MORE

EDITION 2023 — ISSUE 2

Recycled Fads Bring Change

Students Do Their Part To Help Mother Earth

By INGRID GONZALEZ

A "retro" fad has managed to weave its way through the nineties that will put this time period in history for it. Along with the retro ideals have come movements resulting from love, peace and Mother Earth.

Recycling is one major trend that emphasizes loving the earth, but while it has swept areas over the nation, it seems to have only nudged Edmond.

Sophomore Kim Christine is student

> *I always say to think about the future. If we keep throwing everything away, what will the world look like 50 years down the road?*
> —Kim Christine

program. Some students sa
they would

doing it." Pilaski said thoug
that she would participat
because it would help th
environment by reducing th
increase of landfills and givi
old waste a chance to bi
degrade.

According to statistics,
percent of America's
is paper and o
aluminum
thrown a

Mr. Rex Carr
Superintendent of Edmond Schools
1001 W. Danforth
Edmond, OK 73003-4801

Dear Mr. Carr:

~~Please allow me to introduce myself.~~ My name is Kim Christine, and I
Edmond North. Now in its second year, the program has enjoyed
approximately two tons since the program's launch and have
buyers

~~Now, as for the purpose of this letter, I would like to start off by~~
~~saying that the recycled paper market is not doing well.~~ Recycled paper is selling
This is due to the fact that, ~~because~~
recycled p

ocast

The Oklahoma Center for the Advancement
of Science and Technology

hereby recognizes and commends

Kim Christine

For outstanding accomplishments
discovery while attending

Stoke Your Eco-Curiousity

From the time I could spell the word, I've held a deep passion for our planet. In middle school, I learned about recycling, and Rachel Carson. In high school, I moved from Michigan to Oklahoma and noticed there was no curbside recycling like there was back in Farmington Hills, so I sent a letter to the mayor. I also started looking around my school: a community of over 2000 kids. There was no paper recycling, so I started calling paper and recycling companies, and handing out recycled paper flyers to teachers asking their thoughts and participation ideas to get something going. After finding a vendor to partner with, I started a paper recycling program at the school.

Every weekend for two years my friends and I went around on Saturdays and collected the paper from each classroom's cardboard recycling bin. It wasn't easy. We often had to pull out trash, throw away paper soiled with chewing tobacco, and convince people it was the right thing to do. Heading up the student environmental club my senior year, our group worked with others to bolden the conversation on environmental causes. Just before graduation, Weyerhauser - the company I partnered with for the recycling program - presented me with an award for this effort. Later, I found out from my sponsor – Mrs. Allen – that the program had broadened to all three Edmond high schools. It took a village of support from teachers, friends, family, and peers, but the spark had taken hold!

As an undergraduate, I majored in Environmental Science, with goals to one day become a lawyer for the EPA. When it became clear that I'm less math and science, more art and design, I changed course and graduated with a degree in Interior Design. In moving to Boston to pursue graduate studies, my passion for the environment only deepened, as I became active with the US Green Building Council and engaged in sustainability discussions within the industry. The connection between my career and lifelong passion for the planet has remained a constant.

For me, it's simple. Our planet allows humans to exist. Earth's plant and animal kingdoms are essential to life and everything we do has an impact on their ability to support us. In this issue of MORE, I dive into a few topics I feel especially strongly about and that naturally dovetail with design and construction. I've enlisted collaborators whose work I deeply respect. The result is an issue of compelling stories designed to demonstrate where we are and where we are heading.

We are all in this together. The more we talk about these and so many other issues, the more we can change. I hope I've piqued your curiosity and I hope you are ready to dive into MORE.

Sincerely,

Founding Principal

EDITION 2023 Issue 2

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Cover art designed by Kimberly Duval and Bryan Trindade - created using Midjourney AI and Photoshop.

View to section under restoration - Back Bay Newport Beach, CA

Intersections

Up until recently the only Back Bay I'd ever heard of was a neighborhood lined with Victorian town homes, backing onto the Charles River in Boston (cue *Dirty Water* by The Standells). But there's also a place in Newport Beach, California referred to locally as the Back Bay, and it's incredible.

The Back Bay in Newport Beach is enormous, and it's kind of right in the middle of an otherwise dense exurban environment. It's a deep basin carved out by the San Diego Creek and it opens up as an estuary full of tidal pools and marshland, feeding into the ocean at the Newport Bay marina.

I recently volunteered with the Newport Bay Conservancy, which provides stewardship for the land. During an event pulling invasive mustard plants, I learned that a developer planned to turn the area into a marina and condo development in the 1960's. A determined group of local citizens fought the system for ten years, finally using California's tidal pool regulations to block the project.

The story was incredibly heartening. Considering how many times this type of outcome has *not* been achieved, the fact that the bay was saved is amazing. Stories like this abound in the US and in many parts of the world. In the 1960's in particular, citizens were fighting off destructive real estate development left and right.

You may recall the story of how the city of Berkeley, California planned to fill in parts of the San Francisco Bay in the 1960's until a small group of local women fought back, and thankfully won. Or the story of the Hudson River, which runs through eastern New York and remains the largest Superfund site in the country to this day, due to hundreds of years of misuse. In Manhattan, Hudson River Parks and NY State's Department of Environmental Conservation have worked tirelessly over the past several decades to completely transform its boundary, including recent projects to reintroduce oysters between Piers 26 and 34 in TriBeCa, a neighborhood in lower Manhattan.

I remember attending meetings in 2019 on proposed changes to the Hudson River Park bordering our then-neighborhood in Battery Park City. The latest work included a plan to increase resiliency and has not been without its own controversy: the proposed changes will end up destroying several of the purpose-built park spaces installed over the past fifty years - now replete with mature trees and habitats.

Many of the current suburban office parks built in the 1980's and 1990's which those of us in corporate real estate are so familiar with, were created by filling in low-lying areas including marshes and swamps. This devastating move permeated planning well into the twentieth century, resulting in part from Victorian-era fears of diseases wetland habitats were thought to have fostered, and in part from a generally naive understanding of the benefits wetlands bring.

A few years ago I worked on a large corporate real estate project in southeast Massachusetts, which included the renovation of several office and factory structures set on a sprawling wooded campus. The building foundations had relative humidity levels of nearly 100%! Because they were built on fill that was dumped over a creek and watershed, the water table was nearly level with grade. You can actually

see on Google Maps a large body of water, and then a sudden disconnect with its tributary stream. The disconnect is the corporate campus, in place of the watershed. The stream picks up again just beyond the property. The water displacement was clearly never properly resolved.

Another time earlier in my career, I coordinated tenant design for a mall in Rhode Island that experienced massive flooding during heavy rains. Lo and behold, it was built in 1970 on estuaries that once supported the Pawtuxet River.

In many parts of the US, development continues unabated on greenfield land. Below is an example: a residential development, encroaching on the Everglades, built with permission not three years ago.

But it behooves us to work within the confines of the developed environment we've already created, rather than bulldozing more habitat for buildings and parking lots. While humans crave a closeness to nature, it makes financial sense to create areas that are less prone to flood and fire events.

