

The Pioneers of Humanability

Tech Innovation With Positive Impact

About This Report

The Pioneers of Humanability is a collaboration between PSFK and Verizon which directs the spotlight onto the people, organizations and companies using technology to do more new and do more good in the world.

This report identifies and defines what Humanability looks like today with:

- Consumer attitudes about the future of technology
- Three emerging Humanability themes
- 10 Interviews and perspectives with the Pioneers of Humanability
- Six key ways technology is enabling social good

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A Letter From A Verizon Engineer

When you think about how technology will change the future, what comes to mind –autonomous vehicles and drones? Or being instantly transported across the globe by slipping on a pair of VR goggles? What about holographic and mixed reality communication in the workplace?

For me, technology is and always will be about people – because it's people who are behind innovation. They're the ones who use technology as a force for good, doing more new and more good for the world and people's lives through innovative and creative thinking. At Verizon, we call this phenomenon humanability.

Humanability is what happens when you mix human innovation, emerging technology and an unparalleled mobile network. As an engineer who is working on bringing the next generation 5G technology onto our network, I'm excited about what the future has in store – because I've seen it. A 5G network provides endless possibilities for innovation and humanability.

But we don't have to wait ten years, five years or even one year to witness how people, organizations and companies will use these capabilities to change the world for the better. The technology-driven, Fourth Industrial Revolution is here. It's happening now. And it's the Pioneers of Humanability, with their risk-taking, breakthrough inventions that are shaping it.



Katherine Fay,
5G Program Manager

Katherine (Kate) Fay is an Engineer at Verizon who is driving development and deployment of 5G and 5G use cases within the company. Kate, who enjoys mentoring student and encouraging girls to pursue STEM fields, has a M.B.A in addition to a B.S. in Mechanical Engineering. Kate is also a recent winner of the New Jersey Tech Council Innovators to Watch Award.

Humanability: Using Tech To Do More New And Do More Good

We live in a confusing, often chaotic world where the pace of technological change can sometimes feel overwhelming. The sheer volume and pervasiveness of technological breakthroughs has promised to make things simpler, keep us more connected and improve our daily lives but oftentimes the opposite is true. Additional complexity, feelings of disconnection and small erosions of our personal freedoms are common refrains.

More and more it feels like we're the ones adapting to these rapid advances instead of seeing technology adapt to us. That's why it's important to put a spotlight onto the people, organizations and companies who use science and technology to fulfill that promise and make a positive impact on the world.

PSFK and Verizon's Pioneers of Humanability Index includes a wide range of breakthrough innovations from the founder of a startup that wants to build solar-powered mass transit pods suspended above traffic to a citizen scientist organizer furthering space exploration via crowdsourcing to a biotech engineer working with artists to explore future applications. There are many different ways creative-minded people can transform the world, and our list highlights some of the most exciting that we have encountered in our research.

In 2018, the differences between engineer, scientist, and student are much fuzzier than they've ever been. So-called amateur tinkerers and hackers are able to come up with transformational projects just as easily as a seasoned technology entrepreneur. At its best, technology can level the playing field, enabling anyone to manifest their big ideas into meaningful actions.

The creators, founders, and academics we've spoken with all have one important thing in common: They use technology and creative thinking to make our lives better. Sometimes, coming up with new ways to improve the environment, make smarter use of existing resources or bring individuals together around a shared goal is enough on its own, but often these innovations can have an amplifying effect. They also teach us to celebrate our differences, push us towards more equitable access and inspire us to strive for a better tomorrow.

The Pioneers of Humanability doesn't just focus on a single area of change, but instead looks more broadly at positive innovations that can remake what's possible. Any time we're asked to contemplate the new and the next, particularly around technology, there's always going to be worry about unintended (or intended) consequences. That's why we're excited to highlight pioneers who endeavor to deliver proactive, additive value to our lives.

All of the 10 pioneers we have spoken with are developing unique, and sometimes counterintuitive, ways to achieve their outsize goals. Sometimes they find ways to redistribute an existing resource, or even create one out of thin air. Other times, they make an existing process run more efficiently, or create an entirely new way of doing things. They've stopped asking "What if?" or "Why isn't?" and started doing and leading instead.

These are the people, organizations and companies that are building the future—and we're happy to present them to you.



Consumer Attitudes Towards Technology, It's Complicated

Consumers Are Questioning Technology's Role In Society

U.S. adults are roughly twice as likely to express worry (**72%**) as enthusiasm (**33%**) about a future in which robots and computers are capable of doing many jobs that are currently done by humans.

Automation In Everyday Life. Pew Research Center, 2017

Over **80%** of parents surveyed were worried about their kids becoming addicted to tech and developing a shortened attention span.

"Survey: Parents Are More Worried About Tech Addiction Than Online Predators." Fast Company, 2018

In the U.S., the dominant emotions evoked by A.I. are "interested" (**45%**), "concerned" (**41%**) and "skeptical" (**40%**).

"Sex, Lies and A.I." SYZYGY, 2017

There Is Growing Concern Around Privacy

94%

of American consumers are generally concerned about their data.

Consumer Attitudes Toward Data Privacy Survey. Janrain, 2018.

24%

of Americans feel that technology companies are not doing enough to protect user data.

Public Attitudes Toward Technology Companies. Pew Research Center, 2018

~79%

of people said they were "very" or "somewhat" concerned about the privacy of their information on social media.

"People Are Changing The Way They Use Social Media." The Atlantic, 2018.

But Overall Consumers Feel Technology Is Helpful

52%

of Americans think technology has had generally a positive impact on society overall.

Four-In-Ten Americans Credit Technology With Improving Life Most In The Past 50 Years, Pew Research Center, 2018.

74%

of Americans say major technology companies and their products and services have had more of a positive than a negative impact on their own lives.

Public Attitudes Toward Technology Companies. Pew Research Center, 2018

88%

of internet users feel the internet has been a good thing for them personally.

Declining Majority of Online Adults Say the Internet Has Been Good for Society. Pew Research Center, 2018

And Are Hopeful For The Future

47%

predict that individuals' well-being will be more helped than harmed by digital life in the next decade.

"The Future of Well-Being in a Tech-Saturated World." Pew Research Center, 2018

84%

of global Gen Z respondents cite technological advancements (for example in medicine, renewable energy and computing) more than any other factor in making them feel hopeful for the future.

Generation Z: Global Citizenship Survey. Varkey Foundation, 2017

75%

of consumers said they trusted the tech industry to "do what is right," a percentage that has remained unchanged for five years.

2018 Edelman Trust Barometer. Edelman, 2018



Emerging Humanability Themes

Community Connectors: Tech That Brings Us Together

Whether organizing disparate individuals to work towards achieving a common goal or helping people form communities where none previously existed, these pioneers are all about strengthening our human bonds.

- Ariel Waldman
- Jeff Kirschner
- Ran Harnevo

Radical Resourcers: Tech That Creates Greater Efficiencies

Whether distributing materials and supplies to ensure everyone can enjoy equal access or completely rethinking how we use our surroundings, these pioneers focus on making better use of our most valuable assets.

- Mike Stanley
- Komal Ahmad
- Joy Youwakim

Hybrid Hyphenates: Tech That Cross Collaborates

Whether improving the civic and social fabric of cities and governments or challenging conventions around how we develop and manufacture consumer goods, these pioneers work across disciplines to create solutions that prove diversity is a key ingredient to meaningful innovation.

- Amanda Parkes
- Christina Agapakis
- Nigel Jacob
- Sixto Cancel

Community Connectors: Tech That Brings Us Together

Whether organizing disparate individuals to work towards achieving common goals or helping people form communities where none previously existed, these pioneers are all about strengthening our human bonds.

Despite technology's promise to bring us together, people increasingly feel disconnected and isolated. These pioneers fulfill people's need to be a part of something bigger by using digital platforms that help individuals form global communities and leverage their collective efforts to boost benefits for all.

Ariel Waldman

Founder | Spacehack

Jeff Kirschner

Founder | Litterati

Ran Harnevo

CEO | Homeis



Citizen Science Organizer

*Transforming the crowd into
armchair astronauts*

Technology is at its best when put to creative and innovative uses and optimally fostered by diverse input from many backgrounds. However, not all people have equal access to or experience with science or technology, a factor that ultimately limits the potential for pioneering new capabilities that could improve human life.

