, very expensive,” Krugman notes. “But when you actually start to think about using blockchain technology and the Web3 capabilities to facilitate these activities, it's so much less expensive, and it's real time.”

No more waiting 48 hours for the old rails of finance to reconcile the exchange of funds. These are instantaneous transactions conducted privately between two parties. Regulation, however, is still an open-ended question. “There's a lot of talk about how do you regulate this the right way. There are no protections for consumers right now. There's no insurance. All that stuff is being talked about,” Krugman adds.

## Decentralizing Loyalty

One of the biggest moves in Web3 loyalty in 2022 was Starbucks' plunge into the space. The new 'Starbucks Odyssey' program, slated to launch by year end, will allow customers and employees to collect 'digital stamps' as rewards and unlock access to merchandise and private events.

“If there's a way to have a more equitable system where both the company and the individual have ownership

in the path forward of that system, then there is going to be higher engagement. There is going to be more loyalty,” Loulan explains.

While Starbucks' move caught a lot of attention, there's still a long road to real innovation. Brands like Glossier, Delta and Patagonia have already proven the value of nurturing a community of interest. What Web3 does is allow a brand to connect that community more intimately with the values of the company.

Imagine what the loyalty program for a company like Starbucks could look like, creating a feedback loop between a physical store and its customers. As a collective, they could steer the music that plays or choose what seasonal food might be added to the menu. They might be able to more readily tip or acknowledge a helpful employee. Take this further, and they might be able to see the entire supply chain of the products they consume, to better understand their own carbon footprint.

For another brand, loyalty may look like a digital token that is the twin of a physical item — like a luxury bag with high resale value. The exciting part about that token is how it can attribute veracity to the physical product and prove it's not a knockoff. It can also contain supply chain information, aligning the brand and purchaser to particular goals and outcomes.

Smart contracts are another major loyalty lever, when you think about secondary markets. For instance, anytime a token is sold (and a bag changes hands), the original design team that made that style might get a small fee from the sale. Today, resale value is usually missed by the original company, but it could become a revenue stream. By passing that revenue on to the creators (and not just the company itself), the brand would become more attractive to prospective employees. And it feels to customers like they have a chance to help the little guy.

Helping individuals and not just big corporations is part of what has made music fans embrace loyalty NFTs, while gamers, seeing them as yet another way game developers want to wrench away their money, have heartily protested. It's a good reminder that decentralization is best used when making something people love, rather than just a new revenue stream.



## The Cost of Waiting

Gartner's latest "Hype Cycle for Emerging Technologies" report still has Web3 some five to 10 years out from hitting the "Plateau of Productivity." So why should this be a brand's huge move in 2023? Gartner predicts that, by 2024, 25% of enterprises will use centralized services wrapped around decentralized Web3 applications<sup>1</sup>. "Existing Web3 applications, such as decentralized finance (DeFi), NFTs, and decentralized autonomous organizations (DAOs), have already yielded previously unachievable gains for everyday users, investors, artists, content creators and communities<sup>2</sup>."

Once we stop thinking of Web3 as simply a blockchain-enabled internet (since the jury's still out on blockchain) and instead embrace the notion that a future internet should place more control in the hands of the everyday user, then we're in a better position to create value. Web3 becomes the read-write-own version of an evolved internet, decentralizing your data while relying on interoperability as the critical factor.

Detractors can easily find ways to poke holes in the current vision of Web3. Does it have a libertarian bent to it? Yes, that's certainly one faction of its fans. Have there been speculators solely in it for their own gain? That's proven. Is the marketing out ahead of the capabilities? 100%.

Despite all that, decentralization technology is a force of disruption. The right business, the right leaders and the right brands will see the moment to make a move and come out big — because it has the potential to offer a magical combination of three things people crave:

**empowerment + novelty + differentiation.**

This end effect, if you will, is a potent combination for tapping new audiences. We're watching the likes of the EU's General Data Protection Regulation (GDPR) put increasing pressure on old models of impressions-based brand relationships, where the person is the product.

It's a different kind of work for brands. But we can read the tea leaves and envision a moment when the marketing models of old take on the status of TV or radio: not gone completely but no longer the centerpiece.

Instead, taking center stage will be those who can facilitate and protect an ongoing exchange of data that fosters a rich community between brands and customers.

<sup>1</sup> Gartner® "Hype Cycle™ for Blockchain and Web3, 2022" by analysts Avivah Litan, Adrian Leow, Rajesh Kandaswamy

<sup>2</sup> Gartner® "Hype Cycle™ for Emerging Technologies, 2022" by analysts Melissa Davis, Gary Olliffe



Photography: Unsplash

## Getting Started

The moves leaders make today lay the groundwork for tomorrow. Here are three steps to take now:

Read more. This space is complicated and requires time to absorb the vocabulary. It's also changing quickly, so don't assume you're ready for action after reading one article. Try to separate short-term concerns about infrastructure and usability from long-term potential for disruption.

Surround yourself with people knowledgeable in this field — and make sure they're bringing you a dose of skepticism along with their insights into the possibilities.

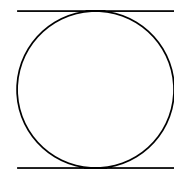
Finally, engage in a bit of opportunity exploration. Much like the transition from dial-up to Wi-Fi, this paradigm shift has the chance to change a business both front of house and back. It's critical for the future value of any company that you see it coming and take action.

Emily Wengert is the Managing Director and Executive Creative Director of Experience Innovation at Huge.



## Chasing Provenance

Royalties, digital certificates, provenance. This is the language of modern smart contracts, and it's being used to rewrite the rules of the art market as we know it.





The past few years of news stories, documentaries and court cases about forgeries and looted art have brought the importance of provenance to a wider audience. The purpose of provenance is not only to assure art audiences that the work was produced by the artist but also that the collector is the rightful owner. Blockchain technology offers to lessen the confusion surrounding authenticity by providing an immutable ledger to record the artwork's history. It also enables visual artists to share in the profit of their works, sparking fresh debate about resale royalties.

The blockchain ledger can record information, but smart contracts are what enable resale royalties. Smart contracts — code that is executed automatically when certain conditions are met — were initially proposed in 1994 by Nick Szabo as a way of merging e-commerce and contract law using computer protocols that eliminated the need for human intervention. Fast-forward to 2018, and the arrival of ERC-721 on the Ethereum blockchain made possible a unique digital certificate of ownership for a virtual object.

Since digital objects can be posted and reposted, shared and right-click-saved online, the advent of ERC-721 revolutionized the potential of digital art to participate in the art world's market of scarcity, with the smart contract specifying the sale terms. Blockchain's record-keeping has also presented a way to publicly disclose a work's ownership and transaction history. By extension, non-fungible tokens (NFTs) have presented a radical opportunity, but the technology is not fail-proof and frequently reintroduces the need for social and legal contracts, which is precisely what the artist Nancy Baker Cahill showed in her work *Contract Killers* (2021).

## Blockchain's New Contract

*Contract Killers* is an augmented-reality work that shows the disintegration of a handshake in front of three symbolic institutions: City Hall in Los Angeles, to represent the failures of civic agreements; the city's Hall of Justice, to acknowledge judicial miscarriages; and a pile of money, to indicate the "gross inequities of late-stage capitalism." A fourth hot-pink handshake in front of a gray wall represents the breakdown of social contracts.

The project uses blockchain not only to sell the individual works as NFTs but also to address the rhetoric about disintermediation and transparency surrounding the technology. Accompanying her own smart contract, Baker Cahill included a legal agreement "intended to be readable and understandable by non-lawyer, NFT purchasers, so that there is no confusion as to intent, application, and scope of the terms." This is just one of the ways Baker Cahill's *Contract Killers* seeks to inject equity and openness into the opaque art market.



Sarah Meyohas, *Speculations - Bitcoin*

# F8

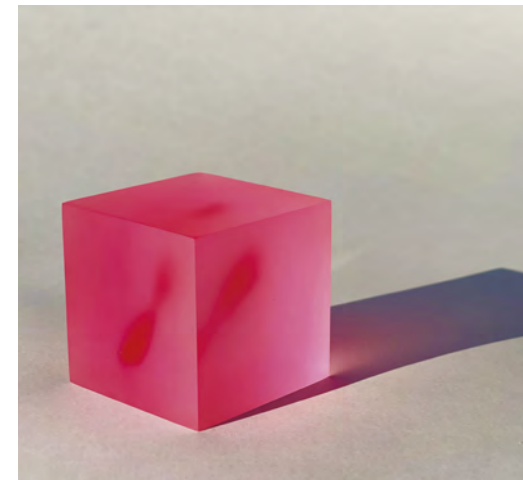
Blockchain's claims to transparency are obviated by the fact that many NFT collectors can't read code any more than they can understand a legal contract. To be clear: Smart contracts are neither smart nor contracts. They are neither as clearly automated as the word "smart" would suggest, nor are they legally binding contracts. For example, when an NFT is sold on a different platform than the one where it was minted, the automatic royalty doesn't necessarily work. The claim that "code is law" is common in the blockchain; though it has been espoused since software became common at the turn of the century, the court cases that will determine to what degree that applies are just now emerging.

