



# GAME 2019 CHANGERS Ideas, Innovation, Inspiration

Bill Anderson · George Blumenthal & Mary Papazian · Joe Burton
Assembly member David Chiu & Mayor Sam Liccardo · Carol T. Christ
Bracken Darrell · Jenny Dearborn · John Donahoe · Jennifer M. Granholm
James Gutierrez · Congress member Jim Himes · Sarah Krevans
Tekedra Mawakana · Sangeeth Peruri · Ryan Popple
Dan Rosensweig · Bill Ruh · Ahmad Wani

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#### NOTHING GREAT IS EVER ACHIEVED WITHOUT

#### **ENTHUSIASM AND COMMITMENT**

Enthusiasm gets you started. Commitment keeps you going.

This year's 18 Game Changers' authors exhibit an abundance of both of these essential elements that drive success.

Fourteen years ago, my wife Leslee and I woke up on Thanksgiving morning, 2004 and flipped on the radio. We heard a report that there were 20,000 people downtown, walking and running to feed the hungry. But here's the kicker: The radio reporter wasn't talking about wealthy Silicon Valley. He was talking about relatively small Sacramento and their annual "Race to Feed the Hungry." We turned to each other and said "Someone



ought to do that here in San Jose and Silicon Valley." We decided, perhaps, that "someone" would need to be "us."

One year later, with the game changing-support of Joe Pon and Applied Materials, the "Silicon Valley Turkey Trot" was born. That first year, 2005, we felt blessed that 1,900 people showed up and we were able to donate \$88,000 to three great non-profits serving local families in need.

Enthusiasm saw us through that first year's race. Commitment has kept our "Silicon Valley Turkey Trot" going and growing. Now, after 13 "Turkey Trots," our little race has grown into the largest timed Thanksgiving Day race in the world, with roughly 24,000 annual participants. In our first 13 years, the Turkey Trot has contributed more than \$7 million to assist local families in need, while also building a better community here in our Valley.

Thanks to thousands of volunteers each and every year, the crazy idea we had on Thanksgiving morning of 2004 has become a Game Changer in serving others. As you read this year's 19 Game Changing authors, please ask yourself some simple questions: "What can I do to change the game? How can I make a difference with my skills and my traits? How can I combine enthusiasm and commitment to truly make a difference in the lives of others?"

We all have gifts. We all have abilities. Let's apply those gifts and abilities through our professional lives or our personal lives to make a lasting difference for others. Each of us can be a game changer - in our community, our business, our family. Read more about our 19 Game Changers in the pages ahead. Then write to me and share your story. Be a Game Changer.

Sincerely,

Carl Guardino

CEO, Silicon Valley Leadership Group

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# GAME 2019 CHANGERS

Ideas, Innovation, Inspiration

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THE FUTURE OF
PERSONALIZED HEALTHCARE

Big data, artificial intelligence, and predictive analytics: Commonly heard and often misunderstood terms that invisibly touch many aspects of our daily lives. From navigating the morning commute to shopping online, advances in technology, and the ability to capture, evaluate, and apply learnings from vast amounts of data are making things faster, easier, and more customized to our individual needs. And yet, in one of the most significant and personal aspects of our lives, our health, we're only just starting to pursue the full range of what's possible.

The concept of personalization in healthcare, such as matching each patient with the right treatment, is not new. But its definition is evolving. 2018 marks two decades since Genentech received FDA approval for the first "personalized medicine", offering a more targeted treatment approach for certain breast cancer patients with a specific genetic mutation of the disease. And scientific progress has continued exponentially since then with advances in biomarker research, new gene therapies, and a record 16 FDA personalized medicine approvals in 2017.

Today, with the rise of new technologies and unprecedented amounts of data, we have the potential to amplify these scientific advances and redefine personalized healthcare – progressing from treatments for segments of patients to truly individualized therapies.

WHAT'S POSSIBLE.

By harnessing our understanding of disease biology; next generation sequencing and diagnostics; and new modalities for tracking outcomes, aggregating data at scale, analyzing, and sharing insights, we are now on the cusp of customizing treatment plans for the individual patient to achieve better outcomes and potentially lower side effects.

For each of us that means a future of care where we can understand what is actually happening within our bodies. We can make treatment decisions based on what has and has not worked for others like us – comparing genetic profiles, health histories, and lifestyles. Then, we can track our response to treatment in real-time so that adjustments can be made quickly along the way.

It's exciting to see the major components of this transformation coming together under one virtual roof within the Roche Group – from advanced diagnostics and insights generated by companies at the forefront of genomic analysis like Foundation Medicine, to the curation of regulatory grade real-world data at Flatiron, and the continued pursuit of insight-driven research and development to deliver highly targeted medicines.

But my enthusiasm is also tempered by a healthy dose of reality. There's a reason why the healthcare industry hasn't already transformed itself. It requires a holistic approach and fundamental changes to

the whole system. We must learn to share information across multiple disparate platforms, while protecting patient privacy. We must leverage the power of real-world data in clinical trials to help bring innovations to patients faster, without compromising rigorous safety and efficacy standards. And we must find ways to leverage that same data to create reimbursement models that recognize innovation, reward outcomes, and ensure access for all.

It's challenging work that requires bold action and novel collaborations, but it's happening. And now that the long-awaited promise of truly personalized healthcare is within reach; there has never been a greater opportunity for us to come together and make it real.