Look to insurance companies to see how they are investing their own resources into protecting Earth's natural resources. You will quickly see that insurers are leaders for change, funding restoration work including things like reforestation and restoration, because their entire business model is built on managing and lowering risk.

For financial services firms, whose investment strategies are now dominated by terms like Environmental Social Governance (aka ESG), the environmental component includes a mandate to reduce greenhouse gasses, through elimination of a business's carbon footprint. Habitat restoration becomes part of the equation as it offsets emissions.

Restoration is a layered term in and of itself. Read on to learn about one strategy that turns tradition on its head. □

New Single Family Residential Development in Southern Florida

Changing Nature

A Conversation with Chris D'Agorne

Photo Credit: Chris D'Agorne

It's not easy to change how you think. Take conservation. PROTECT THE ENVIRONMENT has been the battle cry of a large number of environmentalists, thinking that protection from change, keeping things how they found them, is the best course of action.

But found them WHEN? Last year? 10 years ago? 100 years ago? Who are we to stick a pin in this moving target and call it done?

On the other hand, if not humans to restore our damaged ecosystems, then who? And how? The answers are simple: nature is who, and rewilding is how.

At its core, rewilding is a progressive approach to conservation that lets nature take care of itself, allowing the natural processes to shape land and sea, and wildlife's natural rhythms to create wilder, more biodiverse habitats—a way to keep Planet Earth spinning on its intended course.

"Rewilding is this different mindset," says Chris D'Agorne, who founded How to Rewild in the UK in 2021. "Let's not keep it how it was when we first moved here, but bring back what was here in the past and see what the impact is on biodiversity."

So far, the impact is good, very good. Case in point: In 1995, the ecosystem in Yellowstone National Park was breaking down. Beavers had become locally extinct, and elk were overrunning the place, eating new trees to the ground. To balance the scales, wolves were reintroduced into the park, becoming the main characters in the first true rewilding success story.

D'Agorne explains, "The wolves had an impact on elk, who no longer fed on riverbanks, which improved the vegetation around the rivers, which brought back in beavers, which created new wetland habitats because beavers create dams which reduce flooding downstream."

The unintended (but very welcome) consequences, trophic cascade effect in ecological terms, attracted

Written by Laura Mars

attention, building on the vision of Dave Foreman, who coined the phrase “rewilding” in 1992, and founded The Rewilding Institute in New Mexico in 2003, today a major force. Pioneer organization Rewilding Europe was founded in 2011, now a frontrunner with dozens of projects and programs of varying scale. CNN reported on urban rewilding last year, highlighting how Tiny Forests are being used to bring back animals and plants to urban centers around the world. Portland, Oregon is host to the annual North American Rewilding Conference, the next is in January.

D’Agorne is quick to point out that, while wolves improved the ecosystem of Yellowstone National Park, introducing carnivores or large herbivores is not possible in many cases. Some are extinct and others would not be welcome close to houses and small children. But humans can do a lot of the heavy lifting to create a healthier world, like take down trees to ground level to cultivate growth and provide firewood and timber, and restore peatlands to help prevent wildfires.

neighborhood, the town, the county. . . you get the picture.

The best way to rewild your garden is to plant native plants and shrubs (species that occur naturally in a particular region), which attract pollinators like hummingbirds, bees, and butterflies, and provide habitats for birds and small mammals. Native plants also require no fertilizers, less water, and help reduce air pollution. Affect the larger landscape by connecting your garden with your neighbors through paths or an opening in the fence.

Your lawn too, can benefit from you relaxing a bit. Next May, join the No Mow May movement, which was introduced in the UK in 2019 and is now sweeping the U.S. Keeping the mower in the garage encourages wildflowers, which feeds pollinators like bees, butterflies, and grasshoppers. Beneficial insects and local plant life will thank you.

And so will your 21st century brain. Studies worldwide prove the connection between green space, better mental health, and improved mood. And it’s cheaper than therapy.

“At its core, rewilding is a progressive approach to conservation that lets nature take care of itself...”

“Peatlands are kind of a natural firebreak in the landscape,” D’Agorne explains. “Peatland on the top of a hill is like a wet sponge that fire can’t get by. In the UK, and probably in the US as well, peatlands are being torn up, used for the gardening industry. Degraded peatland is not only more likely to ignite, but it also emits carbon, which contributes to climate change. Healthy peatland regulates carbon.”

Rewilding is not just a save-the-world superhero, but can improve your garden, which can impact the

“Improving access to green space, especially in cities, is something I’m quite keen on,” says D’Agorne. What he means by green space is not just a park with a huge green lawns and dog droppings scattered about. “Somewhere pleasant to walk in is a different experience. For example, my neighbor has goats in her field across the way. My field, only a year into the rewilding process, feels different, like a wild space, more relaxing and full of birdsong.

“It’s similar to me growing up next to the sea. When I

go back, I can breathe again. It's that thing you don't know you're missing until you're there."

As beneficial it is to let nature take its course in forests and fields, it's just as important to learn how to rewild in the built environment. Humans are here to stay and, it turns out, effective partners when it comes to rewilding.

Says D'Agorne, "The brilliant thing about bringing humans into the landscape in a rewilding project, is that rewilding isn't just about nature, it's about people and nature. It's about landscapes that work with nature. If you create a landscape that only works for nature it is not sustainable. Eventually, someone's going to do something more profitable with the land.

"It's better to create a landscape that is beneficial for both people and nature because it's going to be sustainable. For example, if you create a landscape that is producing forestry products at a sustainable level, it both keeps the habitat healthy by replicating the behavior of the straight-tusked elephant (felling large trees), and creates products that people need.

"There's lots of different ways we can do that. We have an overpopulation of deer in the UK (as in the US) destroying part of the ecosystem, and no carnivores to control the herds. Why don't we just eat the deer, rather than eating cows and pigs?"

The three Ds of rewilding—*dispersal, diversity, and disturbance*—offer concrete ways to rewild a garden, pristine land for new development, or existing property for redevelopment.

Dispersal is improving the ability of plants and animals to move around. Make holes in the fence. Replicate wider landscape. In California, it's rocky gardens. In Minnesota, it's a pond and small coniferous area. This encourages native animals to wander and do their thing. Plants are dispersed when their seeds travel on animals and wind, and they need a hospitable place to land. Pond plants need a pond. Woodland plants need someplace shady.

Diversity is a mix of habitats - lawn, trees, bushes, ponds, and complex vegetation and structures - and plants, the more native plants, the better, duplicating what you find at local parks to give butterflies and birds more places to dine.

Disturbance is unique to rewilding. According to D'Agorne, traditional conservationists don't like disturbance. They protect habitats to prevent change. Rewilders encourage habitats to evolve and change. Large herbivores and carnivores are not likely to be invited back into our neighborhoods any time soon, but humans can pick up the slack, felling large trees and letting them decompose for example.

"It's strange that we think of ourselves as different from any other animal," says D'Agorne. "Humans have been around for millions of years, so are as much a part of the environment as other animals. We have a functional role."