Though artists, collectors and dealers all want to cultivate trust and a sense of stewardship, articulating precise expectations around what stewardship entails has been rare. Blockchain smart contracts address the power imbalance where artists are expected to accept contracts, not produce them. Patrons in 15th-century Florence produced contracts stating in precise terms what they were funding; even the eccentric English surrealist Edward James had contractual agreements

with the artists he supported, like René Magritte and Salvador Dalí.

Now, as artists design a smart contract, they are in a position to stipulate their own expectations, such as a percentage of future sales or a resale timeline. In so doing, they can circumvent the speculative transaction of "flipping," where a work is bought and typically resold for profit at auction, spiking an artist's market value in the short term and crippling their long-term growth. Still, smart contracts are dependent on social agreements.

And Baker Cahill's point is that social dynamics cannot be coded. Blockchain's premise of a trustless system dangerously ignores the ongoing realities of social relations that are integral to the art market. People buy art as an investment but also because they like it. Collectors frequently want to follow and engage the artist. Such relationships can be supported by legal agreements, but those depend on trust in society and its systems. *Contract Killers* cleverly uses blockchain to halt overexcited solutionism and insist on repairing our current systems, too.



Above: *Contract Killers (Social)*, accompanying sculpture to *Contract Killers* NFT. © 2021 Nancy Baker Cahill. All Rights Reserved.

Right: *Contract Killers (Judicial)* augmented reality intervention in front of LA City Hall of Justice in 2021. © 2021 Nancy Baker Cahill. All Rights Reserved.





## A Matter of Trust

An artwork's provenance is partly established by verifying that it came from the artist's studio or was handled by the artist. Verified provenance not only authenticates an artwork by establishing a historical record of past owners, but increases the work's value by ensuring authenticity through a careful legacy. As the International Foundation for Art Research (IFAR) says in their Provenance Guide: "The object itself is the most important primary resource and a valuable source of provenance information." Blockchain's record of every transaction provides a provenance history, but how can that be ensured when the smart contract comes from the platform? How can the blockchain record be tied to a physical artifact?

The sculptor Hamzat Raheem has an answer. He deployed his own smart contract so that the NFTs he created could act as certificates of title clearly originating from him, just as his marble and plaster sculptures come from his studio, thereby ensuring a clear provenance. He tackles the matter in his project *Creative Archaeology* (2022), where collectors dig in soil to find one of his sculptures. These are embedded with a near-field communication (NFC) chip. When scanned on a mobile device, the chip activates a private webpage where the finder communicates their wallet address to the artist. Raheem can then send the smart contract that acts as the Certificate of Authenticated Title, developed with intellectual property and arts lawyer Megan Noh. The contract declares that the physical sculpture and certificate, represented by the NFT, must remain united. Transferring one without including the other mutilates the work, according to the contract.

Baker Cahill, Raheem and many other artists are using blockchain and smart contracts to inscribe a new set of social values around collecting art while including legacy practices like legal contracts to support their effort. The royalty approach itself is less important than establishing a relationship of mutual care between artist and collector. And the visual artifact becomes the object representing the importance of that trusting connection.

Media art is often celebrated for its interactivity, and these experimentations with smart contracts reveal blockchain's ability to alter social relations. Since smart contracts are about encoding events between two parties, these artists push beyond the prescribed contracts of established platforms to explore the potential this technology offers for real social change.

Some galleries have been supportive of the creative prospects inherent to NFTs, especially those representing digital artists. For example, Bitforms Gallery and Postmasters worked with the white-label platform Monegraph to create their own NFT platforms with modifiable smart contracts. The gallerist Magda Sawon of Postmasters has been selling groundbreaking media art as well as physical works for 38 years, and she has recognized that artists are mobilizing blockchain for their creative practice. She and her partner launched PostmastersBC to support artists and collectors, who unlike Raheem may still be new to the technology and need support. The gallery educates the community on blockchain technology as a part of any creative or collecting endeavor.



Sarah Meyohas, *Speculations* - Bitchcoin

Many in the NFT space have disparaged galleries and curators as gatekeeping intermediaries in sale transactions, but gallerists argue that NFT platforms also charge commissions and "provide spectacularly limited service in maintenance of artwork and career management," as Sawon decried in an emailed statement. Without that support, artists must marshal their own trajectory while remaining at the mercy of platform protocols.

When a group of crypto artists insisted in 2020 that NFT platforms establish and normalize 10% royalties on resales, the technology's automation made it an easy ask; though the debate resurfaced when the trading platform Sudoswap didn't include resale royalties, leading to loud objections by artists who'd already fought this fight. Reflecting on the *Contract Killers* project a year later, amid the sparring around royalties, Baker Cahill said, "Even standard protocols like that require baseline social agreements. That presumes centralized thought, which is counter to the idolatry of decentralization in the NFT ecosystem." As the technology develops and expands its reach, differing views around the role of consensus are sure to occur. The flexibility of smart contracts is their creative potential, but their mobilization across cultures will reveal cracks in current social contracts.





## Beyond Resale Royalties



The Red Telephone, Jonas Lund Token (JLT) Helpline, 2020, auto-dialing telephone

The future of blockchain is evolving alongside the artists pushing its boundaries, most notoriously surrounding resale royalties. While actors, writers, graphic designers, and even software engineers have royalty norms in their industries, visual artists have long been disregarded. Blockchain came along and made possible what social and legal efforts had not.

Now artists are presented with a panoply of alternative funding practices beyond royalties. As companies like Masterworks buy art and fractionalize ownership across investors, market regulations and tax obligations appear; Masterworks files paperwork with the SEC before selling shares, an example of how established regulations expand and adapt to new systems. Artists using blockchain have been exploring these avenues since the technology appeared, and they exemplify the most interesting opportunities for long-term profit sharing in an artist's work.

Simon de la Rouviere's *This Artwork Is Always On Sale* (2019) operates according to a novel tax concept, the Common Ownership Self-Assessed Tax (COST) model. COST was conceived by Glen Weyl and Eric Posner in their book, *Radical Markets* (2018), as an alternative way to conceive of ownership while also enforcing a perpetual payment structure. De la Rouviere took this concept as an opportunity for digital artists to disrupt market practice. The owner of an object — the authors originally provided a case study in real estate — must always list their asking price, and the seller cannot refuse to sell at that price. The set price then becomes the basis for dividend disbursements overtime, which might be paid to an artist for a creative object. De la Rouviere minted and auctioned the conceptual work on March 21, 2019, with a patronage rate of 5%. A new version was created in 2020, and the artist has posted about how others can create their own version.

Fractionalized ownership is receiving renewed interest as an opportunity for groups to pool funds and purchase costly goods, like high-end art. The artist Eve Sussman experimented with this formula in *89 Seconds Atomized* (2018), a blockchain project based on her short film *89 Seconds at Alcázar* (2004), itself inspired by Velázquez's *Las Meninas* (1656). Sussman produced 2,304 NFTs, each corresponding to an "atom" of the 10-minute media work. Though she retained 804 atoms, a full screening requires that all owners agree to contribute their atom at a specified time. Where Masterworks uses this model as an investment fund, artists can pool smaller collectors to support large-scale, or high-priced, projects.



Jonas Lund Token Proposal #23, 2019, UV Print on laser cut plexiglass, 100 x 80 x 4 cm, Courtesy of the Artist.

In February 2015, the artist Sarah Meyohas launched Bitchcoin, another model for group support. In her white paper, she explains that each Bitchcoin represents a 5-by-5-inch segment of one of her works. In the original launch, that meant photographs from her *Speculations* series, which were placed in a bank vault. Possession of 25 Bitchcoins, for a total price of \$2,500, provided control over the 625 square inches of one photograph. The owner could then choose to access the physical photograph, or redeem the value for a future print, thereby encouraging collectors to become long-term investors in Meyohas's work. Predating the launch of Ethereum (and its ability to automate aspects of shared ownership) by five months, Bitchcoin was an early exploration of how artists could finance their practice. The project's legacy status has contributed to widespread respect for Meyohas, with a new release of Bitchcoins auctioned at Phillips in 2021, fetching up to 10 times the original price per unit.

Bitchcoin represents an early form of what is now described as a social token. Particularly in the music and sports industries, social tokens enable celebrities to tap the support of their fans in order to distance themselves from the demands or limitations imposed by their representation. Creatives promise token owners access to certain events and opportunities, with the coin value increasing alongside the artist's success. In visual art, these typically operate under the guise of decentralized autonomous organizations (DAOs) that can act as trusts, LLCs and community projects; in the United States, the state of Wyoming allowed DAOs to register as LLCs as of July 1, 2021. With all members contributing to a shared wallet, a DAO becomes self-governing and self-regulating,

automating the administration of the group. The encoded rules regarding member votes can mechanize certain functions, such as bidding on an artwork. Most DAOs have very active chat rooms where members participate in vigorous debate about any given issue.

"As the career path of Jonas Lund improves and his market value increases, so does the value of a Jonas Lund Token, thus allowing shareholders to profit through dividends and potential sales of the tokens," states the website of Jonas Lund Token (JLT). JLT is a DAO with 100,000 tokens distributed among parties with voting rights and shared responsibility for the projects that Jonas Lund produces. An advisory board's vested interest in the artist's success provides strategy guidance, but all potential projects are presented to token holders, who discuss and vote on what work Lund will produce.