This is what Ariel Waldman, advisor to NASA's Innovative Advanced Concepts program, hopes to change with Spacehack. Spacehack is a directory of ways for all of us to participate in space exploration.

Below, Waldman explains why science is a public good, how she got a job out of a fan email to NASA, and why “massive multiplayer science” matters.

01

In what ways do you think technology has the potential to impact humanity, making a positive social difference?

Ariel: Technology, like science, is a human endeavor. When we recognize it as such, it becomes self-evident that it requires diversity and inclusion of people from many backgrounds involved in the process of making technology to make it truly equitable for all. Technology by itself isn't what brings people together anymore than food by itself brings people together—it is the humans and stories behind it that affect us and have the potential to make a positive impact.

How does the science and technology work that you do strengthen or positively impact communities?

Science is a public good. But there is a severe lack of opportunities for people from different backgrounds and careers to actively interact with science and collaborate with scientists. Equally, scientists lack fruitful opportunities to learn new techniques and technologies from people in different disciplines.

One of my main projects, Science Hack Day, is a highly collaborative, inclusive event that occurs globally—now in 29 countries—that welcomes scientists, designers, technologists, civic activists and people from all backgrounds to come together in the same physical space to see what they can collectively prototype in 24 consecutive hours. The event is organized by local volunteers in

each community. Science Hack Day acts as a catalyst to the formation of long-term, multidisciplinary communities that solve local and global scientific challenges in new, clever ways. Multidisciplinary teams have created new ways to study radiation, developed earthquake early warning systems and built low-cost groundwater detection equipment, just to name a few.

The connections people make at Science Hack Day last beyond a weekend. For some people, the event has been obviously life-changing, inspiring career changes or sparking multi-year research endeavors. For many others, the impact is subtle yet powerful: the realization that they can actively contribute to science in meaningful ways.

What inspired you to do more new and do more good?

I had been watching a documentary about NASA and became so inspired by it that I decided to send NASA a fan email offering myself as a volunteer. I have no formal background in science so I never expected to hear back, but I ended up getting a job at NASA from it! This changed my relationship to science from observation to participation and contribution. This set me on a mission to give other people the opportunity to actively contribute to science and space exploration. The very first thing I did as part of this mission was to create Spacehack.org, a directory of ways for anyone to participate in space exploration.

You describe your role as creating “massively multiplayer science.” Could you elaborate on this and its role in technological innovation to enhance the scientific community?

I believe in galvanizing the awesomeness within each individual—and building a world that harnesses their existing interests, skills and backgrounds to create serendipitous and unexpected scientific discoveries. I describe this as creating “massively multiplayer science,” which is a nod to massively multiplayer online games (MMOs). In an MMO, you often need to enlist a large team of players with different abilities to be able to accomplish large goals. If you have a large team of similar players, you are unlikely to accomplish as much.

What role does creativity play in science and technology, and how does it manifest in Science Hack Day?

Play is the most empowering form of science engagement and can be a catalyst for discovery in scientific research. Being able to walk away from a creative weekend and tell others that you experimented with biotech, explored neurological phenomena, sonified subatomic particles or designed a website about satellites creates a mental locket—a keepsake that affirms your ability and your right to talk about, play with and contribute to science. You may not still know about the inner workings

of biology, neuroscience, particles or spacecrafts, but you've tinkered with it. You now know that if you'd ever like to tinker with science again, that there's no barrier to entry.

The science industry suffers in immeasurable ways from not recognizing the potential of actively working with people outside of the science community. By having a fresh set of eyes from those who solve different types of problems across a variety of industries, new concepts often emerge and go on to influence scientific processes, communication and discoveries in unexpected ways.

How do you see Spacehack evolving to its audience and continue to support the scientific community?

Spacehack.org was my first project as part of my mission to make science and space exploration disruptively inclusive. It continues on but also now manifests itself in the physical world through Science Hack Day and has been foundational to my work in advising NASA. I care less about building frequent engagement models with my projects—my focus is just to instigate that one spark that gets people to go off exploring.

Takeaways:

- **Scientists miss out from not actively working with non-scientists who have valuable insights to offer.**
- **Volunteers and interested outsiders can contribute to genuine scientific discoveries by using new tech-enabled platforms.**
- **It's not just NASA and SpaceX; anyone, regardless of their background, can take part in space exploration.**



Community Cleanup Incentivizer

*Making environmental cleanup
a game anyone can play*

While many people wish to contribute to bettering their community, sometimes they don't know where to begin. Choosing a way to serve society can oftentimes feel overwhelming. This is what Jeff Kirschner, founder and CEO of Litterati, hopes to change through technology, social awareness and art. The goal? Make cleaning up the world something anyone can do.

In this interview, Kirschner explains how his service uses technology to form a global community of people who not only reduce litter in key areas, but also connect with one another to further the cause and vastly reduce waste pollution.

02

In what ways do you think technology has the potential to impact humanity and make a positive social difference?

Jeff: The social and environmental problems we face can feel overwhelming. Most people don't know what they can do, or where to start. In the case of Litterati, if a woman picks up a bottle cap in Stockholm and a man picks one up in San Francisco, those actions are isolated. Neither knows of the other's existence. Technology can serve as a unifying umbrella. It can connect those people, along with millions of others, and transform that isolated, quiet act, into one that's social and shareable.

When people realize they're not alone in the fight and there's a community of like-minded individuals, that overwhelming feeling turns into one of empowerment. But that's just the beginning. Technology can provide data—information that can be used to identify the root cause of problems, recognize patterns within complex situations and measure the efficacy of our positive impact.

How does your work create a positive impact on communities both locally and globally?

Our mission at Litterati is to empower people to “crowdsource-clean” the planet. We measure impact in a variety of ways (number of pieces picked up, number of people in the community); however, our true impact comes when there's a systemic change. Here's a local example: A group of 5th graders picked up 1247

pieces of litter in their schoolyard. The data showed that the most common type of litter was the plastic straw wrappers from their own cafeteria. The students then went to their principal and asked, “Why are we still buying straws?” And they stopped. Simple and effective.

Globally, we're now in 115 countries and growing bigger each day. From people becoming more aware of their surroundings, to leveraging the data to influence public policy or helping brands understand the environmental footprint of their packaging, the Litterati community is creating impact.

What inspired you to do more new and do more good?

I was hiking through the woods with my two little kids, when my 4-year-old daughter noticed a plastic tub of cat litter in a creek and said, “Daddeee, that doesn't go there.” That was the eye-opening moment. I was reminded of a lesson I learned as a kid at summer camp. On visiting day, we'd each have to pick up five pieces of litter. When several hundred kids each pick up five pieces of litter, it doesn't take long before you've got a spotless camp. So I thought, why not apply that same crowdsourced cleaning model to the entire planet and leverage technology to do it?

Why is a game-based platform an effective way to encourage participation and community service?

We believe there's an opportunity to use achievement levels, badges and leaderboards to encourage

participation. People are naturally competitive, both with themselves and each other. Plus... games are fun. If we can effectively integrate gaming techniques to inspire people to collectively clean the planet, our impact will increase considerably.

Who are your biggest users?

From a Dutch environmental activist, to an Australian consultant, to an Irish former librarian, to a kid in Reno, the Litterati community is an eclectic mix from all walks of life. They're all saying, “How can we do more?”

How are you using the data gathered by volunteers to make an even bigger impact?

Earlier we talked about “Stories of Impact.” The Litterati TED Talk highlights three such stories, which demonstrate how data is used to generate an impact.

Takeaways:

- **A simple tech idea (in this case, an app that uses geotagging to gamify litter pick-up) can have big impact at scale.**
- **Litterati's user base is diverse and spans demographics, backgrounds, and geographic locations.**
- **Litterati built a community around the idea of picking up litter in users' communities.**



Ran Harnevo

Cultural Catalyst

*Building cultural connections between
new immigrants and established expats*

Living abroad can feel like having two homes. It can be a challenge to embrace the place where you live while also honoring the place where you came from. Ran Harnevo is the co-founder and CEO of Homeis, a social network designed to help urban-dwelling foreign nationals connect with other locals who share the same homeland, culture or interests.