When I first heard the term rewilding, I thought dark forests, randomly overgrown outdoor spaces, and lions and tigers and bears ready to pounce. Now I see that rewilding is not random at all, but a well thought out plan with a proven track record, a way to support Mother Earth as she struggles to sustain all who depend on her. All is not lost if we get out of our own damn way. □

Photo Credit: Chris D'Agorne

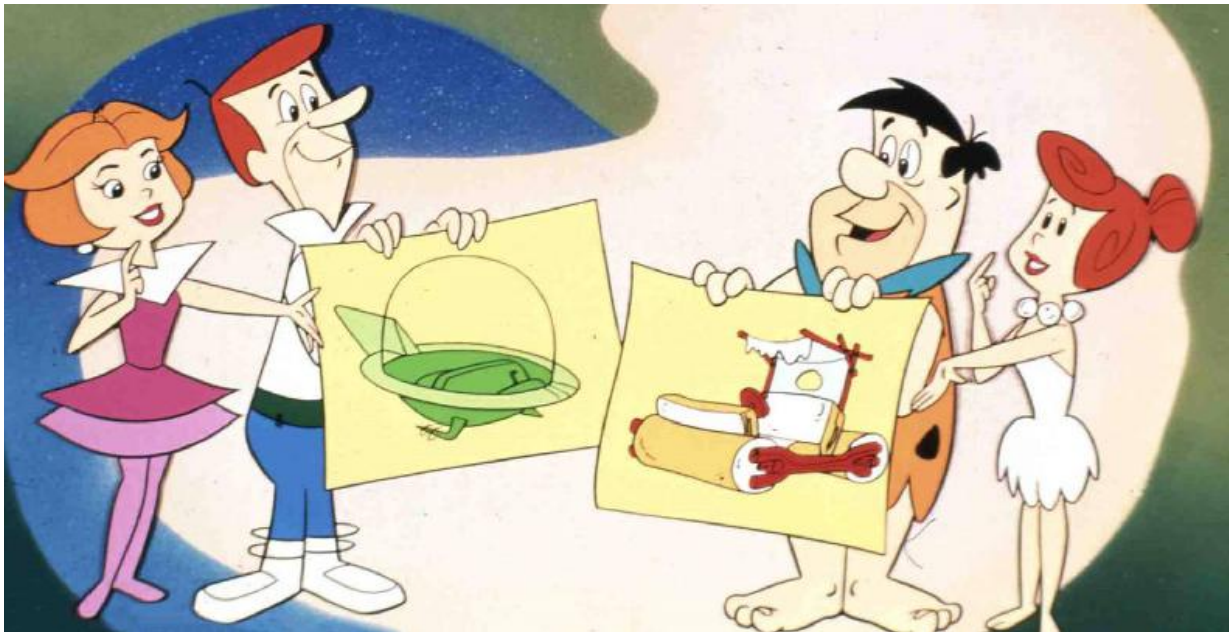


Image courtesy of Hanna Barbera

Energy in America

During the pandemic, I got more involved in my local community. Finding I suddenly had a bit more free time, I joined several town boards.

The experience has been priceless. It's true that all politics is local. I've learned a ton not only serving the community, but in working with people from all different backgrounds. On several of the boards, I am the only design professional.

A recent, very localized situation made me think about the state of renewable energy in the US on a much deeper level.

Picture this scene: a national solar developer buys a large, heavily forested property, cuts down all of the trees, puts in a hay field, and is now planning to install a large-scale, ground-mount solar array over the hay field, where all of the forests have been cut down.

Under the laws in my home state of Massachusetts, what the solar developer did was actually incentivized. In Massachusetts, as in many other states, renewable installations on agricultural land are encouraged, and ground-mount installations are promoted almost more than rooftop or building mounted arrays in some municipalities. Cutting down a forest on private property is legal, converting it to a hay field is legal, and using that hay field to then install a large ground-mount solar array is also legal.

For those reading, hopefully your eyebrows have raised and you are beginning to wonder how it's possible for anyone to cut down forests in this country

Written by Kimberly Duval with a little help from Diego Ibarra

in the name of renewable energy. The answer to your question is that it's not only possible, but it is happening all around you. If you live anywhere near high-tension power lines, look around. If there are forests in the vicinity, they may be at risk. Over the past 10-15 years, over 2500 acres of forests have been cut down in Massachusetts for solar arrays, alone.

There is nothing preventing this same thing from happening elsewhere so long as renewable legislation is written with such a lack of understanding of its consequences. Areas of New England - Vermont, Massachusetts, Connecticut, New Hampshire, Maine - are all grappling with this issue.

This conundrum has brought me to tears. How could a system whose very existence is based on ending the production of energy from non-renewable resources in an effort to decrease our carbon emissions turn around and allow clearcutting of forests that act as carbons sink to trap emissions - which, by the way - are invaluable to sustaining life on this planet?

Two big issues arose from our chat:

- Current legislation in many states incentivizes renewables without language to guard against situations like the one I just mentioned. Policies need to change.
- Renewable energy sources have now been nearly perfected. Science has solved for the efficient capture of wind, solar, and geothermal energy. However, science has not solved for the efficient storage of the energy that is captured. And industry has not caught up with the changes required to complete transmission from the energy source to the grid.

As a result, the grid is lopsided in many places. California, for instance, is reportedly producing too much solar!

But how do we solve for policy that's not working the way we intended? It's complicated.