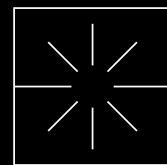
Blockchain is a technology in progress, not a monolithic structure, and artists can exploit its flexibility to remind audiences of its manifold prospects. Blockchain and smart contracts aren't just impacting the digital sphere, but the breadth of the entire art market. "The idea of smart contracts may be giving artists in the legacy art world confidence to demand the inclusion of resale limitation rights in IRL transactions of physical works," wrote Yayoi Shionori, arts lawyer and representative for the Chris Burden estate, reflecting on the impact of this emergent technology.

Certainly blockchain offers an opportunity to ensure provenance and reassure owners of the origin and authenticity of the works they purchase. But confidence in one's artistic value, and the tools to claim it as well? That gift to an artist is beyond measure.



## Great Machinations

The latest breakthroughs in artificial intelligence have sparked a creative revolution. Will humans lead it?





The next big thing in machine intelligence is already here. Multimodal foundation models, or large neural networks trained on vast data sets, are creating deep-learning systems at scale that allow transferability to myriad downstream tasks. AI systems built using these flexible models, such as DALL-E 2, Midjourney, Stable Diffusion and GPT-3, can turn concepts into art or prose into poems by identifying patterns based on a single text prompt.

Creators across disciplines are adopting these auto-generation tools into their workflows at a staggering rate (OpenAI recently granted access to more than a million users in just a few weeks), sparking important and thorny questions about copyright and plagiarism. It's not a matter of if but when modern industries will adapt to these developments. Meanwhile, the field of design is entering a period of uncharted transformation. And the time for questioning is now, while there's still time to influence its trajectory.

As a creative director focused on innovation, I wonder how AI will impact our craft and our livelihoods. Will it be our collaborator or our competition — and why would it matter?

What we know for sure is that foundation models can mimic creativity in a way that is completely indistinguishable from human output. The results can be strikingly emotional in nature, and it's this characteristic that foreshadows our future. We're standing at the edge of a technology-fueled creative revolution. The question is: Will we lead it?

## The Influence of Emotion

Emotion is deeply embedded into the creative process, influencing how ideas are hatched, leading to great creative thinking that is derived from a mix of complex nuances of the human condition. With AI, we're witnessing a level of sophisticated intelligence so advanced that it appears to embody these qualities. The ability to be expressive and conjure emotion in an audience brings AI much closer to replicating human creativity.

AI is trained to recognize patterns, make connections and produce results, but we're often surprised when the results seem subjective — appearing human in a way that is freakishly convincing. But subjective biases like humor or aesthetic taste are actually derived from human intelligence: the capacity for learning, reasoning and understanding. For instance, you have developed a specific sense of humor because you've been “trained” to cognitively process comedy. Theoretically, if a machine were trained with heaps of humorous data, it's conceivable that it could develop a funny bone that rivals the best comedy writers in the industry.

“The best AI can make bold statements and take risks your average writer would never consider. It can come up with ideas that are downright provocative, too. And it doesn't just do all this for fun — it does it because sometimes you need to be told something in a way that makes you sit up and pay attention.”

— Text generated in collaboration with Copy.ai

Instinctively, the human experience of viewing art involves making connections based on an individual's interpretation. Designating an artist's role to AI is acting as a kind of catalyst for this experience. What happens next is entirely up to humans.



Prompt language used for  
Helmet image, p. 81

Fashion editorial, long exposure  
photography, model in motion,  
holographic suit, fashion  
photoshoot, helmet, motorcycle  
pop rider, wearable, techwear,  
emotional lighting, magenta  
accents and details, holographic  
reflections, diffused ambient  
light, hyperrealistic, 8K vray  
tracing render, motion

AI image generated in  
collaboration with Midjourney

## At the Forefront

A growing number of prolific artists, creators and brands have already harnessed the power of AI, embracing the technology for its potential. They are becoming real-time pioneers.

Digital media artist Refik Anadol explores the subject of “what it means to be a human in the age of AI,” partnering with brands like Google, Microsoft and IBM to apply the latest developments to his work. With data as a central element, Anadol likens algorithms to an essential tool of the craft. As he told NFT Now, “I see AI becoming this extension of the human mind. When I did Wind of Boston, I was [telling people that] the data is here becoming pigments and the algorithm can become a kind of a brush. Data is still the pigment — but now, the brush can think.”

Los Angeles-based film director Paul Trillo has been experimenting with DALL-E 2 to showcase its ability to flow with fashion trends. Using a method called inpainting, Trillo created a mesmerizing, 30-second composite of a fashion show featuring hundreds of unique, AI-generated outfits on a model via live-action video. Not only is the work striking and imaginative, it inspires creators looking to iterate rapidly. Trillo

described the power of AI as “limitless and overwhelming” to Fast Company, saying that it “opened the door to some pretty wild designs that I would have never come to on my own.”

Features like inpainting and the highly anticipated release of DALL-E 2's outpainting provide creators with the tools to stitch ideas together seamlessly with high-quality extensions to the canvas.

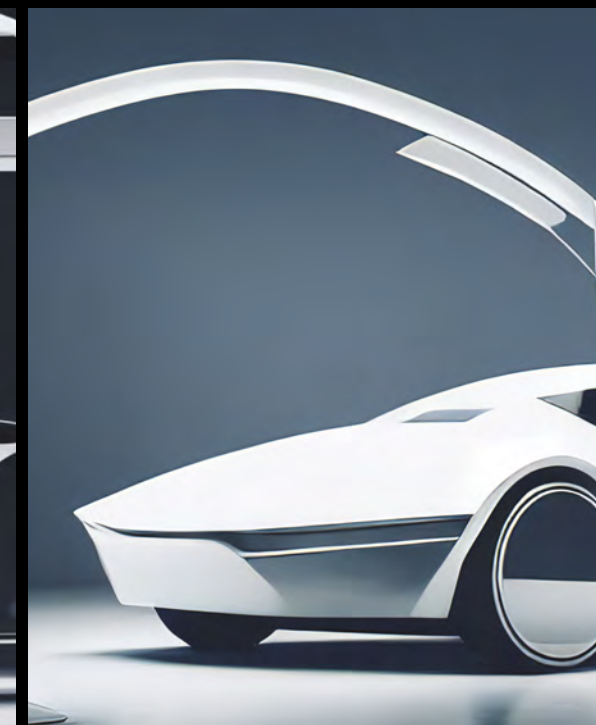
Meanwhile, the very popular experience design app Figma has emerged as a leader on the bleeding edge of efficiencies, particularly with AI features. Recent plug-ins like Ando and Magestic allow UI/UX designers the ability to generate in-app ideas, and optimize the end-to-end design process through simple text prompts, shapes and images. Recently acquired by Adobe for an eye-watering \$20 billion, Figma's AI features are in the hands of more users than ever, bringing the immediacy of innovation into the design process — and on a massive scale.

This, coupled with the current deluge of news in this space suggests machine learning has already gone mainstream.



# F9





## Exponential Efficiency

The speed at which a trained AI can generate a high volume of outcomes — or predictions, in AI speak — is remarkable. In seconds, it can assemble sophisticated words and images, drawing from a vast data set while constantly learning from it. Having access to deep data will always be AI's competitive advantage. No matter how hard we work, humans will never be able to outperform machine efficiency at scale. Shall we concede this fact and embrace a partnership with AI to advance our profession? All signs point to yes.

Creatives are constantly angling for more time and space to practice their craft. We're often inundated with mundane tasks that take us away from the real juicy stuff — the big, scope-for-imagination thinking everyone hopes for. Enter the machine: AI offers up a ready-made assistant to help tackle the grunt work. Suddenly, the human is the true visionary, while the machine is left to the execution. This dynamic already describes the artist-ex-machina relationship experienced by many of today's generative artists, and will continue to evolve.

In a recent report, the research firm Gartner predicts: "By 2026, generative design AI will automate 60% of the design effort for new websites and mobile apps. Generative design AI reduces the human effort required for design exploration and production design. It allows designers to focus on user research, product strategy and solution evaluation, rather than detailed screen design tasks<sup>1</sup>."

<sup>1</sup> Gartner®, Predicts 2022: Generative AI Is Poised to Revolutionize Digital Product Development, January 11, 2022.

AI can amplify the creative process by sketching dozens of design iterations for us. It can auto-complete our ramblings into coherence. But what could an ongoing collaboration with AI look like? An exciting benefit of this new tool is the ability to volley concepts with it — and receive unexpected results. It even has a playful quality to it, which is quickly winning over many of my colleagues.

"Having a tool that helps juice the system of creation is going to be invaluable. This new type of creativity is going to force people to learn how to use language to express outcomes, and I think that's going to be a skill they'll teach in school. The better you are at describing your desired outcome, the more successfully you're going to operate in this new world of generative art," says Steve Croll, group vice president of technology at Huge.

The potential here is to expand original thinking. To break us away from derivative ideas and designs, AI can spark concepts that humans wouldn't arrive at immediately — or ever. Ideally, AI can help shake us from stale or rote habits and push us into fresh territory, helping us deliver work that is unexpected and novel. Bring on the revolution.

A recent article in *The Economist*, titled "Artificial Intelligence's new frontier," put it this way: "AI can be used as a software sidekick to enhance productivity. This machine intelligence does not resemble the human kind, but offers something entirely different. Handled well, it is more likely to complement humanity than usurp it."