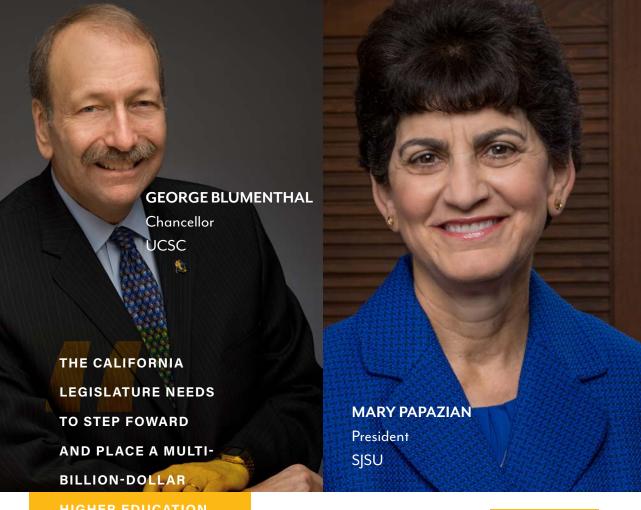






Mentor or role model?
University of Texas Chemical





HIGHER EDUCATION
FACILITIES BOND
ON THE BALLOT.

# THE TIME TO INVEST IN PUBLIC HIGHER EDUCATION IS NOW

alifornia legislators in June approved \$70 million for deferred maintenance at the University of California and the California State University. By all means, we'll take it. But for systems with a combined deferred-maintenance backlog topping an estimated \$8 billion, it felt like being handed a Band-Aid after being hit by a cannonball.

The California Legislature needs to step forward and place a multi-billion-dollar higher education facilities bond on the ballot. A successful measure would be a game changer for campuses from San Diego to Humboldt. Our systems could start to address urgently needed deferred-maintenance and facility needs created by a combined increase of 120,000 students since the last higher education bond passed in 2006.

As leaders of two of the region's largest public universities, we are inspired by what we see on our campuses every day - students striving to earn college degrees and researchers making discoveries that will save lives or launch new industries.

We also see the challenges our students and faculty face as they work to achieve their goals. These are not just the normal academic challenges of managing a full course load or resolving a research question. They include the challenges that emerge when investment in public education diminishes.

Students crowd into lecture-hall stairwells, determined to take core courses they need to graduate. Plastic tarps stretch over leaky lab ceilings, protecting valuable equipment. Temperatures soar in academic buildings where cooling systems have stopped working.

It wasn't always this way. For generations, Californians proudly supported the state's system of higher education. They backed bonds that funded new construction to accommodate growing enrollments and allowed for necessary facility maintenance.

But 12 years ago, in a changing political and economic climate, that investment stopped. Today, there is little new state money for capital improvements on our campuses. Year after year, UC and CSU juggle aging facilities and expanding enrollments.

We see the impact on our own campuses every day.

At UC Santa Cruz, boilers that date back to the first years of the campus are under the wrench more often than they're warming classrooms. Chemistry labs sit unusable, awaiting modernization. We've sought to push forward by cultivating private donations and partnerships, and through targeted student fees to adjust for the loss in funding.

At San José State, facilities are often built with new funding models.

Our Diaz Compean Student Union was expanded with a philanthropic gift and maintained by fees that students levy upon themselves. A partnership between San José State and the City of San José manages a library and a theater that both university members and city residents can utilize.

But capital needs on both campuses are far too great for philanthropy and special partnerships to address alone, and stories like ours exist on public university campuses statewide. Nearly 60 percent of UC's space is at least 30 years old. The system's capital needs total almost \$28 billion. More than half of CSU's space is over 40 years old, and its facilities needs surpass \$14 billion.

California's elected leaders hold a key to fixing this. Today's students and researchers deserve to study, live, and work on campuses that are safe and that offer the resources and support that earlier generations received.

We believe that Californians, given the chance, will once again show their support for the public universities that for decades, have ensured our state's economic vitality and provided broad educational opportunities for anyone who seeks them.



**Favorite app? GB:** Dropbox **MD:** Dropbox



**GB:** Life 3.0: Being Human in the Age of Artificial Intelligence **MP:** The Silk Roads



**GB:** Research Supervisor Robert Greenler **MP:** Dissertation Advisor



**GB:** Our faculty and students who so avidly pursue new knowledge



BEYOND THINGS: PUTTING
PEOPLE AND EXPERIENCES FIRST

n the cloud era, when there's nearly limitless capacity to create and deliver technology features, too often companies forget the most important feature of all: the human experience. Now I'm not talking about "user experience," though there are certainly painful interfaces that we all deal with. What I mean by saying that the human experience is overlooked is that the "who am I making this for, and what do they want to do and feel?" gets lost. In a technology-first flood of apps and offerings delivering ever more capabilities, it's people who have to compromise and adapt to the technology. But what if we look at creating and developing technology through an entirely new lens?

Years ago, when memory, bandwidth, and processors were expensive, there were limits to what could be built, which forced a certain focus. With the emergence of the cloud and powerful endpoints, these constraints disappeared, and people quickly realized they could build nearly anything. This has lead to an avalanche of applications and features that push complexity to the user. But, shouldn't it be the other way around? I'd strive to create a new normal that puts people and their preferences first, and where technology works in the service of the people at the center of it all.

PEOPLE AT THE CENTER

This new normal, as reflected in a communicative and collaborative environment, is a world where we are surrounded by intelligent technologies – on the body, in the conference room, on the desktop, and in the walls and ceilings of buildings. In this scenario, intelligent 'things' are purposebuilt to make our experience the best it can be according to each person's unique preferences, from sunup to sundown. Collaborating with team members to complete a project, calling a customer to close a vital deal, meeting global partners face-to-face over video — all of this should be seamless, easy, and natural. And in the background, analytics are captured that can manifest as actionable insights, fueling even more customization and efficiencies for individuals as well as the business.