03

In this interview, Harnevo discusses the idea of culture networks and how “invisible” groups can become visible communities through technology.

How does the work that you do strengthen or positively impact communities?

Ran: Basically, what I think we're trying to do is to help immigrant communities that are pretty below the radar.

What we're trying to do is to help what we call "invisible" groups to become visible communities. In most cities in the world, there are a lot of local immigrant communities that are strong, help each other, support each other, and help with integration into society in the best way possible. That's our focus—helping these communities.

What inspired or motivated you to do more new and do more good?

I came here 10 years ago with my first startup, 5 Min Media, a video startup that got acquired by AOL for \$65 million.

I lived here for 10 years; I look at myself as a privileged immigrant.

Still, I think that there are so many difficulties and shared experiences that communities have. I just saw my own community, which is the Israelis of New York, and the many other communities of friends. It was super important for me, if I was creating a second startup and was already successful in the first one, to do something that is meaningful.

I want to help my people. When I say my people, it's foreign-born people. I feel I understand them profoundly well.

You talk about culture networks. What sets Homeis apart from other apps or networks that connect local people. What makes it distinct?

We are not connecting local people; we are connecting the local people who share the same culture they bring from home. It's very different. We're not gathering around a neighborhood or around an interest.

When you move to a new country, you first of all want to assimilate, and you want to give back. You want to find what's in common with you and your place. But you also, in our day and age, I think, are not going to delete your past in order to integrate. I think that's over.

When we say culture, there's a lot of shared context behind me and another Israeli. We grew up in the same education system, around the same TV shows, the same books, the same culture that we want our kids to have as well.

We believe that that's a very different thing than what you see out there. I actually think that there is no second Homeis out there, trying to connect people that literally grew up on the same culture, and want to preserve it in one shape or form.

What user needs or behaviors drove the particular features of Homeis?

I think that what we are trying to do here is to organize information through our social activities. Meaning that when you look at foreign born people, what they really do offline all the time is recommend.

It's really a network of recommendation and trust. "This is the lawyer you should work with. I worked with him. He understands us. He understands our mentality. He speaks our language," etc., etc. In a way, I think that these communities, their ability to consume knowledge in an organized way is extremely difficult today.

As much as digital is flourishing, we are still seeing people calling each other to get a recommendation. The crowd wisdom or the crowdsourcing has never existed before. I think that drove our products.

The product is about helping people together, and sharing useful information that would improve their day-to-day life in a place that they're not totally familiar with.

What are some of the surprising/inspirational stories members have shared about their experience?

First of all, I feel that people feel comfortable. There is something about being the foreign born, where again, the legitimacy of saying, “I miss home. I miss this, I miss that,” is not something you can share on a Facebook page. It’s just a very personal experience.

On Homeis people are literally sharing a lot of their journey, and a lot of their difficulties. They feel that it’s a shared experience in the context of the product. That’s one rich thing.

The second one I would say is there are a lot of small businesses that are only directed towards a certain group. If I’m an immigration lawyer, and I speak Hebrew, most of my customers are Israelis. If I’m a gynecologist and I speak Portuguese, most of my customers will be Brazilians.

Today, these guys have no way to let the world know that they exist. What was surprising for us was how many of them joined us to be able to tell their story about a small business they’ve built. It’s business, but it’s very inspiring.

We can actually help extremely small businesses that are not even indexed in Google to talk to their audience in a very effective way.

What are the unmet needs you’re trying to address?

I think it’s very simple. We want to be the go-to product for every foreign-born expat around the world. If you are not one of them, you don’t understand how deep and personal their needs are. The use case here is very clear to us.

We have a group of people that have done a brave thing. They left their comfort zone. They live in a new place, with new rules, with new systems. Their needs are pretty obvious, it’s just that no one has ever created a product for that.

How do you see Homeis evolving in the future?

We’re only in New York right now with two communities, Israelis and French. We will grow both of them globally in the next year. It will open more French communities and more Israeli communities.

Then we just want to take one country at a time, adapt the product to the language, hire the right people, and just go at it.

Takeaways:

- **Expatriates and immigrants often see their social and professional networks disrupted when they immigrate. Technology can help mitigate that.**
- **Professionals and small businesses which speak foreign languages don’t always have ways of promoting themselves to potential customers sharing the same languages.**
- **Smartphones offer a way for far-flung communities to connect and build ties.**

Radical Resourcers

Whether distributing materials and supplies to ensure everyone can enjoy equal access or completely rethinking how we use our surroundings, these pioneers focus on making better use of our most valuable assets.

No society can truly flourish if every citizen can't count on reliable and affordable access to vital resources like food, water, transportation, and information. By leveraging tech-enabled services and renewal models, these pioneers are helping bridge existing gaps.

Komal Ahmad
Founder & CEO | Copia

Mike Stanley
Founder | Transit X

Joy Youwakim
Student | UT Austin

A portrait of Komal Ahmad, a woman with long dark hair, smiling. The image is overlaid with a semi-transparent red and blue gradient.

Komal Ahmad

Hunger Resolver

*Treating hunger as a logistics problem
that we all can solve*

Fresh food has an extremely limited shelf life. Everyday countless amounts of perfectly useable food is dumped and wasted, while thousands go hungry. This paradox is what Komal Ahmad, founder of Copia is solving with an app that connects businesses with excess food to the people who need it.

In the following interview, Ahmad explains why hunger is a logistics problem rather than a scarcity issue and how the right physical and digital infrastructure can be used to redistribute virtually any resource, with benefits for everyone involved.

04

In what ways do you think technology has the potential to impact humanity, making a positive social difference?

Komal: For the first time in human history, we have the technology to solve some of the world's hairiest, intractable, previously unsolvable problems—problems like food waste and hunger. The same technology we use to order a burrito from our couch or swipe right on a dating app to find a significant other can be used to ensure life-saving resources are matched with people who need them. At Copia, our technology is connecting businesses with excess food to the people who need it, when they need it.

How does your work create a positive impact or strengthen local communities?

Access to food is a fundamental human right. A meal is a stepping stone to everything—without it, one cannot be productive or healthy. Food waste in the presence of hunger is one of the most disturbing, yet solvable, paradoxes of our time. Copia was created to make healthy food equitably accessible by connecting businesses with high-quality excess food to those who need it, when they need it.

Our goal is for every food business and business with food to partner with Copia to ensure that their high-quality food is used to feed people and not landfills. By reducing food waste, businesses save money and resources, minimize environmental

impact, and most importantly, move toward a reality where everyone in their community has enough to eat.

What inspired or motivated you to create Copia?

One day I was walking down Telegraph Avenue in Berkeley and encountered a homeless man begging for food and something about him compelled me stop and invite him to join me for lunch. After sitting down with him, I learned that he had just come back from his second tour in Iraq and was waiting for his veteran benefits to kick in. He shared that he hadn't eaten in three days. That hit home for me. How could someone who had selflessly sacrificed so much for our country come home only to face another battle, that of hunger?

Meanwhile, right across the street at the U.C. Berkeley dining hall, thousands of pounds of perfectly edible food were being thrown away. So, it was this very stark reality of those who have and waste, and those who are in need and starve—and these people existed literally right across the street from one another. I thought, there needs to be a solution for this where people who have food could say “we got food” and people in need could say “hey, we need food,” and we could match these two people and clear the marketplace. And that's essentially what we've built at Copia—a way to solve both hunger and food waste across America, and eventually, the world.

Your site reads “Hunger isn't a scarcity problem. It's a logistics problem.” Talk about how Copia is setting out to solve that. Do you see this same model being applicable to other global challenges, and if so how?

Every day in America, we waste enough perfectly edible food to fill an NFL football stadium to the brim. Meanwhile, one in six Americans is food insecure, meaning they don't know how or when they will obtain their next meal. This nets out to a pretty stark reality: we waste three times more food than there are hungry mouths to feed. So it's not a lack of food that's the issue, rather, an ineffective distribution of that food. Hunger is not a scarcity problem; it's a logistics problem.