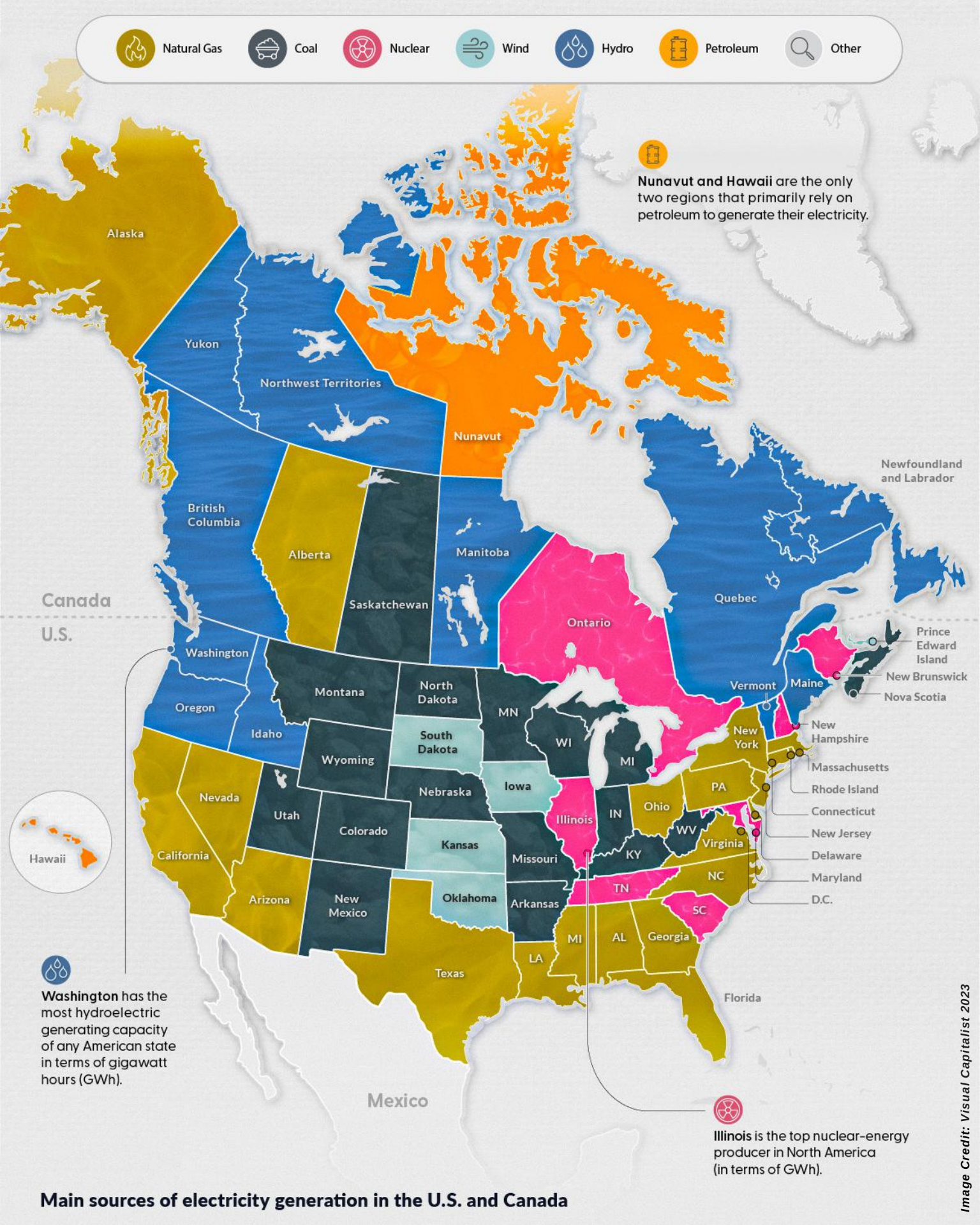
Policy is not only written by politicians but by lobbyists, who spoon-feed their special interests directly into the mouths of politicians who have about a million number one priorities on their plates.

> "Science has solved for the efficient capture of wind, solar, and geothermal energy. However, science has not solved for the efficient storage of the energy that is captured."

In an effort to better understand the current state of renewables, how this worst case scenario can be prevented to align to the movement's original altruistic aims, and what other challenges the system is facing, I reached out to my buddy Diego Ibarra, a leading voice on the subject.

I shared with him my story of the local solar array while he, his son, my husband and I hiked along a shaded trail in the mountains just outside Pasadena, California.

Educate yourself on your own state's laws, and get involved. It's a bit easier to start at your local level. Join your town's Zoning Board of Appeals - or even just learn more about its Zoning By-Laws. Getting involved in local government involves basically re-enacting every scene from *Parks and Recreation.*



Main sources of electricity generation in the U.S. and Canada

Image Credit: Visual Capitalist 2023

From there, good old fashioned calls and letters can actually work, if there is scale. Speak with others who are already on board.

The only way policy changes is when people in large groups, or with deep pockets, speak up. There is a heavy hand on the part of profiteering companies who are not motivated by altruistic goals of saving the planet, but by greed.

Knowing where your renewables are coming from is another good start. Find out if your employer is involved in reducing its emissions and if so what power purchasing agreements (PPA's) they have in place to offset usage. Who are the providers? What does their chain of custody look like?

On a residential scale, you can do the same thing if you are buying renewables to offset your home's energy use.

When it comes to improving storage and transmission, the industry is working hard to find a solution to replace lithium ion batteries, which are problematic in many ways. Lithium technology is not efficient enough, metals are mined from sensitive areas to build components, and batteries are heavy and dangerous. Read any insurance trade journal and you'll see the impacts of lithium-ion batteries on accident fatalities. It's insane.

Hydrogen fuel cell technology is the future, for right now. Testing is progressing rapidly. And there are other alternatives too, like batteries based on rust, and gravity. However, these have a longer way to go. The key is to perfect any of these alternate technologies quickly to avoid the consequences of lithium.

I recently attended a panel for the RPA (Regional Planning Authority) - an advocacy group that works to guide policy around four central focus areas for New York City's metropolitan region, which spans three states. As part of this year's Annual Assembly, a panel of private and public leaders gathered to discuss future infrastructure issues facing the region.

The Director for the Port of NY/NJ , Bethann Rooney, mentioned some of the risks around commercial electric vehicles (EVs), considering the current lithium battery paradigm. Tractor trailer trucks become significantly heavier, reducing their payload by over 8000 lbs. This increases the number of trucks required to deliver the same amount of goods. With the added number of trucks on the roads, repairs and degradation of highways increase.

These factors are only a fraction of the issues associated with lithium ion. Harnessing hydrogen fuel cell or any other less dangerous, lighter technology for EV batteries is critical for reversing damage instead of increasing it.

And don't even get me started on why we are so narrowly focused on single-use modes of transportation over rail....

In parting, I leave you with a stunning graphic from Visual Capitalist. The color-coded map shows you exactly where your power is coming from if you live in the US or Canada. And it says volumes about the work we have left to do to fully divest from the grid in a way that actually achieves the end goal: power from sources that can renew themselves, rather than be extracted from the Earth to the detriment of plants, animals, and humans alike. □

On a Beach in Hawaii

Hawaii has long been my happy place. I spent a lot of time out there in my 20's, including a brief stint waitressing at Duke's Waikiki between undergrad and grad school. In my mind, it has always been an immaculate, tropical paradise, owed to a cultural mindset of caring for the land.

On a recent trip up to the North Shore, however, I nearly lost my mind. After watching the surfers at Pipeline for a bit, my husband and I decided to settle in at a beach we hadn't been to before. It looked like a perfect spot to sit out and watch the waves. We stepped into the sand and noticed plastic litter penetrating the sand in every direction. It was jarring. I was well aware of the Great Pacific Garbage Patch, and how the Jetstream pulls trash to remote islands, but really didn't think Hawaii could be overwhelmed like this. I'd never seen anything like it in all my travels to the Aloha State.

My friend Kelley Tapia owns Samskara Studio, an impressive design firm with a commitment to sustainability in all that it does. She and I were chatting recently and she told me about her experience with similar levels of plastic and trash hiking through Nepal. Considering our shared passions, I brought her into the conversation, and in this article, we've collaborated to raise the issues of plastic specific to the design and construction industry.

Plastic is everywhere. We know this. It's a Tragedy of the Commons situation that our collective trash follows Earth's winds and waves to remote destinations and no one seems to own the problem. Right now, Southeast Asia is grappling with the biggest concentrations of plastic pollution: between rich nations including not just the US, but EU, Canada and Australia dumping our trash and 'recycling' there, to winds and water carrying our airborne trash, to waste that falls off shipping containers into vast parts of the oceans owned by no one, this waste is everywhere. It destroys habitats, it kills animal and plant life, it causes diseases to an extent we don't even fully understand yet.

Beautiful Bali, a yogi's paradise, is littered with plastic that is generated not only from waste that washes on shore but from the impacts of Indonesia as one of many southeast Asian receiver countries for wealthy nations' (aka US and EU) 'recycling' and manufacturing.