So, the next time you see or hear the acronym IoT, I hope you'll remember that all those 'things' are simply a means to an end. We don't want to engage with things. We want to engage with each other. The things are there to make the engagement easier, richer, and more natural. If we ever hope to make people's lives better by leveraging "things", we must first look beyond them and ensure we fully understand how individuals want to engage with devices, environments, applications, and each other.

While achieving this is extremely complex, we're fortunate to find ourselves at an incredibly rich moment in tech history, surrounded by a perfect storm of advances that make it entirely possible. Cloud, edge computing, mobility, big data, AI, intelligent devices, sensing environments – the list goes on. We have all the ingredients at our disposal to break free from the cycle of making technology just because we can, and instead make technology that enriches our lives in the ways we choose.



**Favorite app?**Strava



Factfulness



**Mentor or role model?** Many



What inspires you?

People that are curious and try
new experiences



WHILE ENCOURAGING
EMPLOYERS TO BUILD NEXT
TO TRANSIT INFRASTRUCTURE
AND HOUSING.

### A REGIONAL COMMITMENT TO THE POWER OF PROXIMITY

mid the Bay Area's extraordinary economic success, two sobering realities undermine our quality of life; our lack of housing has made the region unaffordable, and we waste too much time in crippling traffic. As Yogi Berra once said, "Nobody goes there anymore. It's too crowded."

Some cast blame upon decisions of the past, particularly the legacy of single-family, residential sprawl. Yet, contemporary decision-making exacerbates the problem, particularly the refusal of jobs-heavy suburban communities to house fast-growing workforces. As Silicon Valley in recent years has added jobs at a rate six times that of homes, this disequilibrium chokes both household budgets and freeways, as workers are forced to live ever farther from job centers.

To be fair, we've had some recent successes worth cheering. Regional Measure 3's passage will spur billions of long-overdue investment in our transportation infrastructure, and several state and local measures will boost affordable housing funding. Unfortunately, these successes offer only modest relief from our regional headaches. We can't tax ourselves enough to overcome decades of housing underproduction and bad planning that is responsible for geographically separating jobs from housing.

Since our region's 109 cities, towns, and counties have been unable to solve our biggest challenges on their own, the Bay Area must embrace a regional commitment to the "power of proximity"- bringing jobs, housing, and transit closer together. We need to spur more housing development in jobs-heavy suburbs, while encouraging employers to build next to transit infrastructure and housing.

This regional vision should establish incentives for local jurisdictions to align with responsible planning. For starters, since California's public finance laws wrongly incentivize cities to build offices over housing, we should consider a fee on imbalanced development. The idea is simple: charge a fee on jobs-heavy jurisdictions that choose to add more commercial and office capacity, but allow those same cities to earn a credit against that fee by building more housing, or enable neighboring cities to pursue housing development through revenue from collected fees.

A related idea is to focus future state and regional transportation and infrastructure dollars on cities that build housing next to jobs and transit. Over past decades, our region has distributed billions of dollars of transit and infrastructure funding to cities that have been unwilling to build the housing needed to accommodate our growing population.

We also have to strengthen regional institutions with the power to achieve our collective goals. 109 local governments acting on their own have been unable to address our regional housing and congestion crises, and our residents can't afford to wait any longer.

Implementing this vision won't be easy - plenty of sacred cows stand in the way. Some officials will decry what they perceive as an assault on local control, the most holy of political bovines. None of the above ideas will force cities to grow against their will; rather, if they choose to expand, we're simply encouraging them to grow sensibly.

For millions of Bay Area residents and commuters, a regional vision that embraces the "power of proximity" provides a welcome departure from our current path. It will require all of us to unite to reach our goal.



Favorite app?

DC: LINE
SI - Straya



DC: The Far Away Brothers
SL: Leaders Eat Last



Mentor or role model?

DC: Former Chief Judge
James R. Browning
SL: Attorney General



**What inspires you? DC:** Two-year-old son, Lucas **SL:** San José's rising generation of young women and men



### THE HOUSING CRISIS HITS HOME

ithout diminishing UC Berkeley's academic rigor and standards, I want students to thrive, not just survive, on our campus. As my administration moves to improve the undergraduate experience, we are confronted with the dark side of the Bay Area's vibrant economy, a spreading housing crisis. Long gone are the days when students could find cheap rentals; too many live in distant, expensive, and crowded apartments, undermining their academic aspirations and sense of belonging to the campus community.

To resolve the student housing crisis, we are developing university-owned property in the City of Berkeley, and making innovative arrangements to cast light on how the University is adapting to an era of constrained state financing without abandoning our commitment to student welfare and the greater good.

With limited debt capacity and an absence of state funding for capital projects, the University is building new residence halls through public-private partnerships; we lease our land to a private sector developer who then builds and operates housing following our rules and standards, funded through the rental revenues.

We are also active in the housing market; master lease agreements have been signed by the campus at privately developed housing projects now under construction. They are projected to expand our inventory by more than 665 beds for undergraduate and graduate students by 2023.

And, then there's People's Park, the putative "third rail" of local politics. Whatever one thinks of the ideals that motivated the park's creation, it no longer embodies those ideals. The space currently attracts about 40-50 members of the homeless community on a daily basis. These individuals tend to be the victims, not the perpetrators of serious crimes too often committed on the park's grounds.