Copia's technology platform solves the complexities of redistributing perishable excess food. Our Match.com-style algorithm allows nonprofits to create a profile specifying what type and volume of food they can accept and on what days. We are then able to instantly connect a food donation to a nearby nonprofit and dispatch a driver to easily pick up and safely deliver the donation—all in less than 30 minutes.

Right now, we're out to perfect the redistribution of one of the most highly-perishable resources—food. In the future, we envision our technology being used to redistribute any excess resource from medicine to books or clothing to school supplies. We've only just begun.

Can you share a few of the biggest success stories from the platform thus far?

Copia organized the first-ever zero food waste events at the Oscars and Super Bowl 50. At both of these events, Copia recovered high-quality, gourmet food that would have otherwise been thrown in the landfill and used it to serve the local community.

At the Oscars, we recovered food from the Vanity Fair party -- one of the most glamorous post-Oscars events -- where world-renowned chef Thomas Keller prepared incredible food for the likes of Matt Damon and George Clooney. The excess food from this event fed more than 1,100 people in the LA community, including 40 Syrian and Iranian refugees who had just come to America, and gave them the chance to “eat like a star.”

At the Super Bowl, we recovered more than 14 tons of food -- enough to feed over 23,000 people. We aren't talking typical stadium food, we're talking \$300 cheeses, lobster rolls and pulled pork sandwiches.

The scalability of our technology was put to the test this past October when Copia was the first responder to the worst fires in California history. Before FEMA, Salvation Army, and American Red Cross could even mobilize—Copia was on the ground providing food for tens of thousands of fire evacuees as well as 500+ members of our national guard and our first responders. Through our partnership with SF Fights Fire we were able to provide more than 34,000 meals in the first 2 weeks of a natural disaster.

Copia's greatest achievement has been our collective impact with the hundreds of businesses and nonprofits who have partnered with us to reduce food waste and end hunger in their communities. Through our partnership with businesses across the country, Copia has fed more than one million people, and I'm proud to say that this year we will feed over 2 million people with incredible food that would have otherwise been wasted.

What's in store for the future of Copia—how do you plan to scale the platform? What are some of the current goals you're working towards?

Our goal is for Copia to be in every city in America, and eventually, to grow globally. Right now, we're identifying and working with national distribution partners to turn on operations quickly in new cities across the country.

Additionally, what responding to the California wildfires—a huge natural disaster—showed us is that the potential for Copia is beyond just redistributing food. Food, after all, is the most perishable and difficult thing to move—now that we've built the technology and developed the logistics infrastructure, we can use the same sophisticated algorithms to redistribute medicine, medical supplies, books, clothing etc. because it is not a lack of any of these resources—it's an ineffective distribution of these resources.

Takeaways:

- **Poor logistics or lack of knowledge mean that organizations throw away food that would otherwise be donated.**
- **Every day in the United States, enough edible food is wasted to fill an NFL stadium.**
- **A powerful logistics infrastructure combined with self-service tools and connections have the potential to solve many existing issues.**



**Mike
Stanley**

Urban Transport Visionary

*Remaking transit infrastructure with
pods that float above city streets*

While the environmental and human costs of automobile-filled cities have been well known for some time now, the transition to more sustainable methods of transportation has been slow. A major impediment to the adoption of more environmentally friendly transit systems lies not so much in the vehicles themselves, but rather in the major infrastructural changes required. Transit X seeks to create a solar-powered mass transit system consisting of light pods that glide gracefully over traffic.

In this interview, Stanley discusses his plans to reduce urban pollution, congestion and surface runoff with an innovative method of transportation that is convenient, reliable and environmentally sound.

05

In what ways do you think technology has the potential to impact humanity, making a positive social difference?

Mike: Cars are the dominant mode of transportation around the world. The cost to transition to vehicles that are all electric and autonomous is extremely high and will take decades—and won't eliminate congestion, crashes or be resilient to flooding. For humanity to flourish, we need a better approach that enables Earth to heal.

Transit X is creating a solar-powered personal mass transit network with the cost, capacity and convenience to displace cars, buses, trains and trucks. Transportation impacts most elements of society, including education, health, housing, entertainment and equitability. If Transit X is successful, it will represent one of the most significant transitions in our history.

How does your work create a positive impact on urban communities?

Our current roadways have a tremendous negative impact on our quality of life—ugly black asphalt that smothers our roads and parking lots, causing water drainage and urban flooding. Injuries and deaths are all too common. By enabling walkable and car-free cities, we can enhance our cities to be green, clean, quiet and safe. Our health and quality of life can be improved. As a side effect, adoption of Transit X can rapidly

de-carbonize transportation and help reach our carbon emissions targets.

What are the biggest challenges facing cities and urban environments?

Congestion (waiting), parking, pollution, resiliency and safety.

What inspired you to do more new and do more good?

I started building autonomous robots in 1982 and was inspired by the “The Jetsons” cartoon. While attending MIT, my friends and I started building autonomous LEGO robots to compete in games. In 2015, a series of major snowstorms shut down Boston’s transportation system and my wife had to walk home through the snow. That was when I decided that transportation needed to be fixed and I didn’t see anyone willing to “think big.”

You describe Transit X as a “shared mobility network” rather than “public transportation.” Can you explain your vision, and what makes your transport service distinct from existing solutions?

The term “public transportation” has different meanings to different people. I see Transit X as a new form of public transportation. Transit X is an automated transportation network which is also a “shared mobility

network.” Many people think that the term “public” means publicly funded, but Transit X is completely privately financed and operated—similar to the old streetcar networks that covered our cities. Transit X is distinct from other shared-mobility solutions such as shared rides and bicycles because we build the road-like infrastructure—which we call podways—and the “pods” that run on them, which brings me to my favorite movie quote: “Roads? Where we’re going, we don’t need roads.”

What are the technologies that make Transit X possible?

Most of the technologies we use have been around for decades. Another fully automated transportation network has been operating accident-free for the last 40+ years in Morgantown, West Virginia. We are using lightweight composites, including thermoplastics, carbon fiber and pultruded fiber-resin-polyester beams. For our purposes, the costs are now competitive with conventional infrastructure materials such as asphalt, concrete, stones and steel.

The design is probably more important than the specific technologies, and we will be filing dozens of patents to cover the key elements that make Transit X unique.

What in your opinion are the biggest challenges to implementation?

I feel that we've crossed an important threshold from "if" to "when." We need to rapidly deploy Transit X across entire metropolitan areas with hundreds or thousands of miles of podway, so quickly scaling up manufacturing is key. We aim to create car-free cities and that requires getting rights-of-way from multiple, overlapping government entities.

One challenge is that cities perceive anything new as a higher risk than the status quo, even if the status quo is actually much riskier for crashes, pollution, flooding and lost productivity. It's been difficult to get municipalities to look beyond their current infrastructure, but concepts like Hyperloop and The Boring Company are at least getting people thinking about different approaches.

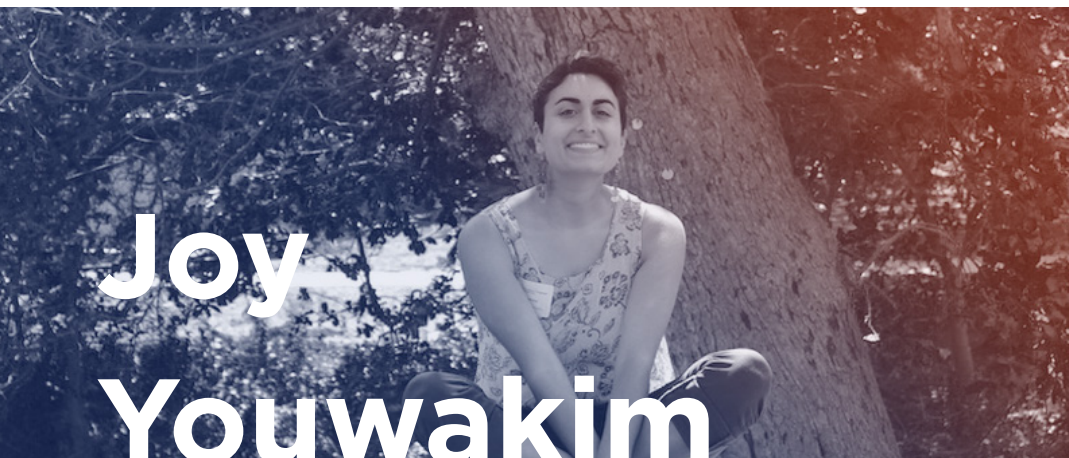
More than 10 cities are moving forward with Transit X and 150+ cities are interested once we demonstrate our first pilot. Our challenge at that point will be keeping up with demand.