While the top plastic polluting companies all manufacture single-use plastics, the design and construction industry uses plastic in just about everything. And it's becoming more ubiquitous everyday.

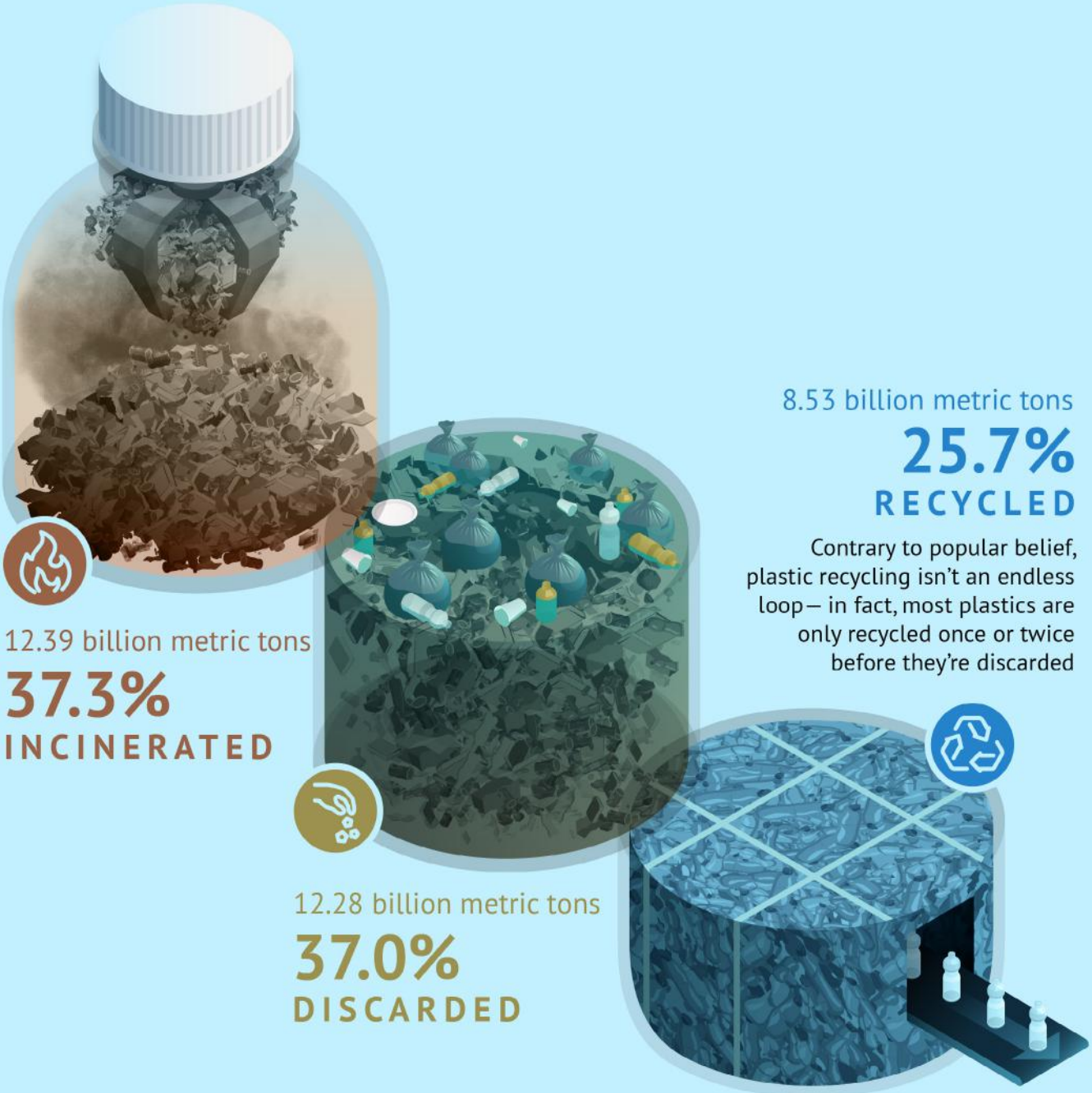
From the packaging that wraps materials coming to the jobsite, to products used in final installations, including components like piping, flooring, building wrap, roofing membranes, vinyl coatings, latex paint (yes, latex paint contains more than 30% plastic), and outdoor furniture, we in the design and construction industry are fighting an increasingly uphill battle to limit the amount of plastic on projects.

Written by Kimberly Duval and Kelley Tapia

THE FUTURE OF THE WORLD'S

Plastic Waste

By 2050, it's expected that roughly 12 billion tons of plastic waste will end up in landfills or the natural environment.



12.39 billion metric tons

37.3%

INCINERATED

12.28 billion metric tons

37.0%

DISCARDED

8.53 billion metric tons

25.7%

RECYCLED

Contrary to popular belief, plastic recycling isn't an endless loop— in fact, most plastics are only recycled once or twice before they're discarded

Image Credit: Visual Capitalist 2021

**figures do add up to 100% due to rounding*

On the jobsite, we can:

- *Reduce reliance on plastic packaging. One of the most effective ways to reduce plastic packaging on job sites is to reduce the amount of plastic used in the first place. This can be accomplished by identifying alternative packaging materials or reusing packaging and loading materials and containers where possible.*
- *Request packaging-free deliveries. Construction managers can work with suppliers and contractors to request packaging-free deliveries whenever possible. This might involve specifying in contracts that deliveries should not include unnecessary packaging, or providing clear instructions to suppliers about packaging expectations.*
- *Maximize efficiency. Make materials do more with less. Re-evaluate every aspect of a project that requires plastic to make sure plastic is truly the best solution.*
- *Commit to change.*

In the design studio, we can:

- *Consider the value. Is the material necessary? If so - why? Dig a bit deeper. Are there alternatives that perform the same? Is the effect long-lasting and important? Can the material or object be easily reused when it's no longer effective in its current application?*
- *Use the waste - not the raw material!*
- *Act like the influencer you are! Designers are in a tremendous position of power because we select nearly everything! We know what works, in what environments. We can suggest alternates. We are our client's educators and that education is one of our most valuable services!*

On behalf of our clients everywhere, we can:

- *Relentlessly pursue reuse. Whether it's focusing on redevelopment over green field sprawl, renovating instead of building new, or buying from the second-hand market, there are ways to become a part of the circular economy by focusing away from brand-spanking new to already available.*
- *Question everything. Manufacturers are just trying to do their job. They have a product they think the consumer needs or wants, and it's our job to let them know if there's an appetite by using the product or not. Ask the tough questions and push for the cradle-to-grave information. Talk about Scope 1, 2 and 3 emissions for everything. Manufacturers wouldn't make something no one wants to buy!*
- *Alternatives are making their way into viable, market-ready products. Follow their stories!*

Photo Credit: CNN

How we use plastic determines whether it's providing real value as a solution to a more wasteful or yet unsolved problem, or whether it's replacing something that was actually inherently better performing or didn't need to be replaced at all.