I believe that the University has a responsibility over the park, to collaborate with the city in support of its homeless population, and to address our students' need for housing. With that in mind, I decided that People's Park would be among the first university-owned parcels to be developed, for it is the only site that allows the campus to address student housing needs, revitalize a neighborhood, and provide improved safety and services to all.

In line with our public service mission, and the park's founding ideals, we will provide a portion of the site to non-profit organizations for the construction and operation of "supportive housing" for the homeless, with 75 to 125

apartments and social services fully funded by external sources. Then, using a public-private partnership, we will also build a new student residential facility that will provide between 700 to 1,000 new beds onsite. There will be more than enough room for new, safe, and welcoming open space, as well as a physical memorialization of the park's history and legacy.

None of this would be possible absent a new and extraordinarily positive town-gown relationship. We are working closely with the mayor and other elected officials, as well as leaders of civic, religious, and business organizations. Together, we can and will greatly improve upon a status quo that poorly serves the needs of those we care about most. We must consider and support the people who will benefit from the park's renovation, rehabilitation and re-purposing: the homeless, our students, neighbors, local businesses, and visitors to our campus and city.



Favorite app?
Cleartune



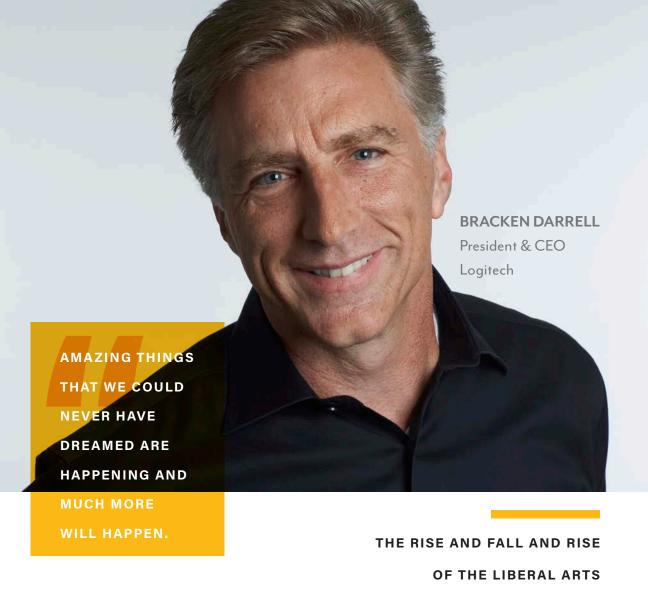
Mrs. Osmond



Mentor or role model?
Former UC Berkeley Chancello
Chang Lin Tien



What inspires you?
Berkeley's students and faculty



very trend has a counter trend.

U.S. STEM education is certainly not adequate. And coders are needed like rain in the desert: the growth today in software majors doesn't seem to even begin to fill the shortfall.

But as more students adopt STEM majors, watch for a shift. Liberal arts (including writing, performing, philosophy, ethical and moral thinking, art, and more) will become vital to so many careers in the future. That future has started.

### Why?

Today so many new jobs at Alphabet, Amazon, Facebook, Apple, Microsoft, and even little Logitech are engineering roles. Software/hardware needs are accelerating down humanity's roller coaster ride into the high tech future.

But ... more jobs are coming for liberal arts lovers, content creators, and performers. It's happening already. Full time. Half time. Part time. Sometime.

#### **GAME CHANGERS 11**

Technology is enabling "the great creation age." We can reach others in previously unimaginable ways at startling scales. Or we can create for just a few, intimately, as we have always done.

In addition, that bottomless need for coding won't keep growing unabated. Software engineering will move to lower cost countries; be dramatically simplified; and software will write itself. Oh, there will be a lot of STEM jobs for sure!

But more and more people will create. Content.

The job explosion of the future ... full time, part time, most of the time. Creators will be in a "work-from-anywhere," create your business, everyone monetize, Uber-meets-creation sharing mindset economy. (Sorry, mom, that was a terrible sentence!)

So, is the only way to be a writer, blogger, broadcaster, creator, performer is to be a liberal arts major? NO. But these platforms unleash those who first love to create, perform, or engage from a broad liberal arts background.

Of course I know I'm writing this from Silicon Valley. It's not STEM versus liberal arts.

As liberal arts learners incorporate STEM and STEM majors incorporate the liberal arts (during or after their formal education), neither will dominate. This isn't new: was Steve

Jobs a STEM or liberal artisan?

Now let's consult an expert on creation. In the classic Dr. Seuss story, the Sneetches all look the same (differently alike) except some have starred bellies.

The star-bellied Sneetches feel superior. They work and play together. The starless sneetches suffer.

Then an entrepreneur arrives. He offers to apply stars to anyone's belly for a mere \$5. The non star-bellied Sneetches line up and away he goes making money and changing lives. Before you know it, it's completely unclear who was originally a star-bellied Sneetch and who wasn't.

Next, he brings a new innovation: star removal. Now cool people want theirs removed and again innovation creates mayhem.

The Sneetches realize they are all the same and the stars lose significance.

So I predict it will be with STEM and the liberal arts. Today, the "in" crowd is STEM. One day soon liberal arts will be cool.

And we will all be STE(A)M.

As STEM rises, the rise of liberal arts has begun. Instead of STEAM, maybe we should call it Science kNowledge Engineering Arts Technology Creation Humanities ... SNEATCH.