What's in store for the future of Transit X? When will people be able to test the service?

We'll show a full-size pod and test track later this year in the Boston area. Groundbreaking for our first pilots will be next year (2019).

Takeaways:

- The primary obstacles to building a "Jetsons" style mass transportation system aren't technical; they're bureaucratic.
- As a result of initiatives like the Hyperloop and The Boring Company, municipalities are beginning to think more creatively about transportation.
- Solar powered vehicles hold potential for getting passengers from Point A to Point B with reduced effort and impact.



Land Rejuvenator

*Transforming food deserts into
fertile farmland*

Food security and a lack of nutritious food options are major problems for at-risk communities that often lack transportation infrastructure and resources to easily obtain healthy food. Often located in urban environments, these so-called food deserts come down to a question of cost and access. Supermarkets and other providers don't find it economically viable to serve these populations, which creates a void.

One strategy to solve this challenge is radically reusing space to raise fresh produce in close proximity to food deserts. Joy Youwakim, an economics student at the University of Texas, Austin has introduced a model for growing produce on top of landfills. In this interview, Youwakim explains why land renewal and its accompanying technology is a public good that has the ability to create sustainable food sources and self-sufficient communities, while decreasing the environmental impact of landfills.

In what ways do you think technology has the potential to impact humanity, making a positive social difference?

Joy: Technology has the potential to impact humanity by decreasing gaps of resource and socioeconomic inequality. New technologies have the capability to create new types of jobs, provide more education to all age groups, and per environmentalism, provide clean water and increase food accessibility.

What are some of the most exciting ways your work creates a positive impact? What were some of your most recent accomplishments?

Growing produce on top of landfills is one possible solution to increase economic autonomy and food security in food deserts and other underserved communities. Landfills can often be found on the outskirts of major cities, affecting the household wealth of surrounding areas by lowering property values. By using the landfill as a readily available, free and clean food source, this project can help offset some of the negative externalities caused by the presence of landfills. They also make for direct access to locally grown, fresh produce, which means produce that is more nutrient rich and uses less carbon to transport than other produce sources. Some of the most recent accomplishments of this work are being awarded grant money to continue from General Mills.

What inspired you to do more new and do more good?

Once I saw a photo of a covered landfill, my first thought was, “Why don’t we already grow food on top of these?” Personally, hunger issues affect everyone, and we have the capabilities to feed more people and waste less of the food that we produce. 2018 is too late and my work is trying to play catch up. This approach makes use of a resource that is otherwise underutilized and abundant in quantity across the U.S.

What are the biggest benefits of this approach? Challenges to overcome?

Challenges will be using reliable water sources and finding efficient ways to both grow as much food as possible and distribute it to families efficiently. Benefits are alleviating urban poverty and directly increasing food access which will hopefully directly increase household wealth and health.

What is needed to scale this method to more places?

In order to scale this method to more places, initial testing must be done on landfill spaces across the U.S. This means municipal governments being willing to take on this sort of work. In order to encourage this, we are doing as much research as possible on our own test plot in Austin and plan to publish our findings. We are also working on a city plan that could work here to use as a model for other cities as well.

What do you think the future of more sustainable and environmentally friendly agricultural will look like in the future?

Future sustainable agriculture will make use of underutilized, available spaces and resources and use innovative solutions to not only feed people, but to alleviate global hunger and poverty.

Takeaways:

- **New innovations make it possible to safely grow crops on top of covered landfills.**
- **Growing crops on top of covered landfills is a non-intuitive but potentially useful way to increase vegetable access in “food deserts.”**
- **Austin, Texas is the site of an ambitious test to safely and efficiently grow produce crops on a landfill site.**

Hybrid Hyphenates

Whether improving the civic and social fabric of cities and governments or challenging conventions around developing and manufacturing consumer goods, these pioneers work across disciplines to create solutions which prove diversity is a key ingredient of meaningful innovation.

Society is growing more and more aware of the interconnected nature of the issues facing the world today. From fashion's pollution crisis to urban congestion, new approaches and holistic mindsets push these pioneers to look outside their fields to create multi-disciplinary solutions through cross-collaboration for greater positive world impact.

Amanda Parkes

Chief Innovation Officer |
Future Tech Lab

Christina Agapakis

Biomimicry Scientist &
Creative Director |
Ginkgo Bioworks

Nigel Jacob

Co-founder | New Urban
Mechanics

Sixto Cancel

Founder | Think of Us

A portrait of Amanda Parkes, a woman with long blonde hair, wearing a dark jacket. The image is overlaid with a blue-to-orange gradient.

Amanda Parkes

Fashion Tech Connector

Making a sustainable future for fashion at the intersection of technology and biology

The fashion world has undergone many attempts to improve its environmental friendliness. From recycling programs to anti-plastic initiatives, nothing has been as revolutionary as the work that Amanda Parkes, Chief Innovation Officer of Future Tech Lab, is doing, however: fostering the creation of sustainable fashion technology for positive environmental effect.

In this interview, Parkes describes how her hybrid investment company—part multinational accelerator, part experimental laboratory, part philanthropic organization—aims to empower the fashion industry to improve its social and environmental footprints.

07

In what ways do you think technology has the potential to impact humanity, making a positive social difference?

Amanda: Generally, there's been a perception that technology and sustainability seem at odds with each other or that they naturally have to be, with natural materials on one hand and technology and devices on the other.

I think that now with the fourth industrial revolution, we have a convergence between the physical, the digital and the biological. We can start to see how these things can actually come together. Using high-tech processes and high-tech innovation can help to create more sustainable materials and processes. For example, you can have things like synthetic biology. We're involved with a company called Bolt Threads, which is producing lab-grown spider silk. They've taken the DNA from a spider and transposed it into yeast cells. When the yeast cell grows (you can think of it as similar to beer brewing), you feed the yeast sugar, but instead of having it create beer, it creates silk protein. This is a very high-tech process with the DNA transformation, but you get completely naturally occurring silk, which can then be extruded.

Using the tools of both digital kinds of technology mixed with biological technologies really can make our materials streams be a lot more sustainable in various ways. I think that's one way that we can have

better sustainable material culture, which obviously directly impacts humanity, climate change and the environment.

Every technology has a potential positive impact and a potential negative impact. When you look at things like artificial intelligence, you can use it in ways that will actually create better supply chains, understand everything about business and industry better and have predictive models. That can all be very, very positive. You have machines do what they're good at and have humans do what they're good at -- creativity for the humans and repetitiveness for machines.

I think that the most important thing is that we consider how these technologies are employed. It's not just, "Can we do this?" It's, "Why are we doing it and what exactly are we doing?" and thinking of the longer-term effects.

Questions of ethics and process and all of the human angles of developing new technologies come into what we're developing. That could be from the corporate perspective. It could be from a government policy perspective. There's a lot of different ways that those situations can be structured.

How does your work create a positive impact on the local and global world?

When we're talking about the kind of high-tech development around

materiality, obviously there's impact around the global supply chain, around what materials are available and what price points they can meet.

When you talk about having more sustainable materials developed at a more affordable price, that naturally means that everything else along the fashion supply chain can be more sustainable, both in terms of environmental sustainability, but also in terms of the human piece of sustainability, the ethical piece of sustainability, so around labor and transparency.

The global development of these new processes that impacts local production methods and makes things safer for everybody involved, that's one way to think about it. Every person who's a piece of this fashion supply chain can have better working conditions and a better existence if we have more sustainable processes in place -- from a high level.

You describe the work that you do as being at the intersection of design, manufacturing and technology. Could you elaborate on that?