But the key to sifting through the vast literal wasteland of products permeating our market is to get more specific. We need to be able to evaluate each use case and determine whether plastic provides a genuine benefit and whether alternative solutions might be more suitable. We can break down our analysis considering a few general categories:

Sustainable sourcing and disposal:

With plastic so ubiquitous in the building industry, it's important to focus on sourcing and disposing of plastic in a sustainable manner.

Risk Mitigation:

Plastic off-gassing can impact indoor air quality, and plastic waste contributes to environmental pollution. We mitigate these risks through proper life cycle analsysis of materials prior to their specification.

Plastic alternates:

The building industry can focus on exploring alternatives to plastic materials.

Take a look at some of what's coming:

- Novomer turns carbon dioxide into biodegradable plastics.
- NewLight takes methane and turns it into "air plastic" plastic packaging (Dell) and carbon-negative chairs.
- Wricks makes customizable modular bricks that are made from recycled plastic, construction, and thermal waste.
- Miterro is working to create the world's first bio-based polyvinyl alcohol (PVA) replacement. No more microplastic from the detergent and laundry pods in our water stream and soil.
- PlasticRoad Creates highways comprised of various circular and modular elements made from recycled plastic.

We're not suggesting that the design and construction industry will ever completely remove plastic from buildings, given its role in modern construction materials and versatility in meeting a wide range of building needs. But there are steps that our industry can take to reduce its reliance on plastic and mitigate the risks associated with plastic use.

When in doubt, ASK the question. Demand fuels innovation and change. □

View to one of Leyla's slides during IIDA Leaders Breakfast keynote address - NYC, 2022

From Pier 60 to Portugal

A Conversation with Leyla Acaroglu

I was first introduced to Leyla at the IIDA Leaders Breakfast in NYC, last spring. She was the keynote speaker, and with a refreshing lack of any pretense, delivered one of the most enigmatic keynotes I'd ever seen.

Leyla's style is and seemingly always has been, relatable. Comedic in a very soft way. Honest and genuine. I got these same vibes when I sat down with her (virtually) in May to discuss her thoughts on sustainability, and more specifically, plastics.

(Kim) After I heard you speak at the Leaders Breakfast, I knew I needed to learn more about you, your journey. How did you start out on this path? The way you present reminds me a lot of that animated short based on The Story of Stuff *by Annie Leonard.*

(Leyla - from a hotel in Portugal) It's funny you mention that because I saw *The Story of Stuff* when I was in university. It was early in the days of YouTube, you know, and multimedia wasn't the kind of saturated landscape it is now. I was so impressed. I was like, this is the way we should talk about all of this.

What was your focus in college? Was it environmental science?

So, I studied product design because I knew I liked being creative and I didn't want a boring job! At the time I remembered thinking toothbrushes and remote controls were really badly designed. I wanted a job that fixes that. I was in my second year of design school and one of the engineering professors told us about this thing called the Gaia hypothesis, which is now a globally-adopted theory

that everything in nature is interconnected and that the whole planet is one giant organism that works together to sustain life.

And he said it very casually. And my mind was just blown completely. And then he mentioned, 'you know, as a designer, you're going to make decisions that will have these far-reaching impacts, but you probably won't even know about them'. And then he was like, 'moving right along…'

And you were like… Whoa!

That was the point that really changed the trajectory of my life because I suddenly was very passionate about this thing that I had no idea about before. I went to the library and got all the books I could on the topic. I was like, okay, I'm only going to design eco products now. I was really intense about it. But after a couple years I started to realize there was a much bigger issue at play. I ended up quitting design school to study sociology, majoring in sustainability because I felt this might be a human problem.

I got a job working at this research center, the Center for Design, which was focused on sustainability. I learned about lifecycle assessment, which is a scientific process to assess the impact of products. And then I just started making stuff. I made this animation series called The Secret Life of Things. It's about a cell phone that has an existential crisis.

…which by the way, is amazing. The voice of Dr. Fraud. And the exposure of the metals used in our cell phones in this like comedic way. Amazing.

So this was actually the foundation for a whole educational series that got the curriculum in Victoria schools changed. I was like, oh wow. I can use design to make change. This is cool.

Is this around the time you introduced the UnSchool? (The Unschool, by the way, is an amazing program that teaches disruptive design and systems thinking)

Right. Around this time, I started my PhD in industrial design. I was teaching how to make change through design. I dived quite deeply into systems thinking and tools for making change. These became the first seeds of the Disruptive Design Method because I thought this shouldn't be that complicated. Traditional academic systems are so often ugly and boring and clunky. None of the academics think like designers and their tools don't fit within the design process. If a tool is clunky and ugly, designers will be like, NO.

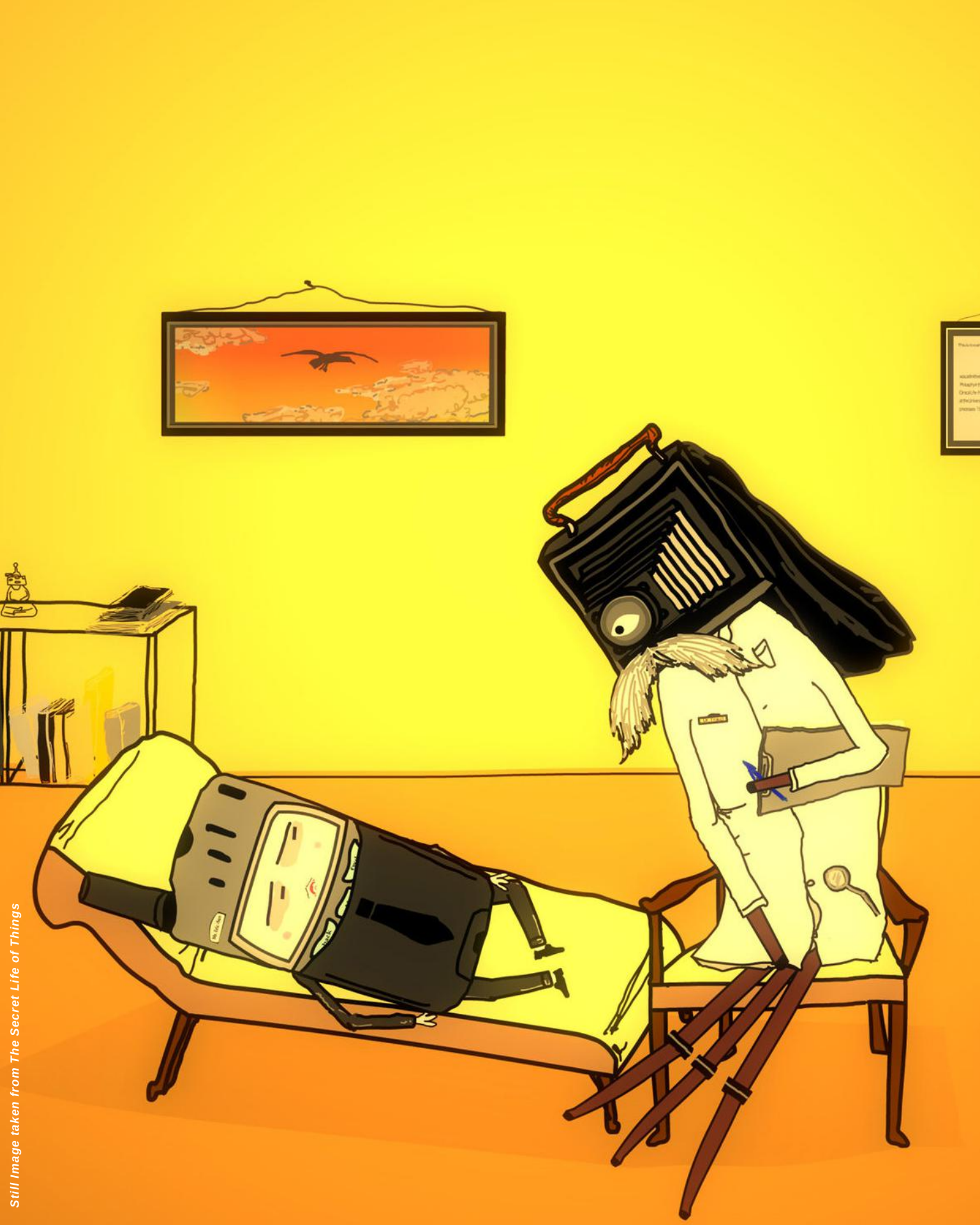
So I set about fixing that. I thought: how can I get people excited and motivated and interested and give them the practical tools that will help them make change in their entire career?