**Favorite app?**Door Dash



Neutrino

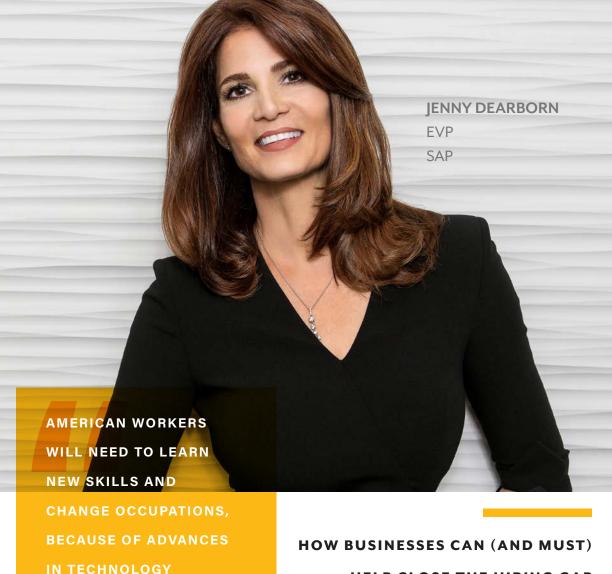


Mentor or role model?

Movie character



What inspires you?
Creation



HELP CLOSE THE HIRING GAP

round the globe and here in Silicon Valley, economies are threatened by an ever-widening gap between available jobs and workers with the right skills, especially in tech. Half a million computing jobs, America's #1 source of new wages, are unfilled nationwide yet just over 49,000 computer science students graduated into the workforce last year. Corporate America has the money and the moral responsibility - not to mention the most at stake - to fill the gap.

And what's at stake is far-reaching: 67 percent of computing jobs are outside the tech sector. Programming positions are growing 50 percent faster than jobs overall, with coding skills needed for data analysts, artists, designers, engineers, and scientists as well as IT workers. By 2025, two million manufacturing jobs will be unfilled because not enough workers have the needed skills such as computing and problem-solving; this count is up from just 600,000 in 2011. And by 2030, as many as 54 million American workers will need to learn new skills and change occupations because of advances in technology and automation.

To wait for our government and/or schools to fix glaringly broken education and job training systems is wishful thinking. Consider these shocking statistics:

• fewer than half of U.S. schools offer any computer science courses

AND AUTOMATION.

- just 13 states have a policy to give all high school students access to computer science (CS) courses, and only five of those provide K-12 access
- California sadly exemplifies this neglect: although some progress is being made, only two percent of CA high school students took CS courses last year, far less than those who took ceramics
- and although 70 percent of CA principals surveyed think CS is important, they lack the funds to hire and train CS teachers

Businesses can and must change the game. Companies that need workers with tech skills should start filling in the gap, urgently, by taking concrete measures to both nurture and tap into a wider talent pool.

Invest in education efforts through funding and/or in-kind services

- join, or initiate, public-private partnerships
- sponsor hackathons and coding events, especially for disadvantaged kids and groups under-represented in tech
- **support** non-profits that promote computer science and STEM education

**Incentivize employees to volunteer** in schools and job retraining programs.

 adopt a local school and underwrite its computer science teacher(s)

- enable teams of five to work four 10s and jobshare teaching computer science
- reward (and develop) high performers with a three-month volunteer teaching sabbatical

#### Widen the hiring net.

- recruit more broadly from overlooked, yet rich sources of hard-working prospects like community colleges (where people like me started out)
- inspire future talent by sending tech-focused employees – especially women and minorities – to high school and community college job fairs and career nights
- eliminate "degree inflation" by removing academic credentials from descriptions of jobs that don't require them

These efforts go far beyond corporate social responsibility to acts of corporate survival. As individuals our survival instincts should prompt us to act, too. We must lobby local schools and officials for K-12 computer science education; volunteer our tech skills; and encourage kids to pursue CS skills, careers, and dreams.

Need resources? Check out organizations like code.org, CoderDojo, Citizen Schools, TEALS, Hour of Code, Scratch, She's Coding, and others. Ask Congress to support computer science at www.change.org/computerscience.



Favorite app?
Saturday Night Live



Last book read?

"The House of Morgan: An
American Banking Dynasty and
the Rise of Modern Finance"



Mentor or role model?

Madeleine Albright



What inspires you?

The creativity and generosity of public art



### MAKING THE WORLD OF WORK, WORK BETTER FOR PEOPLE

his year marked the 10th anniversary of the App Store. It is hard to overstate the impact of smartphones and apps. In an astonishingly short time, this personal cloud-based technology platform has radically changed our personal lives. I believe a similar transformation is about to happen in our work lives, too.

Cloud-based software platforms are poised to change how we work. I regularly talk with senior business and technology executives all over the world. In every geography, in every industry, the conversation is the same: software is rapidly changing the way companies operate and the digital transformation of business is well under way, so that means how work happens is consistantly evolving. It means rethinking and redesigning how work gets done.

A decade ago, most things that we now do instinctively on our smartphones - the routine activities that make our personal lives easier and more convenient - were unimaginable. Yet today, we love the benefits of these apps and the services they enable.

In a short time, the same will be true at work. Today, technology at work is complex and often frustrating. But we can build the same kind of convenient experiences at work that we enjoy in our personal lives.

This opportunity is creating excitement, but also anxiety. We relish software's ability to handle mundane workday tasks. That gives us more time to focus on work that matters most. But we also fear a future when artificial intelligence may take over our jobs. And it's not always clear a new job will be there for everyone when some of today's jobs disappear to digitization.

Effectively managing this tension will be critical. Any period of technology-driven transformation brings disruption and opportunity. Some jobs will go away. New jobs will emerge. Navigating the transition from old to new will be challenging. Creating the future of work will require public and private sector partnership and leadership to ensure innovation delivers more benefits to more people.