## Unintended Consequences

With all the bright promises of AI comes a dark potential: the long-term loss of craft excellence. The efficiency gained from automation might also threaten to render humans too reliant on machine intelligence, dulling our skills — and our own potential to develop true grit — in the process.

Learning how to design, write or ideate is an important part of every creative's discovery process. What happens when the journey becomes too easy? Will we lose our edge? Worse yet — will companies prefer the work produced by AI to our best human efforts? According to Forrester research, "Large creative agencies will lose 11% of jobs to automation by 2023."

That stat serves as a real warning sign. But it doesn't tell us anything about the secondary effects of such a shift. And it doesn't give any credence to our human capacity to adapt, either.

"The AI revolution promises creative growth in many areas and while some jobs and processes will change or disappear, others should emerge, and people will develop new ways of working in symbiotic relationships with AI. The positive vision for AI is one of co-creativity, where AI will assist creative professionals, not replace them," writes Julian Watkiss for FE News.

For now, we are still the arbiters of quality. AI's current output — whether it's copy, conceptual imagery, creative code or product layouts — is mediocre at best without the guidance of humans. For some companies, generic AI-output might suffice. But for the impassioned creators looking to move the world forward, we'll need to actively delineate the "good enough" from the "great" in each collaboration that leverages machines.



## Human Intervention

In order to optimize our relationship with AI, creatives must become creative directors. Fundamentally, this involves precision in curation — the steering, approval and amendment of an AI's work through diligent prompting. In fact, coming up with high-quality AI prompts with proven, desirable outputs is considered an art in itself, allowing creators to sell their tried-and-true prompts on a new kind of marketplace.

"Really great artists are methodical — there's a method to the madness, right? And these new models are different methods we can use, new tools we can add to our process. DALL-E 2 and Midjourney are almost like instruments, and we're just learning how to play them," says Jon Hackett, group technology director at Huge.

Beyond the art of curation, our role requires us to responsibly challenge the inherent bias and accuracy of data built into AI systems. Since we're ultimately at the mercy of data sets, we'll have to be keenly aware of any limitations or assumptions in that data, in order to understand its impact on outcomes. Once we reach a point where an AI is actually trained on other AIs, there's the horrifying potential for a strange echo chamber of auto-generated, harmful content, requiring human intervention.

AI algorithms can liberate us to achieve ever-greater ambitions. But it could also usher in unwanted, inaccurate and irresponsible outcomes — if we let it. This all points to one truth: we bear responsibility for what happens here. AI starts with humans and ends with humans, and only through collaboration with it can we steer this game-changing tech toward positive evolution.

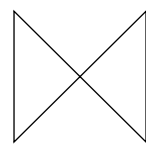
Natalie Comins is a group creative director at Huge.

"The best AI can make bold statements and take risks your average writer would never consider. It can come up with ideas that are downright provocative, too. And it doesn't just do all this for fun — it does it because sometimes you need to be told something in a way that makes you sit up and pay attention."



## The New Rules of Work

Ana Andjelic, brand executive and author of “The Business of Aspiration” offers her take on the future office, in all its forms.







"I know it's a hassle to come into the office, but if you're just sitting in your pajamas in your bedroom, is that the work life you want to live?" Malcolm Gladwell recently asked on the *Diary of a CEO* podcast. "Don't you want to feel part of something?"

We like the future that we can anticipate, but sometimes the things we anticipated don't become the future. We consider the bad things to be a negative externality of the good things. But innovation by necessity must be internalized. In tech terms, hybrid work is a bug that became a feature.

Given the chance to work flexibly, 87 percent of people take it, according to the third edition of McKinsey's American Opportunity Survey. In the U.K., this figure is at 60%, per Core Signal's trend report, and 37% of Europeans polled stated that not being allowed flexibility would be the policy most likely to cause them not to accept a job offer. In Asia, flexible working patterns are also normalizing, with 38% of companies expecting employees to be in the office full time and another 24% expecting employees to be there most of the time, according to CBRE's new Office Occupier Survey. (In the U.S., it's 5% and 32%, respectively.)

"Any action that is repeated frequently becomes cast into a pattern," Berger and Luckmann (1966). "The Social Construction of Reality"

Features become institutions. Just as the pattern of working long hours in offices has been considered not only normal but normative, hybrid work, when institutionalized, becomes aspirational. Since the pandemic, hybrid work rearranged how we spend time and money, how we commute and what we do for leisure. This impacts local businesses, hotels and restaurant traffic. A report by Kastle, the security company, found

that office occupancy in 10 major U.S. metro areas averaged 44% as of July 2022. In NYC, the most recent reported occupancy rate is 41.2% according to The City, a nonprofit local news outlet. The figure is similar in London, with average office occupancy rates at 40% according to CoStar. In Tokyo, office vacancy rates have increased steadily since January 2020, according to Statista.

Companies wrestle with the two intertwined narratives. Efficiency of the office (an economic narrative) is juxtaposed with office bonding, belonging and camaraderie (a social narrative), leaving organizations to figure out the right SWOT (strengths, weaknesses, opportunities and threats) analysis of the two. But the real value innovation here is in the decoupling of efficiency and socializing from one single, shared physical space. This effectively changes the meaning of "office." In place of the office, there is a new value curve. Corporate leadership needs to pay attention to what their employees are doing right now — how they organize their days and what their work-related rituals and daily rhythms are — to successfully build and manage the office of the future.



Photography: Unsplash

## Efficiency

Since the days of Max Weber and Frederick Taylor, companies have been synthesizing workflows, controlling resources and managing employee output to maximize labor efficiency and minimize slack. In the modern work era, efficiency has been the ultimate business goal.

Open-office plans, despite their collaboration mantras and kombucha taps, have primarily been productivity tools to pack in as many people per square foot as possible. For efficiency purposes, job tasks are divided into simple, routine categories based on functional specialization. Every employee is responsible for what they were hired to do.

In addition to specialization, mass retailers, banks, airlines and real estate firms have moved toward short-term, impersonal interactions to make themselves more efficient. They successfully inched out independent goods and service providers — known for their intimate customer knowledge and long-term customer relationships — based on the principle of lowering the cost of goods and services by giving customers one-stop-shop convenience.

Across industries, companies aspire to stay lean to keep profits high. No one wants cash sitting in their balance sheet or inventory sitting in their warehouse. Airlines, in order to make each of their trips as efficient as possible and squeeze more money from passengers, started offering a growing a la carte menu of auxiliary services, like checked bags, legroom, meals and pillows. Low-budget airlines run ridiculously short routes in the name of efficiency, with a hefty carbon emissions cost.

Short-termism, specialization, cost reduction and transactional relationships still largely apply, even in creative industries like advertising or fashion. But they are ill-positioned to solve fuzzy problems like applications of cryptocurrency, global supply chain challenges or the modernization of retail. Answering how to use blockchain to drive revenue across channels or how to change the cost model to support the new role of stores requires a holistic perspective and a versatile skill set.

The best talent doesn't define itself through roles or specializations (like a social media manager or copywriter or PR person). They bring value to the organization through their ability to grow the company's business, move the wider culture and help their coworkers do their jobs better.

# F10



## Socializing

“The city was one’s dining room, living room, and extended home — rather than the apartment, which is just where we went to sleep at night,” writes Elizabeth Currid-Halkett in her book “The Sum of Small Things.” Even for 2017, when this book was published, this view feels dated: It’s somehow closer to the “Sex and the City” era than to anyone’s actual behavior today. Since 2016 and the onset of *hygge*, the Danish term used to describe the pleasures of cozying up at home, young people have come to the conclusion that going out requires “too much effort.” Instead, they started to invest in plants, cookware, meditation cushions, decorative pillows, candles and bath bombs. “The Great Indoors” is the title of a 2017 essay that captured emerging trends like candles, baths and spending more time at home. In 2019, author and consultant Venkatesh Rao’s term “domestic cozy” was officially elevated to the level of a coveted lifestyle.

The pandemic built upon this already existing zeitgeist and amplified it to global proportions. But the pandemic did not invent it. Younger people had already opted for a slower pace of life as a good thing. Hustle culture reached its fever pitch before the pandemic and then faced a cultural backlash. Anti-ambition became a thing. Artist Jenny Odell wrote “How to Do Nothing” about resisting the attention economy.



Before reconsidering their effort-reward ratio, generations of workers believed they were too busy to cook, exercise, sleep, watch TV, see a doctor, shop for clothes or get over jet lag. This belief led to an entire economy based on outsourcing and delivering these services.

Now they embrace a more balanced existence. The modern workforce, free of guilt, sets time aside for journaling, cooking, going for a walk and checking in on friends. They’ve realized that their social connections happen outside of the traditional office, where they used to spend all their time. The feeling of a shared identity, belonging, being needed and being part of something is a feature of their social and professional networks, which are wider than the office.