What we are working on at the moment is how to design goods and services so they flow through international designed circular systems. That is the whole concept of the circular economy. The next big thing is to figure out how to do that. I started the Unschool to fix that problem and, and that is where we are now.

Let's talk about plastic.

You know, we take this absolutely intractable highly durable material and make single use items out of it. But when its technical properties are used in safe ways, it's a pretty amazing product. In fact, you could convert a lot of single use products into reusable using high value plastics. But the issue is that we've created a system where disposability is dominant. The material properties being used create a system that is fundamentally unsustainable.

This speaks to the bigger issue of disposability, which is what the circular economy is trying to solve: eliminating waste by design. Because a lot of these systems are by design and because it's



Still Image taken from The Secret Life of Things

become so ubiquitous, we don't question it. We don't question the disposability because we just assume that it's normal and it's fine, but it really is problematic.

Of course, there are plastics that are dangerous to human and animal health, and there are literally thousands of plastics that are impossible to recycle because of the way they're put together.

But by and large, it is not the material, it's what we do with it.

Do you think we will ever have a life free of plastic?

I don't think we will ever stop using plastics in the economy. There is a big market for the use of plastics. It is abhorrent that we use them in single use products and that we are allowed to take this highly valuable material and make it so disposable and so devalued.

That is really the challenge we need to overcome. For instance, I would say to the plastics industry 'you guys should be designing reusable products that you then sell the service'. Companies like Coca-Cola, Pepsico or InBev are just buying a vessel to put liquid in. These companies could be part of a closed loop system, delivering a reusable vessel without the waste and solving so many problems.

Policy is being enacted at local, state, federal, global levels. What do you think about the policies being set right now?

Well, the United Nations is working right now on a global plastics treaty. Global leaders are actually meeting this month in Paris to roll it out. In the next couple years, we are going to see a reckoning with waste-producing industries. The plastics industry is going to have to figure out how to maintain its relevance at a time when we know that the social and environmental costs associated with single use plastics are just phenomenal.

But we really need whole systems change, to the point where producers take responsibility, where governments are filling the gaps and where designers are equipped with the tools and resources to know what is the best solution for the product or the system they are designing for.

What's your take on industry action?

I feel so sorry for the recycling industry because you know, they really tried and only 9% of plastics is actually recycled right now. But there are so many problems at play here. Around 2006, most Western countries started exporting their recycling– to China. In 2018 China banned these imports.

So Western countries literally had no facility to manage the waste. Canada, US, EU, Australia all assumed that things could be shipped somewhere else, until they couldn't.

We also have the issue of wishcycling (or aspirational) recycling: where we all assume that our materials, our products will be recycled. So we unintentionally increase the cost of recycling by contaminating the waste stream when we add them in and hope for the best.

On top of that, the plastics industry is pumping out new plastics and the numbering system that was supposed to help with recycling (designed by the plastics industry) does not work. Of the seven categories, categories 5 and 6 are basically un-recyclable and category 7 is a category that contains everything else (including the thousands of types of composite plastics I mentioned earlier).

The system is a risk. We would love to think that recycling is a solution because we've been told that, but as it has been well-documented, recycling was put forth by industry to actively redirect the issue away from waste-production to individual consumer decisions. From a sociological perspective, recycling has validated the production of waste. We have made the issue a bigger problem by making it

psychologically okay for us to produce waste.

How does design tie it all in?

Design influences society and therefore, the planet. There needs to be a minimum operating standard around design professions, and a level of responsibility and accountability for the things that we create - perhaps a Global Code of Conduct.

I am trying to find ways of really opening up this space because I think most designers are interested in this. Designers genuinely want to figure out how to not make crappy products (or buildings, or interiors, etc).

Good designers learn over time what intuitively works in a space, but they also need time to figure out how to be able to manage trade-offs and argue for them. Design is one of the key solutions to this challenge because design is about creating frictionless experiences.

Do you think these changes represent real progress?

Progress? Is that the right word? (smiles) I see a lot of bullshit, which drives me nuts. But I like to selectively see the things that are good. There is a long way to go on a lot of levels, but I do believe that we will get there. □

Photo Credit: James Duncan Davidson

Links to Lose Yourself In

World Economic Forum

World Economic Forum is a non-profit and Davos is its annual meeting. The research, discussions, and policy recommendations WEF generates fuel change in the world.

» READ MORE

International Living Future Institute

ILFI is responsible for the Living Building Challenge and the JUST label. ILFI is an important US non-profit whose influence continues to grow.

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UN SDG 7 and 13

UN 13 is a goal within the United Nations Department of Economic and Social Affairs focused on climate change. Established in 2015 as part of the Paris Accords, the goal includes 5 targets for reducing climate change. UN SDG 7 focuses on clean energy. These goals are drivers for public policy changes throughout the world.