In this context, I believe leading with purpose is paramount. Purpose gives us clarity. It informs decision-making, helps us evaluate trade-offs, and gives us a pathway to the future. Purpose gives us a filter to assess the impact and opportunities of the technology we are creating. Purpose gives us a platform for partnership and leadership.

At ServiceNow, we believe that technology should be in service of people. Our purpose is to "make the world of work, work better for people." As CEO, serving people is something

I passionately believe in. Throughout my more than three decades in business, I have embraced a model of servant leadership. My role is to help others succeed - our customers, our employees, and our stakeholders. And purpose gives us guideposts for the broader impact we have in the world, and how our company can help society succeed, too.

The year ahead, and the years to come, will be ones of great technology-driven change. I hope we all work together with a strong sense of shared purpose, to ensure the future makes the world work better for people.



Favorite app?
Pandora



A Gentleman in Moscow



**Mentor or role model?**Phil lackson



What inspires you?
Seeing people achieve their full potential



INCLUSIVE INTELLIGENCE:
THE DIGITAL ECONOMY CAN FIX
THE PROBLEMS IT CREATES

s folks know in Silicon Valley, the digital economy is great for the one percent, but most Americans can't keep up. Many here are promoting universal basic income (UBI) to repel what they fear are a barrage of pitchforks. But with respect, UBI is a lousy answer. We need solutions that empower everyday people with skills, purpose, and dignity.

Digital systems distort the value of people's contributions to economic growth. Two related issues: many workers lack technical or creative expertise, and despite data's immense value, people aren't paid for sharing their data. We must build the people's ability to provide what the digital economy values, and make sure they are fairly compensated. Very briefly, below are five actions aimed at building a skilled 21st century workforce.

First, we should enable lifelong learning by providing all adults with portable learning accounts, compatible with any qualified education or training program.

How to pay for such accounts? As the value of routine labor declines, people should be compensated for their other economic contributions. The Economist wrote in 2017 that data has replaced oil as the world's most valuable resource, and the value of data held by U.S. companies likely runs into the trillions. Europe's GDPR codified the fact that people own their data.

VALUABLE RESOURCE.

Second, by the same principle underlying royalties for copyrighted works, wages for labor, and rent for land, companies should compensate people for data when they profit from its use. To start, we should establish an organization that will research and establish standards for data's value and create a program modeled on the LEED standard that certifies companies for fair data valuation practices. These micro-payments over time could fund each person's lifelong learning accounts. Technology companies that pay data royalties for lifelong learning accounts are potentially creating future skilled employees.

Third, we should revamp our antiquated workforce training programs through artificial intelligence (AI). Instead of being threatened by AI, let's use it to develop personalized learning programs that teach valued technical skills to underemployed Americans. Many examples already exist, from Khan Academy to the U.S. Navy's Digital Tutor program for training IT professionals. These personalized experiences should be accessible to all workers and universally deployed by workforce development agencies and employers alike.

Fourth, unemployment insurance funds could be repurposed to support guaranteed trial employment and on-the-job training periods. Instead of subsidizing unemployment, let's partner with employers to subsidize employment during or after personalized skills training.

Fifth, governments, workforce training boards, community colleges, and employers must coordinate-on-steroids to identify employer hiring needs and match trainees to job openings on an ongoing basis. Governors have carrots and sticks to encourage greater coalescence. A universal, personalized training approach with a job guarantee would address the shortcomings of past workforce training efforts, and give displaced workers a shot at succeeding in the digital economy.

Many other issues should be addressed to ensure shared prosperity in a world of digital dominance. However, by focusing on giving individuals convenient resources to reinvent themselves, we can build the optimistic future that digital systems promise.



Favorite app?
Runkeeper



From Cold War to Hot Peace



**Mentor or role model?**Madeleine Albright



**What inspires you?** First-time women and Millennial candidates running for office



BUSINESS IS IN FINTECH'S GRASP.

# PAYPAL, SQUARE AND STRIPE CAN DISRUPT FOR GOOD

ayPal, Square, Stripe, and other fintech leaders started with a mission to disrupt massive banking institutions, which they believed had become, as Bill Gates famously said 25 years ago, "dinosaurs." They saw the inefficiencies the banks exploited to take a cut of transaction or charge fees, taking a bit out of everyone's pockets along the way. They decided innovative tech could outsmart the banks, and they created the world of virtual payments we know. According to the EY Global Banking Outlook 2018 report, the adoption of fintech providers for money transfer and payment services rose from 18 percent in 2015 to 50 percent in 2017.

Fintech providers have proven to be a boon for most people, except for those who could benefit from their services more than almost anyone: the 65 million or so Americans who are unbanked or underbanked. The "tech" part of fintech isn't the problem; internet access is nearly pervasive and even smartphone adoption is broad and deep. It's the "financial" part. Lower income communities have been left behind in the global economy, starting with easy, affordable access to capital for relatively basic needs.

We take credit for granted every time we swipe-and-go with our cards. In lower income communities, predatory lenders with APRs of 1,000%+ and associated fees are often the only access to capital; these options trap hardworking people in an endless cycle of debt. As a result, these families have little chance of establishing any positive credit history that can provide a path to financial independence.

The gap in serving these communities can't be boiled down to some simple matter of indifference or prejudice. Yes, financial institutions of all kinds don't have a good track record of serving low-income neighborhoods; In some cases, they do only the bare minimum to meet state or federal standards. The biggest hurdle is one of trust and risk. Underbanked and unbanked communities don't fit into our standard credit and lending models. Hardworking people that lack the credit histories or can't escape an outdated one are not reasonable risks in these models.