## Design for the future

To develop a sustainable organization strategy around the new office, corporate leadership should consider the following four truisms:

**One percent rule.** There's a famous anecdote about Sir Dave Brailsford, who was appointed the British Cycling performance director in 2002. It had been nearly a century since Great Britain had won an Olympic gold medal in cycling. Far from discouraged, Brailsford approached his charge to improve this record by breaking down every single thing he could think of that goes into riding a bike and then improving it by 1%. The nutrition of the riders, the pillows they slept on, the gel they used for their massages, the ergonomics of the bike seats, the weight of the tires: Brailsford improved it all, just by a tiny bit. By putting all those 1% margins together, or by "aggregating marginal gains," he ended up with remarkable results. In 2008, the British team triumphed at the Beijing Olympics, claiming 70% of the gold medals in track cycling, a feat they repeated at the London games in 2012. They won their first Tour de France that same year and have since gone on to win five more. Brailsford proved that, rather than a silver bullet, there are a handful of micro, human-centered optimizations that can help create considerably more value down the proverbial cycling road.

**The Tragedy of Growth.** GDP growth "does not enhance life satisfaction, alleviate poverty, or protect the environment," according to a recent research report from the UK-based not-for-profit company Positive Money.

But we still seem to come short of a viable alternative to a financially stable non-growth economy (the closest we've come is the ESG framework). The solution seems to be as normative as it is systemic: Modify corporate measures of economic progress by incorporating additional indicators, such as carbon emissions, robustness of the healthcare system and infrastructure, and education. Start with the growth-imperative-deformed industries like global sourcing models and product-driven value chains. The lean and overextended supply chains worked great — and yielded huge surpluses — until they didn't. Alternatives are on-shoring production and the increased self-sufficiency of companies in terms of their reliance on both locally sourced materials and talent.

**Human-centrism.** Most of our institutions are built for and around individuals, with narratives and ideologies of individual freedom and competition to match. But humans are not only individuals; they also belong to communities and are members of a society. Their behaviors are shaped by those around them and by collective symbols and stories. The new social and economic targets are a community and a society. The level of an individual is seen in the context of their social and economic networks.

Longer time horizons. The behavioral economics term "hyperbolic discounting" describes the human tendency to discount future rewards compared to present ones. Psychologically, we are not primed to think in terms of abstract threats and long time horizons. Sociologically and economically, we must prepare for the longer term. During the summer of 2022 heat wave, for example, all around us there were reminders of wide-reaching and long-lasting consequences of our actions for our environment and for our communities. We need to put these reminders front and center when making business decisions.



## Localize to win

Crises are great truth tellers. They expose organizational and operational strengths and weaknesses. They challenge leadership. They bring on business disruption, revenue drops, layoffs and the pressure to reduce expenses and find new ways of making money.

But crises also offer a creative toolbox. They force all of us to think and act differently, and they force businesses to address problems in new ways.

To save the physical office, break it up. Turn it into a portfolio of smaller working spaces: hyper localized nano-offices and micro-clubs. In this scenario a massive brand office becomes a house of smaller local offices or an office family. The biggest roadblock to our workforce getting back into the office is commuting; the key to removing it is renting a series of mini office spaces close to where employees reside.

Remote workers are remote only in relation to a specific set of coordinates. In fact, they are right where they need to be, spending their workdays locally, in their home offices, neighborhood coffee shops, coworking spaces and membership clubs. There, they work and socialize, build their community and forge their identity and a sense of belonging.

Maybe the ripped social fabric of meaning and purpose that Gladwell laments is in fact just a metamorphosis: There is no need to conform to an office identity when you can build an office around your own identity and share it with like-minded others who identify with the same lifestyle. (Offices have always been more fun once we find our own tribe there.)

This "office portfolio" approach encourages intrapreneurship, where teams are freer to innovate, test against their customer preferences and renew their

brand's relevance and differentiation. It also reduces the giant fixed costs of running mass brand businesses through a combination of efficiencies in operations and payroll, with cost savings in real estate, utilities and technology. Breaking up one massive office into a series of smaller, local working spaces allows a company to manage it in a cheaper, more responsive and more nimble way.

This shift to micro and local has already happened across industries. There are independent bookstores, niche magazines, impossible-to-get-in-to clubs, private communication apps, "Close Friends" sharing on social media and a rise of localized neighborhood outposts of national chains (IKEA has a localized store in Paris, as does Target in NYC). Localization is powered by both the rise in nano-warehousing and a decline in private-car ownership among young urbanites, according to McKinsey research. Nano- or micro-warehousing refers to small fulfillment centers dispersed throughout urban neighborhoods. It helps retailers route orders quickly through nearby facilities and provide the handy last-mile solution that ensures speedy delivery and cheaper fulfillment.

All of these examples are the opposite of the "bigger is better" model. We seem to want to shop, entertain and socialize in the same way we did 100 years ago, before mass media, mass brands and mass offices.

Companies' success ultimately depends on their employees and whether they find it desirable to work, live, socialize and self-actualize within the corporate construct. It is up to all of us to intentionally and laboriously weave together the new fabric of our work practices, in all the physical spaces — home offices, company offices, coffee shops, coworking areas and membership clubs — where they take place.



of  
office

Out

Where to stay, play, and network  
in the year ahead.





## Destination: Madrid

Photography: Unsplash

The Spanish capital is poised to become Europe's next urban hot spot. Here, your essential pocket guide to the city of art, music and matadors.

Madrid is having a moment. Though this imperial city still bears the scars of the European debt crisis and the crushing effects of COVID, it's coming out of the gate like a pent-up bull.

The city of Madrid is spending 13 million euros this year with the aim of becoming "one of the world's top city destinations," according to the tourism bureau. They're off to a running start: In July 2022, Spain welcomed 9.1 million international tourists, which is more than double than in the same month in 2021, according to the National Statistics Institute.

Many in the hospitality industry saw this coming and prepared for it. Back in 2020 when the world stopped traveling, Madrid was littered with distressed properties looking to sell. Hotels were shuttered and real estate was cheap. Seizing the opportunity, real estate developers — with and without prior plans to invest — swooped in and rebuilt in such a spectacular fashion, even the boulevards seem to have a brand-new shine.

In the heart of the city, historic landmark buildings and architectural marvels have reopened their doors as hotels and are rapidly becoming social hot spots. Setting the tone are the Rosewood Villa Magna, the Mandarin Oriental Ritz, the Four Seasons Hotel Madrid and a new outpost of the Marriott-owned Edition — each of which received multimillion-dollar redesigns within the past three years. More openings are coming. Madrid currently hosts 803 hotels, with 15 more slated to open by 2024, including buzz-worthy brands like Thompson, Sonder and Nobu.

Though Madrid was once seen as a stopover to other, more popular coastal attractions, such as Barcelona or Mallorca, that perception is changing. Madrid is known for modern connectivity; its massive high-speed rail network called Alta Velocidad Española (AVE) is second in length only to the tracks in China, and its international Madrid-Barajas Airport is the second-largest airport in Europe.

Now, instead of a place to pass through, Madrid is giving us more reasons to stay. Here are just a few of the not-to-miss highlights:





Plaza Mayor, Madrid. Photography Unsplash



Palm Court, Mandarin Oriental, Madrid

## Eat

“Nobody goes to bed in Madrid until they have killed the night,” wrote Ernest Hemingway in *Death in the Afternoon* (1932). This is no less true today. Dinner is a late affair, with friends and families typically gathering at the table around 10 p.m.

On weekends, the lead-up to dinner involves a Spanish tapas bar crawl, which can last until morning. Locals call this ritual “tardeo,” and its fullest expression can be found on a colorful, festive street called Calle de la Cava Baja. No reservations are required, just an ambling attitude and an adventurous palate.

### Amós

For a fancy fine-dining experience, head to Amós, led by Michelin-starred chef Jesús Sánchez. Here, locals don their finest attire to carouse over the course of an eight-plate prix fixe menu that showcases Cantabrian cuisine from the northern coast of Spain.

It’s a gastronomic performance, staged in a dining room furnished with spacious banquettes, royal-blue velvet chairs and soft gold pendant lighting. The show begins with tiny bites, like a quarter-sized anchovy sphere, which leads to a few spoonfuls of pickled-mussel pâté before an entr’acte of small plates featuring caramelized foie gras on black-olive sponge cake — all of which crescendos to the main dish: a fall-apart hake filet swimming with Cantabrian cockles in a pool of delicious green sauce.

And if you have any room left, tuck into the almost too-divine-to-eat assortment of desserts, such as almond cake with caramel ice cream or a cloud of white-chocolate cream topping seasonal fruits.



Amós Restaurant, Photo by Jennifer Leigh Parker

### Dani Brasserie

There are a few eateries you really should not miss. Dani, on the rooftop of the Four Seasons hotel, is one of them. Cut through the lobby and take the elevator to the seventh floor. There awaits one of the best views of the city, beneath a glorious 19th-century bell tower perched at the precipice. Stand here and watch all the grand boulevards and historic monuments of Madrid sprawl out before you, illuminated by the city lights.

Madrileños adore this spot, too. They come for the views, but also for the excellent craft cocktails, tapas and full Andalusian menu, the creation of Spanish chef Dani García. If you’re in the mood to snack on acorn-fed ibérico ham, pick apart a rosette of bluefin tuna or photograph the edible flowers in your cocktail, this is the place to satisfy your cravings.