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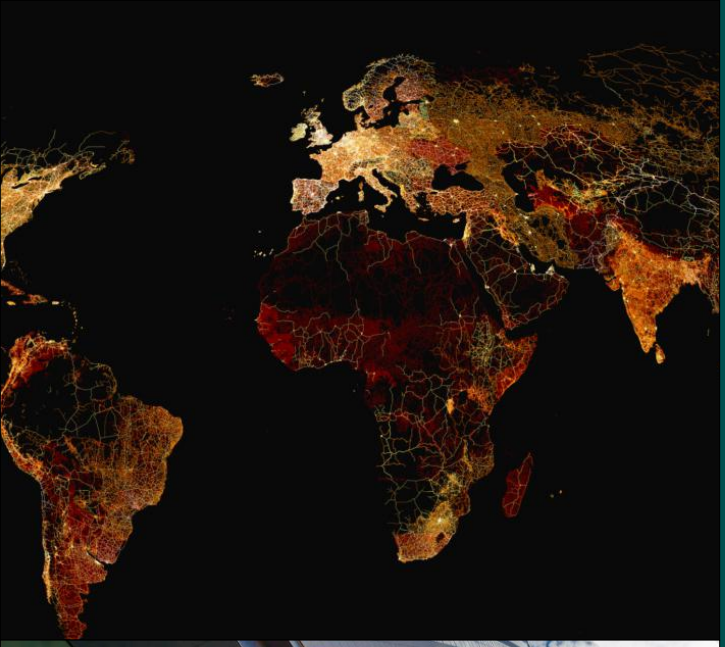


Visual Capitalist

Visual Capitalist is a Canadian digital media company, started in 2011. Its Editor-in-Chief is Jeff Desjardins, a regular contributor to WEF, Business Insider, Market Watch and others. The site offers incredible infographics on topics you didn't even know you didn't know. It continues to push boundaries and share timely, important information in easily digestible nuggets. You can purchase licensing for various infographics like I did for this issue.

» READ MORE

Urban Land Institute

ULI is the oldest and largest network of cross-disciplinary real estate and land use experts in the world. Similar to ILFI, ULI focuses on the built environment. ULI's Board of Directors includes investors, A/E firms, construction companies, lobby and trade groups and more. ULI works to influence policy and industry in the pursuit of decarbonization, housing equity, and education of the next generation of leaders.

» READ MORE

Congress.gov

Perhaps not the easiest reading material, a review of what Congress is actually doing, what bills are being considered or have passed, what they actually say, is worth your time. For instance, the recently passed Inflation Reduction Act has incredible influence over the future of renewable energy, reshoring of jobs, and so much more. Drink some coffee, and plan to perhaps prop your eyelids open. Public policy impacts every part of our lives.

» READ MORE

Until Next Time...

When I was 20, someone gifted me a copy of *Natural Capitalism* by Paul Hawkins and Amory Lovin. I was just applying to grad schools, about to begin my career as a full-fledged member of capitalist corporate America. The book was an a-ha moment, prominently featuring a new term: the Triple Bottom Line. Catapulting the pursuit of systems like ESG and the circular economy, the book's key tenets marked a major shift in thinking about business, even now.

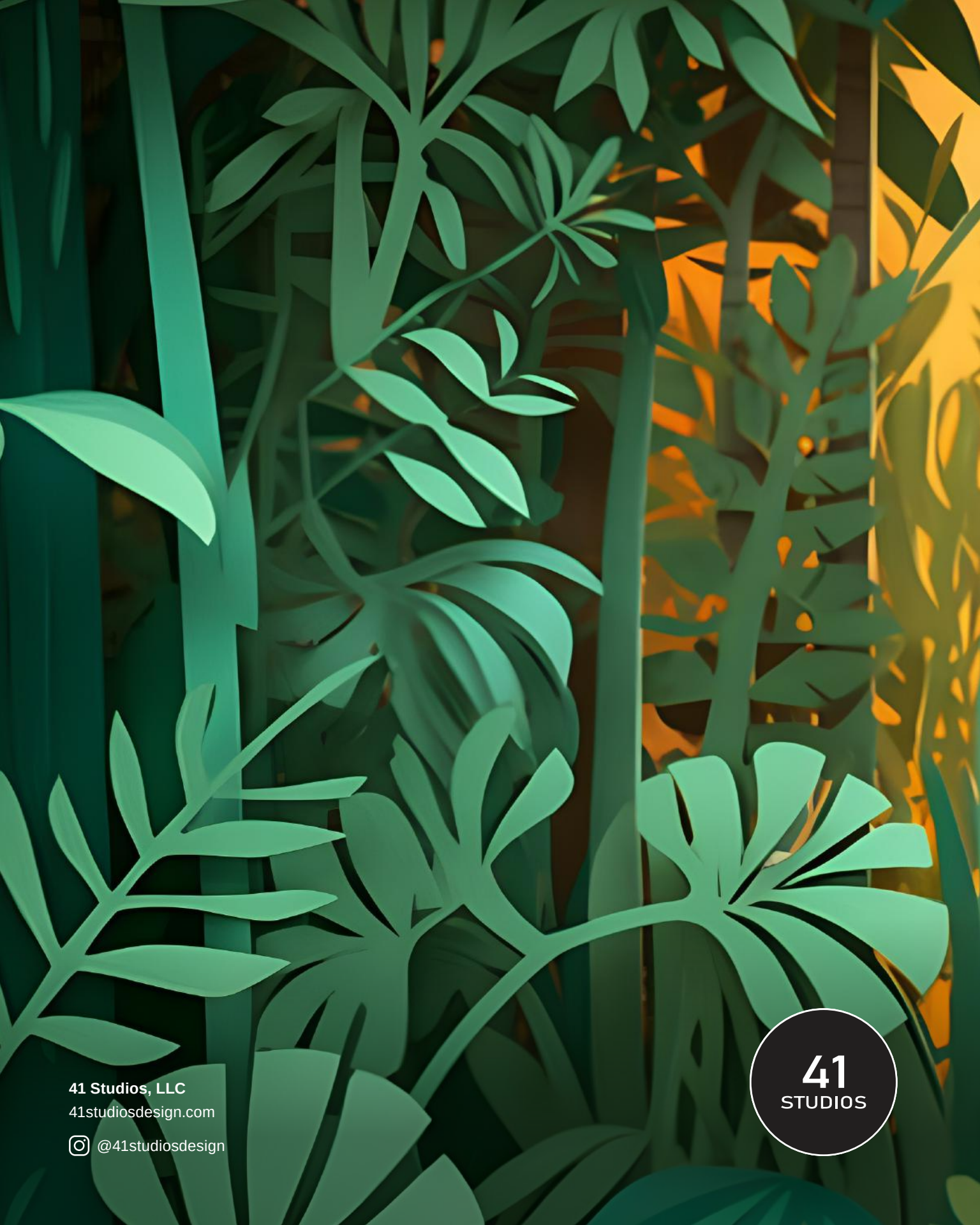
Probably the biggest takeaway for me was the idea that we *could* sustain our planet. It's *not* a lost cause. Though natural resources are required for life at every level, these same resources can nearly all be regenerated if handled with care and not squandered - through the design and application of smarter processes.

"All is connected… no one thing can change by itself" reads my favorite quote from the book's author, Paul Hawkins.

With that, I want to offer a huge thank you to all the collaborators who joined forces for this issue. Bryan Trindade for continuing to amaze me with his creative and branding skills. Laura Mars, who I met when she wrote about our house for *Berkshire Magazine* back in 2021. Chris D'Agorne who tirelessly pursues his passion in preserving our resources. Diego Ibarra, for educating me on the deepest levels of energy policy and practice. Kelley Tapia, who seems to share my spirit in her entire perspective on life. And Leyla Acaroglu, whose voice is so needed right now. Let me not forget the countless family and friends who read and re-read the content I write to make sure I am not being my characteristic 'Debbie Downer' self (cue SNL's Rachel Dratch Disney World scene).

Looking forward, the future is bright, and as an absolute sun-lover, I am here for it.

Much love and hugs.



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