This can change, and the opportunity to do good and do good business is in fintech's grasp. Technology consistently creates impact when it can digitize the offline world. Trust and risk for these communities has been the one offline activity that fintech has not been able to digitize. Companies like mine, INSIKT, and others have done just that. With online tools, borrowers in these communities have taken out 100,000 credit-building loans, in the range of \$300-\$2,500, across Arizona,

California, Illinois, and Florida. The goal: help people get and keep good credit by calculating each borrower's ability-to-repay. Pay off one loan. Get another. On average, Insikt borrowers have improved their credit score 312 points. When they have a strong enough credit score, they can work with mainstream institutions to get a standard credit card or get an auto loan at a competitive rate.

What's missing? The other aspect fintech excels at: scale. Companies like mine cannot serve this market alone. We need to stand on the shoulders of giants. Fintech providers have the potential to disrupt a whole new market. To serve people who, frankly, have been getting screwed for far too long.



Favorite app?
Soundcloud



Count of Monte Cristo



Mentor or role model?

Stanford Professor & Chairman of JetBlue Airways



What inspires you?

The "ganas" (desire, grit) and the human potential of our customers



conomic disruption - the fading of old products, industries, and jobs in favor of new ones - has always been part of the American experience. Over two centuries, farming gave way to the Industrial Revolution, which gave way to a more service-based economy. Throughout these shifts, globalization, dramatic technological advancement, and automation have created immense opportunities and challenges for American workers and policy makers, and the accessibility of the American Dream. Everything has changed except the laws, policies, and support structures that protect and promote American workers in their pursuit of the American Dream.

And more change is coming. While growing industries employ the vast majority of workers in the United States, almost 30 million people (or 21 percent of the U.S. population) still work in professions experiencing employment declines. The critical challenge will be ensuring that people in declining industries are able to transition to those on the rise. Some reports estimate that automation and rapidly advancing technology will be responsible for a loss of 13 million jobs across the United States, but an even bigger impact will be on the tasks performed in existing jobs. These changes will require workers to build new skills and be able to move seamlessly between jobs and across multiple industries.

This is a huge economic and political challenge. Many factors lead to stagnant wages and friction in the labor market, including the diminished negotiating power of workers, outdated regulations, and low rates of new-business formation. These challenges require legislative solutions that empower workers, allow employers to cultivate and retain a skilled workforce, and grow the economy.

As Chair of the New Democrat Coalition, I have brought together my colleagues to offer a set of ideas and policies designed to empower American workers to compete and thrive in the changing economy. Recently, the New Democrat Coalition launched an Economic Opportunity Agenda: A Future that Works. In it, the coalition lays out a vision for closing the skills and opportunity gap, rethinking the relationship between employers and workers, and empowering workers and entrepreneurs.

In a world where workers change jobs or industries, or hold multiple jobs at once, legacy employer-provided benefits and protections will likely not meet their needs. We must establish a robust system of portable benefits and expanded safety net protections to provide workers greater flexibility to change fields or employers, return to school, or start their own businesses. This would boost the economy through a stronger, more financially secure workforce.

We believe enacting these policies, and others like them, is critical to ushering in a new age of widespread prosperity and to rebuilding the social and political stability eroded by kitchen-table economic anxiety. We are committed to making sure that the American Dream is available for all Americans. Addressing this unique economic challenge must be the next progressive advance.



**Favorite app?**Skyview



Lincoln in the Bardo



**Mentor or role model?**TV character

Will McAvoy



What inspires you?

Mountains, deep water, and the movies of Peter Weir



ON OUR NOT-FOR-PROFIT
MISSION TO SERVE
OUR PATIENTS AND
COMMUNITIES, ESPECIALLY
THE POOR AND VULNERABLE.

HEALTHCARE'S

here are moments in life that forever change you: a wedding, the birth of a child, and the loss of a loved one. In healthcare, we're honored to witness many of these moments with the people we're privileged to serve.

For Kathleen Killips that moment was July 3, 2004, when she was 24 years old. It was a Saturday and Kathleen's family found her unconscious at home. She was rushed to the emergency room at Sutter Roseville Medical Center, outside Sacramento, where doctors diagnosed her with acute liver failure.

Kathleen needed highly specialized care, but it wasn't available in her community. Her care team contacted its colleagues at Sutter Health's California Pacific Medical Center (CPMC) in San Francisco, a national quality leader in liver and liver transplantation care. Kathleen was immediately transferred. When she arrived at CPMC, doctors there told her that without a transplant, she wouldn't survive the weekend.

In a race against time, Sutter network clinicians connected quickly with each other and with community organizations to find Kathleen a donor. The next day a match was found and Kathleen had a successful liver transplant.

Sutter Health helped save Kathleen's life that day. But we didn't do it alone. Her donor's generous decision, the efforts of the donation network, her doctors, nurses and care teams, all played a vital role in saving Kathleen's life.

Kathleen's story doesn't end there. In the 14 years since her transplant, clinicians at Sutter Health have continued to care for Kathleen by monitoring her ongoing health and even helping her become a mother - twice! Pregnancy is potentially dangerous for transplant patients, but with the help of her high-risk pregnancy team, Kathleen now has two healthy children.

Every person, in every community across the U.S., deserves healthcare like Kathleen's. While miracles occur every day in doctors' offices and hospitals, the U.S. healthcare system has grown into a complex, fragmented, and expensive industry that's often hard to navigate and has significant variation in quality.