# Stay



## Mandarin Oriental Ritz, Madrid

After a three-year renovation, this gilded dame has been restored to her circa-1910 grandeur. This is largely thanks to the work of Spanish architect Rafael de La-Hoz Castanys and French interior design agency Gilles & Boissier. Most strikingly, the great steel and glass dome above the Palm Court restaurant, which had been hidden for 80 years, has been recovered — bringing blue sky and natural light into the social heart of the 153-room hotel.

It's everything you might expect from a Mandarin Oriental in a major metropolis. Sophisticated refinery broadly nods to Anglo-Saxon, European and Asian cultures, which is a delicate balancing act. But they are rewarded for it with strong brand loyalty. Regulars can expect proper English afternoon-tea service set to live piano music, gold-leaf accents adorning the delicate desserts and an ultra-luxe Champagne and tapas bar that seats only eight. And that's just the restaurant.

This classic property manages to stay contemporary because it's self-aware. Management knows the median age of their wealthy clientele, and they're working to attract the next generation of travelers, who don't want to stay cosseted in goose-down bedchambers — they want to be out discovering Madrid! Peruse the hotel's Instagram account and you'll find promoted "MOExperiences," which include private museum tours (the Prado is steps away), visits to the Liria Palace and day-trip itineraries that highlight the city's best gourmet markets, art galleries, clubs, restaurants and shops. This kind of golden-key access is what you should expect from a five-star concierge, and this staff does not disappoint.

## Rosewood Villa Magna

Some hotels envelop you in their world and color your impressions of a destination. Rosewood Villa Magna is one of those. Built on the site of the 19th-century Anglada Palace, it first opened as a hotel in 1972 and attracted Spanish aristocrats. Following a 210 million euro investment by RLH Properties, the 154-room building underwent extensive renovations led by Spanish architect Ramón de Arana and reopened in October 2021.

Today, the hotel still evokes a sense of royalty, with an aged-brass façade that reflects the sun and a white stone porte-cochère entrance that opens onto a spectacular garden courtyard, which you can see from the comfort of your hotel room. The Villa Magna suite, for example, overlooks the Paseo de la Castellana boulevard and features a king-size bedroom with a writing desk and chaise lounge, a marble bathroom and a luxurious living room flanked by a breakfast table and in-room bar.

But it's the smaller details that make it memorable. A copy of painter Francisco Goya's biography sits on the foyer table. Fresh flowers have been placed in each room. The bar is stocked with crystal glassware, plus a gin-and-tonic kit with all the trimmings. Even the fine linen pillow has your initials embroidered onto it. If that doesn't make you feel welcome, I don't know what will.

Rosewood Villa Magna, Madrid, Front Desk.

# Play

Hall of the Cloister of the Prado Museum. Agustín Martínez © Madrid Destino



## Museo del Prado

Madrid is an art lover's capital, with countless galleries and museums to choose from; but its most revered treasures can be found along the Paseo del Prado. Like nowhere else, it is within the walls of the hallowed Museo del Prado that one gets a sense of the Spanish soul.

If you listen closely, the artists and artworks in this 200-plus-year-old institution can tell you much about their patron monarchs, who are inextricably linked to the history of Spain.

Here, you'll find the world's most comprehensive collection of Spanish master painters Diego Velázquez and Francisco Goya, who are presented with such clarity that their lives seem to come through the canvas. Their paintings reflect not just royal court concerns, but historical upheavals, and their respective styles influenced the artists who came after them.

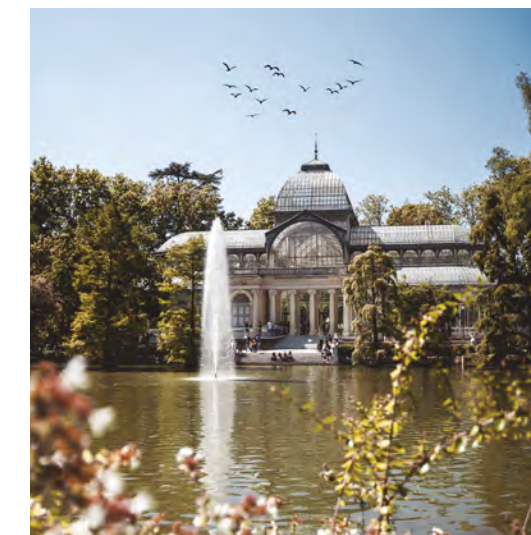
Beyond the Spanish masters, you'll also get a master class in European art, thanks to the Prado's extraordinary collection of Rubens, Rembrandt, Bosch and Titian. With thousands of paintings, drawings, prints and sculptures to see, you'll want to spend at least a few hours meandering through the wings. To keep things fresh, the museum also hosts a slate of new exhibitions throughout the year.

## El Retiro Park

El Retiro is to Madrileños what Central Park is to New Yorkers, or the Luxembourg Gardens is to Parisians. It's the place everyone comes to relax, play and enjoy a respite from urban life. For starters, it's a massive green space, spanning approximately 350 acres in the city center, with gardens and statues as glorious as any you'll find in a European capital.

The focal meeting point is a large artificial lake, watched over by the imposing stone Monument to Alfonso XII, complete with an equestrian sculpture of the king. It's a popular spot to rent rowboats and listen to street musicians as you watch the world go by.

Lastly, don't miss the Palacio de Cristal, aka the Glass Palace. Hidden among the trees south of the lake, this glass pavilion was built in 1887 as a winter garden for exotic flowers. It is one of the finest examples of cast-iron architecture in Spain.





# By Invitation Only



Maison Villeroy is home to one of the most exclusive private membership clubs in Paris. Here's what's in store for the brand's next outpost, coming soon to Manhattan.

A few steps away from the Champs-Élysées, between Avenue Montaigne and the river Seine, you'll find a tony little side street called Rue Jean Goujon. This is where fashion's power players, including Bernard Arnault, Chief Executive Officer of the luxury giant LVMH, go to work. Behind a secure rod-iron gate, you'll also find one of the city's most elite private clubs. Bienvenue chez Maison Villeroy.

Open in earnest since September 2021, Maison Villeroy is the latest example of a hotel, restaurant, and members-only club hybrid designed to satisfy the needs of guests in a pandemic world. It's a model that's been around in Paris since the 17th century salons were held in private homes by members of high society. Now, with a renewed interest in privacy, small gatherings, and sophisticated service, the maison model is once again en vogue.

"The way we operate the hotel is like a villa. This could be your grand living room, rather than a hotel bar. Back in 1908, this was the center of the family Villeroy. This was their dining room," says Jacques Oudinot, COO of The Collection, holding court in the Belle Époque lounge over a breakfast of cacao-dusted cappuccino and impossibly fresh croissants. Having previously served as General Manager at the famous Hôtel de Crillon in Paris, Oudinot is well versed in the language of high-end hospitality.

These days that means hyper-personalized service. For example, in this 11-room bijoux hotel, there are 25 staff members helping to manage the whims and requests of only 50 member guests. The staff includes 12 trained butlers, so basically everyone gets butler service, instead of a traditional concierge or bellhop. "Our butlers will be here to welcome you, escort you to your room, book a restaurant, or serve you lunch at the restaurant. He's your one point of contact. So you know him and he knows you," adds Oudinot.

It's over-the-top, even for The Collection, the luxury property management company which operates Maison Villeroy. Owned by Kirill Pisarev and backed by Wainbridge International, The Collection includes nine other properties in St Barth, London, Courchevel, Cap Ferrat, and New York. But Maison Villeroy was the first to test the hotel-club model, which is somewhat of a leap in Paris, where private members clubs do not enjoy the same cultural caché that you find in London or New York.

Annual membership fees are similar in range to Soho House, at \$2,500 annually for the minimum membership (which does not include spa or gym access), and \$5,000 for top tier members — which includes the spa, gym, and access to their sister club in New York. But that assumes you've passed the hurdles of initial acceptance. These include a written application, a referral letter by an existing member, and an entrance interview with the general manager. "We make sure that they really understand who we are, and that we understand who they are and what their intentions are. And we need to meet their expectations," adds Oudinot.



An apartment inside Maison Villeroy, Paris.  
Photo courtesy The Collection

## New York, New York

Slated to open at 401 West in the West Village by January 2023, Maison Hudson is a serviced luxury residential apartment building designed by Danish architect Thomas Juul-Hansen, whose client list includes Jean-Georges Vongerichten and David Yurman. Embracing the multi-use mantra, it includes a full-service restaurant, spa, gym, and rooftop with views of the Statue of Liberty and the Hudson river.