First of all, I don't at all believe these are disparate practices, and that's maybe one of the biggest problems that exist. Designers have somehow been traditionally educated in a way that they're cut off from manufacturing processes and the supply chain. You can actually go through design school and -- for

example, if you're doing something in industrial design -- never understand how injection molding works at a factory level.

When we think about elements like circular design -- where you design products from the very beginning to be reclaimed, both in terms of material and how they're assembled and all these things -- understanding the manufacturing becomes a major element. The assembly, the disassembly, how things get reclaimed, -- there's an entire cycle around the product. The design manufacturing and the technological element of that are intrinsic to each other. It's arbitrary that we've somehow split that out in terms of education system and how we run jobs.

I know that now there is a little bit more of a convergence. If you're a technology designer at the highest level, you have to understand manufacturing processes down the chain. There's massive opportunity for innovation. That is a key component. The reason that we've gotten ourselves into the state that we have is because they've been separated.

I also think there's a lot of process technology that often gets ignored, as well as enabling technologies. Of course, what's of public interest is consumer products. That's what we see as the output. For example, the enabling technologies of components and things like the design of interactive fibers and the internal chemistries of batteries, all these

things are going on on the back end. The companies are not consumer-facing brands. All that stuff is really, really important to be addressed. Without that level of deep attention and investment into those layers, we're not going to move forward. That's something that I've seen that has been very skewed about how Silicon Valley works in terms of their investment structure. They're very focused on these things that have immediate consumer results and less focused on things that have global, world-changing implications in terms of materials and processes. That's because they're not as sexy as investments.

You're talking about things that can be kind of boring, but they can be massively possible. I talk about how whoever can create the USB connector of fiber -- something that's a universal connector for fibers to do all kinds of interactive processes -- that's a multi-billion dollar company and idea. I'll be in every single consumer product.

Those are really much harder and much more fundamental innovations that don't have a three-year return on investment, necessarily. I think there's a broken piece of our financial infrastructure that's tied into what we think of as consumer tech, as opposed to enabling tech.

Could you describe the Future Tech Lab and the resources it provides to the community?

Future Tech Lab is working on the future of sustainable and interactive fashion through a hybrid model based on different pillars - an investment fund, an agency and an experimental lab for research and product development. Our company in itself is an innovative and experimental business model to try to move the entire fashion industry forward. We see each pillar as necessary for this development. Those elements working together and simultaneously is what allows us to create change and be a bridge-builder. That's essentially what our company is: a bridge-builder between fashion and tech.

We have an investment fund. We obviously are focused on some of these hard tech, biotech, with pieces of material science, the things that you would not normally think of as direct fashion investments, but that are very, very crucial for the future of the industry.

We're looking at the companies that transverse those spaces, and that also are behind the scenes, so really important companies that are emerging.

Then we have an agency, where we work with big companies, such as fashion companies or tech companies. We help them with innovation and sustainable strategy. That's as much

about thinking about how their business works and understanding fashion traditionally does not have any internal R&D. They don't own the means for their own production. I think this is a big cause of a lot of the roadblocks in the industry. Apple and Google will buy the companies that they need for the hardware and software and have this 5-year, 10-year plan and research going on inside of their companies.

We also have our experimental lab, which is where we do product development. We're making some private label products to demonstrate to the fashion industry that we can do very high-fashion products that use and combine innovative, interesting, new high-tech fabrics and some interaction technologies.

We also do incubation and outreach, working with programs like Fashion for Good. We also work with universities and do project challenges. We call it our incubator, but it's not a physical space incubator. It's more about trying to incubate all the best ideas and the best communities to try to combine and create new projects that are maybe less defined.

Takeaways:

- **Future Tech Lab is applying technology industry models to the fashion, apparel, and design worlds.**
- **As the fourth industrial revolution takes hold there's a convergence of the physical, digital and biological that impacts product development, design and manufacturing.**
- **To achieve sustainable innovation it is essential to have better communication at all stages of the supply chain.**



Christina Agapakis

Bio-Organism Orchestrator

*Innovating on a molecular level
with global scale impact*

The scientific process is often discussed as a series of revolutions. A lone genius making a major discovery that alters the course of science going forward. In reality though, this process is far more iterative, collaborative and creative than the public ever knows and its effects extend far beyond the scientific community. Ensuring that today's innovations make a positive impact on everyone's future is more critical than ever.

These are the kind of challenges that Christina Agapakis, Creative Director at Ginkgo Bioworks is tackling in her work designing custom microbes as molecular machines for industrial uses. In this interview, Agapakis explains how she approaches molecular scale breakthroughs with an eye towards global scale affects.

08

In what ways do you think technology has the potential to impact humanity, making a positive social difference?

Christina: For technology to make a positive social difference we have to first change the culture of technology. Science and technology reflect the biases and beliefs of the people that make it—to make technology that makes a positive difference we have to work to end the sexism, racism, homophobia, ableism, and ageism that exists within our organizations. Likewise, technology never works in a vacuum and is never a silver bullet—we have to work to understand the broader social, cultural, and economic contexts of the problems we are trying to solve, and of where new technologies will fit.

What are some of the most exciting ways your work creates a positive impact?

I'm trained as a biologist but my work now is primarily about communication: How can we communicate across disciplines and across scales? Molecular biology is very small, and the questions that biotechnology inspires are very big. Being able to see and make sense of the molecular scale and the global scale requires collaboration and translation.

How can we communicate about the futures we want and ways that technology will be part of that? How can we communicate about the need for diversity and the challenges of

careers in technology for anyone who doesn't fit the stereotype? How can we communicate with and learn from other communities to make technologies that are truly positive?

What inspired you to do more new and do more good?

Jurassic Park came out when I was in elementary school and the human genome was published as I was finishing high school. For sure there's a not insignificant number of Jurassic Park influenced biologists along the Gen X/millennial generational border! Biology is awesome (dinosaurs!!!! but also biochemistry!!!! I remember very vividly first learning about the Krebs cycle!!!!) and when I realized that learning about biology could be my *job* I was hooked.

What role does creativity play in scientific research and how does it manifest in your work? What are some of the most novel/playful applications of your work?

There's such a huge difference between how we learn science in school and how science is actually made. We learn science as a series of discoveries, often made by individual men working alone, that become a set of memorable facts and equations that govern the natural world. We get quizzed and measured and there is a right answer and a wrong answer. But the scientific method is much more creative and generative and

collaborative than the stories that we learn in school.

On our way to a scientific goal we meander, we have to take leaps of faith, connect distant dots. After the fact we tell "the story" in the logical way that gets into the textbooks, but the unknown space we inhabit while we're making science is absolutely creative and totally confusing (Uri Alon calls this space "the cloud").

A lot of my work has been about highlighting that process, whether it was through Method Quarterly, a magazine about science in the making, or through art/science collaborations.

At Ginkgo, creativity is everywhere, but I also work to import mindsets that are explicitly creative. We piloted a creative-in-residence program last year with Natsai Chieza. While she was at Ginkgo she made the world's first bacteria-dyed caftan. So much of the residency experiment was about finding and understanding the connections between design and synthetic biology, and about showing those processes. We'll be bringing another resident in this year and I can't wait.

How would you describe the potential of bio-organisms/enzymes to people outside of the scientific community? Any misconceptions you want to dispel?

It's easy to take biology for granted. Maybe it's even a bit fashionable in some circles—there's plenty of folks who imagine someday replacing their biology entirely and uploading their brains into a computer. But while computers can do lots of amazing and useful things, a computer can't grow or heal itself. A computer can't gestate and give birth to another computer.

So to understand the potential of biology, just think of what even a simple plant can do: a plant grows itself from a tiny seed with nothing but dirt, water, and sunlight. It pulls carbon dioxide from the atmosphere and grows—renewably—into a complex three dimensional form programmed into its DNA and shaped by its environment. In its roots live bacteria (let's say it's a soybean plant) that can fix nitrogen from the air into usable fertilizer, eliminating the need for artificial fertilizer. In its leaves, enzymes convert simple sugars into life-saving medicines.

Synthetic biology is about learning from these processes and remixing and reimagining them: bacteria that make fertilizer for soybeans might form the basis for self-fertilizing corn; drugs that are extracted from rare, difficult, or endangered

sources can be produced in yeast in a microbrewery; maybe someday more of our technology will be renewable, circular, and self-healing too.

What is in store for the future of Ginkgo Bioworks?

It's such an exciting time for biotechnology and for Ginkgo. It's been absolutely astounding to watch Ginkgo grow over the past ten years and I'm constantly blown away by what my colleagues do every day. I'm not one for predicting the future but I know the next few years will be busy and fun but the next ten will bring things I can't yet imagine.

Takeaways:

- **Technology innovation can't be considered in a vacuum, but instead requires an understanding of broader social, cultural and economic contexts to create positive impact.**
- **Diversity of thought is critical in any undertaking to ensure the final outcomes speak to the widest possible audience and their needs.**
- **Biology is already innovative so it's important to take inspiration from the successes of the natural world and apply those insights to technology ventures.**

A portrait of Nigel Jacob, a Black man with short hair, wearing a suit and tie, looking slightly to the side. The image is overlaid with a blue gradient on the left side where the text 'Nigel Jacob' is placed.

Nigel
Jacob

City Reinventor

*Making civic life more equitable
and engaging*

‘Climate change,’ ‘social equity,’ ‘economic prosperity’—these are buzzwords and challenges that affect communities around the world. However, certain issues tend to be more pronounced in urban areas, due to the higher concentration of people. These persistent issues require new ways of thinking and doing, which is where the Office of New Urban Mechanics comes in.

Serving as an informal research and development lab for civic life in the city of Boston, it tackles everything from gamifying safe driving to promoting economic development. In this interview, the organization’s co-founder, Nigel Jacob, discusses how design can make civic life more meaningful and how to make an impact across disparate communities.

09

In what ways do you think technology has the potential to impact humanity, making a positive social difference?

Nigel: The context, I think, where technology can have a huge impact is in making connections between disparate communities. One of the ongoing challenges that we face is that cities have gaps and lacks of connectivity across different segments of society. As such, tools can better enable people to interact and discuss issues of local importance to build relationships. It's really exciting.

How does your work allow you to do more new and do more good?

New Urban Mechanics has always focused on unbilled and better civic experiences for residents. This focus on design and on the needs of people has enabled us to tackle issues ranging from civic engagement to transportation and even housing.

What are the biggest challenges facing communities in urban environments?

Urban issues vary from city to city, but in general the issues are climate change, social equity and economic prosperity for all.

New Urban Mechanics aims to “make civic life more meaningful.” Expand upon this and tell us how it informs your organization’s projects.

The ethics of design are critical. We think a lot about how our work impacts peoples' lives in both the near and the far-term. This means many things. Firstly, it means that we need to be accessible. People need to be able to reach us and interact with us in an easy way. Secondly, it means that we need to be honest about what we can and cannot do.

Tell us about a particular application where technology and design intersected to resolve a challenge facing urban communities.

It's too much to say that any urban issues have been resolved, but one set of issues that we've been working on where we have seen change is driving behavior. Boston famously has some pretty bad traffic; speeding is an ongoing challenge in our efforts to become a more bike friendly city.

As such, a few years ago, we had the idea of creating a digital game-like platform which could encourage and incentivize people to drive more safely. We partnered with a local company to create a game called Boston's Safest Driver. The goal of the game was to remind people to engage in safer driving practices throughout the day.

Points were awarded for behavior and there was a leaderboard to show how you ranked against others. At the end of the game, we awarded some prizes and gave lots of kudos to the winners.

This kind of approach won't necessarily solve the issues of transportation in the city and we're certainly doing everything we can to encourage smarter multi-modal

transportation decision-making amongst our residents. But these approaches can go a long way in demonstrating how local governments can be flexible and dynamic in how it approaches urban issues.

What improvements are you most excited to tackle in the next year?

Under Mayor Marty Walsh, Boston has been focused on the issue of social resilience and equity. If we can move the needle on the issue of social resilience and equity we'll be able to have impact on a huge range of urban issues including everything from education to transportation to economic development.

Takeaways:

- **By launching a New Urban Mechanics lab, the city of Boston was able to tackle civic issues using tactics similar to those in the technology and science worlds.**
- **Gamification is a powerful tactic for engaging communities and incentivizing positive behavioral change.**
- **Empowering communities to connect with one another and voice their opinions is critical for generating new insight and creating long-term buy-in.**

A portrait of Sixto Cancel, a Black man with a mustache, smiling. The image is partially obscured by the text 'Sixto Cancel' on the left.

Sixto
Cancel

Youth Empowerer

*Providing at-risk youth with the tools
and support to succeed on their own*

Many US youth in the foster care system “age out” of the system at 18 or 21 and are automatically left without a family or the skills to make it on their own. Sixto Cancel, Founder and CEO of Think of Us and one of the Pioneers of Humanability, uses technology to give these youth the tools they need to successfully navigate adulthood.

In this interview, Cancel describes how Think of Us created an app-based platform to connect youth with a support network of adults from non-profit and government agencies who can help coach them in their journey towards self-sufficiency.

10

Could you talk to us about the ways in which you think technology has the potential to impact humanity and make a positive social difference?

Sixto: The way that I've seen technology making a difference in human services—and for humanity—is when technology really focuses on connecting us humans more than ever before our moments of need.

It's not to automate and replace human connection with an online platform, but I think the technology can play a stronger role in actually coaching folks through situations.

We can use technology to say, "Hey, I'm going through this," and a person will say, "Hey, I want to support, and I want to be there with you." Technology can do the work of saying, "Hey, as you think about supporting this person, here's what you can do. You can hold space with them. You can show up."

Technology can help you actually walk with someone in need, help them process what their need is and then get to the next level of healing.

I think technology can play a role in making a difference because of how it prompts, how it engages, and how it actually facilitates more in-person human connection.

Could you give us a specific example of how your platform on Think of Us is facilitating this connection?

Absolutely. One example that comes to mind is when a young person using our platform says that they need help creating a résumé.

They could shoot it back and forth a couple of times on email or hop on the phone with someone, and be able to accomplish a goal. However, there's nothing like being able to actually show up and say, "Let's do this together, and let's sit side by side, and work on it."

We want to go to the next form of connection where the technology is actually coaching adults to be able to show up in person. We want to be able to show them how they can help and coach the young person through completing their résumé instead of just saying, "Let me give you feedback. Let me review what you've done."

The way we use technology helps guide the support of people to build their capabilities to do things differently.

How does your platform help guide people through this process?

On our platform, young people can create their goals and then create action steps to achieve those goals. Their goal might be to go get a job, and so action step number one is that they need to create a résumé.

When they say they need to create a résumé, we have video content and articles that are then shared with a supportive adult and the young person to help them do that.

How is Think of Us working to strengthen or positively impact communities?

Depending on the state, young people age out of foster care at 18 or 21. We are working with young people who are aging out and not getting adopted or returning to their biological families and then have to figure out how they're going to be completely self-sufficient.

Where are you going to live? Where are you going to be able to get a job? Where is it that you might want to go to school? How do you take care of your own mental health? How do you take care of all the things that adulthood requires you to do?

Our platform helps young people build their own personal advisory board to help them create that transition plan, and then to execute that plan.

What inspired your work to focus on supporting youth within the foster care system?

I myself grew up in the foster care system and aged out of it, as did some of my colleagues. My work very much comes from that experience of having to navigate those experiences on my own.

What are some of the biggest challenges that your organization has to overcome?

I think the biggest challenge is, just like many nonprofits, in fundraising. However, I look at it as having the capital to actually do the work. Tech companies work in a way where they are infused with a round of capital. Then they hit certain milestones and get another round of capital based on their successes.

In the nonprofit field, however, you have a three-year work plan. You get a grant to accomplish the work, then you evaluate that work and show that you're making a difference.

We're at an interesting intersection with Think of Us, because we need to function like a tech company, but we have a nonprofit's social mission. It becomes complex in how we actually navigate those things.

What would you say makes your organization different from other support networks?

I think it's the fact that we put the young person at the center, giving them a voice and a choice. We really want young people to start surviving and really start to be able to own their destiny and have a life where they're actually living.