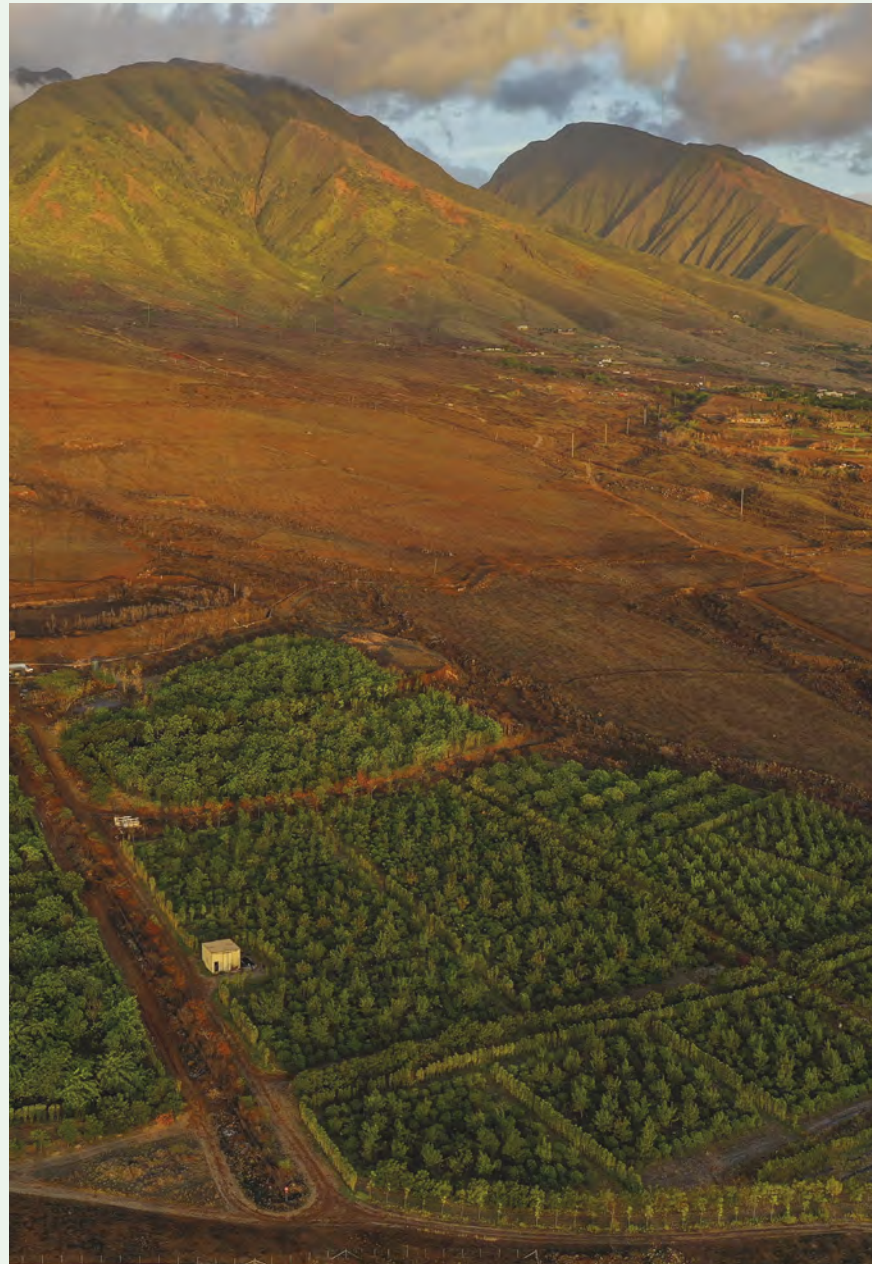
With only 10 apartments, Maison Hudson is an intimate venue with limited capacity. In that sense, it's not in the same category as the sceney New York clubs like Casa Cipriani or Zero Bond, which host hundreds of guests at a time and maintain strong A-list demand.

Of course, the true New York make-it-here test will be the club's new restaurant Marius, with about 56 covers split between an indoor dining room and an outside courtyard. You must be a member or resident to eat here — unless, of course, management changes its mind after opening. Those lucky enough to get in will be treated to a provençale menu (a lot of olive oil and garlic) from the Michelin-starred chef Sebastien Sanjou, who also helms the kitchen in Paris at Villeroy. There, he is known for his vegetable-forward menu, which changes each week and upholds the tenets of classic French technique. While his Marius menu is yet to be revealed, we know he will not be importing any ingredients from France. In New York, as is de rigueur since chefs Daniel Humm and Dan Barber came onto the scene, all produce will be sourced from local farmers.

Overall, the club's premise plays directly to the strong coterie of Francophiles and Parisians in New York, who celebrate high-brow French hospitality for what it is. Sign up in Paris, and you're automatically a member in New York? Mais oui, merci.



# Seed Growth



Courtesy the Maui Ku'ia Estate

How a former biotech scientist built an oasis on dry land — and turned an unlikely crop into Maui's most delicious new product.

Many people have heard of the famous Hawaiian Kona coffee, but far fewer are aware of Hawaiian-grown cacao, the fruit whose seeds are used to make chocolate.

Most of the cacao grown in the world comes from a clutch of places within 10 degrees of the equator: Ghana, Côte d'Ivoire, Nigeria, Ecuador, Brazil, Indonesia, Peru and a few others. Hawaii is actually on the outer edge of the equatorial sweet spot.

People didn't really start experimenting with growing cacao commercially in Hawaii — the only place in the U.S. where it is grown — until the 1990s, with Dole being one of the first growers in the state (they sell under the name Waialua Estate). Compared to Mexico's storied chocolate history, which dates cacao growth to at least 1400 B.C., Hawaiian cacao is still in its infancy, with not much, if any, exported. But it's growing rapidly: According to a 2020 Hawaii Cacao Survey, about 133 acres of cacao were harvested in 2019, yielding 32.8 tons of dry beans. That represents a 70% increase in Hawaiian production since 2014. (Comparatively, Ghana produced 771,000 tons in the 2019 to 2020 harvest, according to the International Cocoa Organization).

One company betting big on the island chain's chocolate potential is Maui Ku'ia Estate. Founded by CEO and owner Dr. Gunars Valkirs and vice president of farm and factory operations Daniel O'Doherty, Ku'ia is one of a little more than a dozen chocolate producers in Hawaii, but it's one of the only ones with its own on-site farm and factory.

When Valkirs moved to Maui in 2008 after selling the medical diagnostics company Biosite that he'd helped found, chocolate was far from his mind. "For five years, I was playing golf and kite-surfing and not working at all," recalls Valkirs, whose home is on three acres in Kapalua. In 2010, he found himself volunteering a portion of his land to grow cacao trees. "The University of Hawaii at Manoa had an experimental field trial program, and Dan O'Doherty was a graduate student there at the time. He was running the program, so he came out to install the trees. There were 40 trees that I needed to grow and take care of, and Dan would come out every six months and take data."

What started as a hobby soon morphed into a business. That original experimental crop was destroyed by strong winds, but Valkirs was hooked. Instead of giving up, he went all in with O'Doherty, who by that point had become a world-traveling cacao consultant, to find a better growing location. Valkirs leased 54 acres of fallow farmland in Lahaina, where sugar cane had once been grown (the last harvest was in 1999). Although that area came with challenges, thanks to O'Doherty's global cacao-growing experience, the duo was able to successfully start planting cacao trees in 2015 after several years spent clearing the land.

"The challenge at the farm is literally the exposure to sunlight because we are on a west-facing slope in Lahaina, which is translated as 'merciless sun,'" says O'Doherty. "I certainly was nervous early on, but I knew it could be done. And I was very clear with Gunars that this is totally uncharted territory. I had visited dry zones in Ecuador and Brazil, where it's irrigated, but they're typically more equatorial. I'm pretty certain ours is the driest and most exposed farm that exists in cacao."

While there was inevitably some trial and error, O'Doherty and Valkirs planted a regenerative agroforest — woodland that replenishes what has been exploited to mimic natural forest ecosystems.



This provided shade with ground cover, nitrogen-fixing trees and a lot of organic matter to reduce erosion. They brought in water for irrigation from the nearby West Maui Mountains. Aerial photos of the farm look like an oasis on dry land. Without their efforts, this land would be barren.

On the plus side, the types of fungi that can grow on cacao in wet environments are not an issue in Lahaina (other Hawaiian cacao farms, for example in Hilo on the Big Island, must contend with these, like most cacao farms around the world). O'Doherty's background in working with genetics and dealing with the USDA on in-kind trade permits him to legally bring in other cacao varieties and cultivate them, allowing Ku'ia to have a varied array of plants that are best suited to Maui's climate.

Chocolate, which is made by harvesting seeds from the cacao fruit, fermenting them for several days, drying and roasting them, then grinding them, is similar to wine: It has a terroir, and seeds grown in different places impart a different flavor to the finished product. Ku'ia's single-origin Maui estate-grown chocolate has notes of tropical fruits, along with a hint of red wine and lingering notes of cherry and other dark fruits.

"The commodity market, which drives everything, doesn't penalize for bad quality, and it doesn't reward for good quality," says O'Doherty. But having its own farm and factory makes Ku'ia stand out in the craft bean-to-bar commercial chocolate world (which represents a small fraction of all the chocolate being made). Most of its competitors either only grow cacao or only make chocolate — not both.

And while most growers are breeding only for things like disease tolerance, fat content, and high yields, O'Doherty has the luxury of breeding for taste. "For such a high price for both the cacao and chocolate in Hawaii, it needs to be not just excellent, but unique."

After the much-delayed harvest from the first seedlings actually produced enough fruit to turn into chocolate, Valkirs was faced with a choice. "I calculated that it would take a million dollars to develop 10 acres of cacao to maturity, and that million dollars would never be recovered if we were just selling cacao." This meant that to make a profit, the company would need to make its own chocolate instead of selling cacao to other chocolate makers, which is what most cacao growers in other countries do. But given the operating costs of being on a U.S. island, that would have been impractical.

Faced with the choice of either shutting down the farm — a \$5 million hobby was a bit too much to swallow — or going all in and building a factory, he chose the latter.