When you come into foster care, it's because of abuse, neglect or because your parents can't take care of you. Those are all reasons that you had nothing to do with.

Our platform and our work is about making sure that every young person has the same opportunities that any of their peers would have had.

What types of tools does your organization provide and who stands to benefit from them?

Our main tool is a life coaching platform where young people are able to create goals. They're able to tag members of their personal advisory board to support them in accomplishing and executing the tasks within that goal. We also have content on the platform to help them.

What are some of the biggest success stories that the platform has had so far?

I would say some of the biggest success stories that we've had so far occurred when we did a soft launch in Nebraska, where we had 70 young people get onto the platform in the first 90 minutes and they created 67 goals. What was so enlightening and what made us really happy was that out of the 67 goals, 62% of those goals had to do with financial literacy or purchasing some type of asset, such as a car or housing.

What it showed was that the group of 19- and 20-year-olds that we had in that room all had a strong grasp of what they needed to do in terms of managing their money to be able to be self-sufficient.

There are a lot of different opinions that people may have about what adolescents and Millennials can do, but what we saw on our platform was

that young people who could have chosen any goals in the world chose goals directly related to something that had to do with being a hard worker or learning a new skill around money.

That really gave us an insight into what is top of mind for young people who have aged out of foster care.

What I love about our work is that we're not here trying to create a new program for young people in foster care. We're here to work with the existing programs and partner with them, bringing technology and data to the table.

We can show them how they might be able to use real-time data to learn about young people's goals, young people's wants and young people's needs and then be able to utilize that data to do their work better.

Takeaways:

- **Technology's greatest potential is its ability to connect more people and help them foster deeper relationships with one another.**
- **Putting your core user at the center of everything you build and do is essential to creating lasting success and impact.**
- **Leveraging the data and insights captured from actual users of the platform helps continually refine the development process.**

Key Ways Technology Is Fueling Positive Change

1. Bringing people together to solve the world's biggest challenges. Small actions taken together can have outsized impacts.

Key Words:

Network Effect, Crowdsourced, Amplification

2. Helping communities understand that our differences can often be our biggest strengths when working towards a common goal.

Key Words:

Diversity, Inclusivity, Cross-Collaboration

3. Enabling individuals and communities to take meaningful action whether it's simply having a say or creating their own solutions.

Key Words:

Empowerment, Participation, DIY

4. Ensuring equitable access to life's most important resources and connecting people and organizations with an excess of resources to those in need.

Key Words:

Affordable, Accessible, Redistribution

5. Rethinking our relationship to the environment and its available resources for a more sustainable future.

Key Words:

Renewable, Recyclable, Alternative

6. Allowing people to imagine the unthinkable and give it life in the real world. Dream bigger and create radical change.

Key Words:

Inspiration, Action, Possibility

Pioneer Index

Christina Agapakis
Biomimicry Scientist & Creative Director |
Ginkgo Bioworks

Christina Agapakis is a biomimicry scientist exploring the future of biotechnology and creative director at Ginkgo Bioworks, an organism design company bringing biology to industrial engineering. Ginkgo engineers yeasts for perfumes, foods, and cosmetics, discovers better enzymes for everything from making cheese to stonewashed jeans, and engineers organisms to improve efficiency and sustainability in bioindustrial applications.
Ginkgobioworks.com

Komal Ahmad
Founder & CEO | Copia

Komal Ahmad is the founder and CEO of Copia, an excess food management solution which enables businesses and event organizers to request pickups of their excess food so they can donate it. Pickups are arranged via the web or mobile app, where users can also view data on surplus trends, make better buying decisions, and access tax deductions, as well as receive photos and testimonials from the people that are fed with the donated food. The platform is responsible for recovering 900,000 pounds of food and feeding up to 2 million people a year.
Gocopia.com

Sixto Cancel
Founder | Think of Us

Sixto Cancel is the founder and CEO of Think of Us, a nonprofit dedicated to leveraging technology to improve the life outcomes of foster youth aging out of the system. Sixto has been recognized by the White House as a “White House Champion of Change,” a “Millennial Maker” by BET and was named as one of the “Top 24 Changemakers in Government under 24” in the country by the Campaign for a Presidential Youth Council and Sparkaction.
Thinkof-us.org

Ran Harnevo
CEO | Homeis

Ran Harnevo is the co-founder and CEO of Homeis, a social network designed to help urban-dwelling foreign nationals connect with other locals sharing the same homeland, culture or interests. Created by an Israeli expat living in New York City, the site helps foreign nationals stay connected with those back home while also building new relationships in their current city, where they can ask for recommendations or search for services among people with similar backgrounds and experiences.
Homeis.com

Nigel Jacob
Co-founder | New Urban Mechanics

Nigel Jacob is a co-founder of the Mayor's Office of New Urban Mechanics, a civic innovation incubator and research and development laboratory within Boston's City Hall. Jacob's work is about making urban life better via innovative, people-oriented applications of technology and design. Prior to joining the City of Boston in 2006, Jacob worked in a series of technology start-ups in the Boston area.
Boston.gov/new-urban-mechanics

Jeff Kirschner
Founder | Litterati

Jeff Kirschner is the founder and creator of Litterati, an app which incentivizes users to help clean up their local environments by turning the process of picking up litter into a game. Users snap photos of the garbage they collect and record the type of waste and location, which is then used to create geotagged heatmaps of problem areas and most commonly found items. Recently awarded a \$225,000 grant from the National Science Foundation, the app's users have so far collected more than 1 million pieces of litter around the world.
Litterati.org

Amanda Parkes
Chief Innovation Officer |
Future Tech Lab

Dr. Amanda Parkes is a media designer, technologist, and the Chief Innovation Officer of Future Tech Lab, a fashion incubator and manufacturing hub. Modeled after MIT Media Lab - where Amanda earned her PhD - the space brings together manufacturers, designers, technologists, and scientists. Amanda uses her education in engineering, art history, and kinetic interaction design to create initiatives which combine science, engineering, and fashion.

Ftlab.com

Mike Stanley
Founder | Transit X

Transit X is a shared mobility network concept that seeks to replace buses, trains, cars, and even short flights with solar-powered pods that are suspended above traffic. Utilizing a thin, elevated rail network that would cover an entire city, the pods, designed to hold up to 5 people, are summoned via a kiosk or app, allowing riders to board on a platform and go directly to their destination. Envisioned to combine the efficiency of public transport with the comfort of a car, the startup plans to demonstrate a pilot system in Boston by late 2018.

Transitx.com

Ariel Waldman
Founder | Spacehack

Ariel Waldman is an artist turned scientist, the founder of Spacehack.org, a directory of ways to participate in space exploration, and the global organizer of Science Hack Day, a 24-hour, worldwide event bringing together scientists, technologists, and designers. Waldman is a member of NASA's Innovative Advanced Concepts program. In 2013, Ariel received an honor from the White House for being a Champion of Change in citizen science.

Spacehack.org

Joy Youwakim
Student | UT Austin

Joy Youwakim, a student at the University of Texas at Austin, applied for a permit to grow food on top of a Texas landfill near the Austin airport. Once approved, she successfully grew various crops on a 400- square foot space on top of the closed landfill. The produce was tested by Food Safety Net Services and is safe for consumption, proving this is a model that could be duplicated across the U.S. in the future.

Ugs.utexas.edu/our/student-profiles/joy-youwakim

About PSFK

Piers Fawkes
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**42 Bond Street, 6th Floor
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PSFK is the world's leading business intelligence platform for innovation in retail. Across every major industry vertical, we help the most progressive brands identify and leverage new customer experience opportunities through a mix of trend reports, immersive events, insight-rich content, ideation workshops and on-demand research services.

About Verizon

Verizon
**140 West St,
New York, NY 10013**

Verizon Communications Inc. (NYSE, Nasdaq: VZ), headquartered in New York City, generated \$126 billion in 2017 revenues. The company operates America's most reliable wireless network and the nation's premier all-fiber network, and delivers integrated solutions to businesses worldwide. Its Oath subsidiary reaches people around the world with a dynamic house of media and technology brands.