"I chose to invest more money and make one of the world's best chocolates," says Valkirs, who in addition to being the CEO is the general manager and head chocolate maker, working 70-hour weeks. He and his wife JoRene have committed to giving 100% of net profits back to the Maui community. Though the company is not profitable yet, projections indicate that it will be in 2023.

The factory — which is entirely off the grid and runs on its own solar power and Tesla batteries — was completed at the end of 2019, and according to Valkirs it was an \$11 million investment. It currently runs at only about 20% capacity (around 176,000 pounds of chocolate a year), meaning there's plenty of room for growth.

Ku'ia has approximately 7,000 cacao trees set across 20 acres, with a plan to expand to 60 acres. Right now, the cacao grown on the estate in Maui isn't enough to supply all of the chocolate the factory makes — it only covers about 25% — so the rest is imported from a single-family estate in Costa Esmeraldas, Ecuador.

Aside from being sold directly to consumers online, the only place to get Ku'ia chocolate right now is in Hawaii. It's for sale at a few select local markets and at the retail store and café that are attached to the factory and tasting pavilion. The chocolates are also given as amenities in several Maui luxury hotels, including Montage Kapalua Bay, and at popular tourist restaurants like Mama's Fish House, which Valkirs says goes through 5,000 pieces of Ku'ia chocolate a week (one is given with every check).

While wholesale is not the main goal (the goal is two-thirds retail, one-third wholesale), Valkirs says these placements help pique people's interest in the product. Right now, it's all about getting on people's radars. "I don't have a distributor outside of Hawaii, and I don't want one," says Valkirs, who adds that wholesale distributors take too much of the profit. Instead, the plan is to continue to increase direct retail sales and level up the factory's output. "If people taste the chocolate, they will buy the chocolate."

As long as it can get into people's mouths fast enough.



# Must-Have Gadgets: 2023 Edition



1

## 1 Cowboy 4 E Bike

I love to take long rides on the weekend to clear my mind. But sometimes we get lost in thought, and suddenly realize we just biked six miles downhill and need to turn around and head back home. That's where the Cowboy comes in. I figure I may as well pretend to struggle in style. And I mean, just look at this thing. I can't think of a more beautiful thing. Murdered out and sleek as hell. Form and function at its finest.

Rich Bloom  
Executive Creative Director

[us.cowboy.com](http://us.cowboy.com)

Our Huge Moves staff set their sights on the future. Made with intelligent design, upcycled materials or hi-tech features, these products are harbingers of what's-to-come. Living smarter, better lives is the power of a great product. What could be better than that?

2



## 2 Gozney Rocbox

A handful of wood pellets (or charcoal briquettes, or wood scraps from an ill-conceived shelving project) provides enough zoot to blister up a Neapolitan-style pie faster than your gas-burning kitchen oven reaches base temp. During those 90 interminable seconds, you can talk thermodynamics with your dinner guests, expound on the beauty of giant sequoias, or just sit back and watch this adorable WALL-E castoff perform high pizza-making art.

Jonathan Schultz  
Group Creative Director, Experience Copy

[gozney.com](http://gozney.com)



3

## 3 Jose Gourmet Canned Goods

I'm a part-time resident of Portland, Maine. Living in a town that serves as a busy commercial seaport, it's impossible not to see the impact of the evolving blue economy: the sustainable use and regeneration of marine ecosystems. A design-forward, delicious example: Jose canned goods, which takes lesser-used seafood and transforms it into something gourmet. The labels alone are reason enough to stash them in a stocking, but opening them is even better.

Katie Birkel  
Vice President, Strategic Growth

[josegourmet.com](http://josegourmet.com)



4

## 4 Trova Go Biometric Stash Case

As someone who likes to travel for work and for pleasure, I like knowing my personal items are safe and secure. I love the portability of this product and also the versatility. The integration with biometrics, facial recognition and my iPhone is perfect for someone like me who is always changing and forgetting passwords. Whether it's credit cards, cash, jewelry, or as they describe "recreational or otherwise private things," I'm covered.

Matt di Paolo  
Chief Client Partner

[trovaofficial.com](http://trovaofficial.com)

5



## 5 Objecto W4 Hybrid Humidifier

New York City can be quite arid in the winter. I'm a big proponent of skin health and this product keeps my skin hydrated while I sleep. I spent time looking for a humidifier that shared the aesthetic of my home. We landed on this model, and it never disappoints. I can feel the difference in my skin on the nights I use it, and it comes with a nifty, visually appealing remote control.

Danielle Mardesich  
Associate Program Director

[crateandbarrel.com](http://crateandbarrel.com)





## The Curtain Raiser

Jason Schlossberg is Global Head of Marketing at Huge, as well as an executive sponsor of Huge Moves. Having joined Huge in 2017, Schlossberg was the driving force behind the company's award-winning strategic communications craft. He is known for endless curiosity, moral leadership, and hustle. With 20-plus years in the business, he knows where the industry's been, but prefers to think about where it'll go. Here, Schlossberg shares his thoughts on the making of this issue.

Since February, we've been discussing how this platform should and could be tech-enabled. We went all-in on AI covers and NFTs. You had to convince our team to get on board. But how did you convince yourself?

**Schlossberg:** First and foremost, our publication is Huge Moves. Clearly that's a play on Huge, but we think about huge moves in a very specific way. A huge move is a bold move that an organization makes which has a material impact on its business.

We also wanted the publication itself to be a huge move. Obviously it needed to be a magazine that was thoughtful, that benchmarked a very high journalistic standard, and that was beautiful. But it also had to exist in the world we live in today, where technology is a core component of everyone's experience. So we incorporated tech into the cover — which, more specifically, is an exploration of how humans and AI can creatively interact.

Our cover art is also being minted as an NFT. A lot of people think NFTs are worthless, a fad, or even a scam. What's your argument for minting, despite crypto's volatility?

There's two parts to this. The cover reflects a collaboration between AI, its generating software, and human designers. The question became, should we even embrace that? We decided that to shy away from AI would be putting our heads in the sand.

Also, we wanted to understand that process. I think that it really stretched our design team in really exciting ways. How you design when you wield AI as a tool is very different than when you wield a stylus. It still starts with a human idea; a human has to prompt the AI and edit what comes out of that experience. It was important for us to understand that, embrace that, and learn from that.

Then the question became, how do we utilize this technology to engage with our audience in a meaningful and modern way? So we started to think about the tenets of Web3, which is really about changing the dynamics between the platform and the audience. It's less about a one-way broadcast, where the platform controls everything and the audience receives what's given. Ultimately, we decided to design and mint limited edition digital tokens. We think it's a powerful way of transforming the relationship between publication and audience.

You mentioned crypto volatility. I think that only matters if we were trying to build some sort of asset. From our perspective, the discussion around NFTs and digital tokens has been obscured and hurt by its association with the financial markets. The future of these tokens is less about that and more about transforming the nature of the relationship between the token creator and the token holder. In that sense, it's about the relationship, not about the financial underpinnings of crypto.

It seems everyone is taking a leap. Do you see a lot of brands in that same boat?

For many brands, the whole process of turning products into digital tokens has been clunky and less than ideal, to put it politely. We've all had that experience, where it was a little bit confusing, complicated — what do you do with it once you have it?

We decided only to do it if we could make it a positive experience for ourselves and, more importantly, for our readers, and I think we achieved that. We created a very elegant, elevated minting experience that is also very educational. That was the goal.

Who would you say is our target audience?

Our reader is the Huge client; senior level business executives. These individuals are really grappling with

existential questions around the future of their business. They're either in legacy industries that are being disrupted, or they're disruptors themselves. But they're at this confluence where lots of change is happening very quickly. We would like this content to be something that they consider, and that provides inspiration, actionable insights, and even recommendations for how they can navigate the next year, and how they can set themselves up for success beyond that. That's really who we're writing for.

We've printed 3,000 copies of this issue. Why do you think print is still valuable?

Our media landscape is all about hot takes and snackable content. It's about driving attention at whatever cost. I think that appeals to the worst in us. It leaves no room for nuanced conversations. The magazine is tackling complex, meaty issues that demand attention, care, and thought. You have to present multiple points of view. We chose to do that through a physical print magazine because it's a contemplative platform. Big ideas need space and time, and we wanted to help people get back to that.

I also firmly believe that the experience of reading and engaging with long-form content has a positive effect on us. Chalk it up to humans' innate neuroplasticity and ability to adapt. It really helps rewire us and transform us into more thoughtful humans.

The medium is the message?

To a certain extent, yes. But more than that the medium actually changes the reader. That's the part that I'm personally very excited about. That is the power of product.





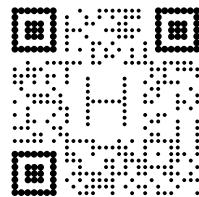
Ready to make a huge move?  
Let's talk.

Total NFTs Minted = 5,000

On the right, you'll find a QR code which unlocks access to your limited edition NFT. Think of this digital token as your personal invitation to join us in an experimental space where we'll share exclusive access to ongoing content, events, and updates.

We have minted one of the first "soulbound," non-transferable tokens on the Tezos blockchain. Claiming it gives you a seat at the table. Be part of the conversation. Be part of our community.

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