Consumers want and deserve personalized, coordinated care that they can rely on; advanced medical quality, improved convenience, and lower costs.

Years ago, Sutter set out to do just that.
We're building an integrated healthcare
system that's focused on our not-for-profit
mission to serve our patients and communities,
especially the poor and vulnerable.

We do this so that patients like Kathleen receive exceptional care and service at an affordable price no matter where they go within our network. All patients across Northern California benefit from the sum of innovation, expertise, and standards of care that we promote and maintain.

But to truly transform healthcare in the U.S., all of us in the healthcare industry must proactively focus our unique perspectives and experiences toward a common goal.

That's the opportunity before us right now:
To learn from each other and the successes of other industries, so that we can radically change healthcare to be more effective, more affordable, and provide more delightful service - while staying true to our mission to care for others.



Favorite app?
TouchNote



The Long Goodbye



**Mentor or role model?** Altruistic Kidney Doner Zully Brussard



What inspires you?
Our patients and their families



ON PROBLEM-SOLVING,
CREATIVITY, AND THE
ABILITY TO TRANSFORM
THE HUMAN EXPERIENCE
FOR THE BETTER.

### TRANSFORMING EVERYDAY LIFE VIA SELF-DRIVING CARS

loved the day I turned 16. I can still remember - in the run up to that momentous occasion - my dad teaching me to drive a stick shift in a parking lot, as if mastering the release of a clutch was the superior measure of driving readiness. It was such an important milestone in my young life, and I treasured the freedom it represented.

But the truth is that I had no idea what I would come to understand about the perils of driving. In the U.S., there were more than a million collisions last year, and over 37,000 of these collisions were fatal. Almost all crashes have the same factor in common; human error.

But these numbers don't tell us the personal and painful repercussions of the lives impacted by each collision. As a young girl, I lost two of my dear uncles in tragic car accidents. Uncle Ransom, my mom's brother, was killed by a drunk driver in his 20s. And Uncle Perry, my dad's brother, was killed in his 30s by a driver that ran through a stop sign, leaving his three children without a dad. This is the tragic experience and story of millions of people around the world who have lost loved ones to this fate; a fate that deserves challenging.

Throughout my career, I've been drawn to technology because it's an industry predicated on problem-solving, creativity, and the ability to transform the human experience for the better.

I believe in the power of technology, while also recognizing its limits. For example, I insist upon limiting it in my personal life to strike a meaningful balance. Ultimately, I remain hopeful in the power of technology to serve as a force for good in our lives.

I joined Waymo because it's a self-driving technology company founded on finding a solution to reduce collisions and save lives. It was built upon that commitment.

Waymo got its start nearly a decade ago as Google's Self-Driving Car Project. Google engineers set out to answer a unique question: could technology be developed to solve one of society's biggest challenges by reducing road fatalities and lives lost in traffic crashes every year? In search of an answer, it grew the team and formed a braintrust of NASA engineers, safety experts from NHTSA, and specialists from defense and auto industries, among others. Together, they created a playbook for rigorous and comprehensive development and testing of this technology.

Waymo is not pursuing the driver-assist technology that helps you parallel park or adjust if you overcorrect on a turn. In fact, early-on, our engineers were alarmed to discover a new safety risk: the part-time human driver. In an initial study, Google found that it was actually unsafe to ask people to go from passenger to driver in a split second. Once people trusted the technology, they stopped paying attention - one person even fell asleep. That's when in early 2013, we decided that only full autonomy, where the technology performs

all the dynamic tasks of driving, is the safest course and the only way to live up to this challenge.

And that's why Waymo is offering a game-changer: the world's most experienced driver

Already, in the Greater Phoenix area, select members of the public have been using our self-driving service in a trial program to commute, run errands, or take their kids to soccer practice. Soon, even more people will be able to download the Waymo app and use self-driving technology however they please.

This is a huge leap forward in delivering on our mission and it opens the door to mobility opportunities we can only begin to imagine. As Waymo's Chief External Officer I think a lot about the excitement and the skepticism that comes with any major technology and transformation. It's only natural for people to question what's new and how our lives could change with self-driving technology. Nevertheless, I do hope there's one critical question that all of us can take to heart. For so long, access to a driver's license has represented the key to freedom, but at what cost? Despite everything that's changed in the intervening decades since Uncle Ransom and Uncle Perry were taken from our family, traffic casualties have gotten worse, not better. We can't ignore that our roads are in crisis. For some reason we've accepted this fate and decided that it's somehow okay and worth the risk.

Many believe self-driving technology will be disruptive, and I agree. It's my sincere hope that it disrupts our complacency to road perils and opens the door to a safer future, sooner rather than later.



Favorite app?



**Last book read?**The House at Sugar Beach



Mentor or role model?

Maya Angelou



**What inspires you?** My son's joyful, optimistic, and loving ways



**PARTICIPATE IN THE** CALIFORNIA DREAM.

### PRACTICAL GAME CHANGER TO ELIMINATE THE ACHIEVEMENT GAP IN CALIFORNIA

alifornia is the land of dreams. But the home of Google, Apple, Facebook, Tesla, and so many innovation giants is also the land of broken dreams. Our schools are failing two million students — an astounding 1 out of 3 students. If you're born to a poor family or if you're Latino or African-American, your odds are even worse; you have a 70 percent likelihood of failing in school.

The unfortunate reality is that our schools do not prepare many of our children to participate in the California dream. The root cause isn't a lack of desire to see students succeed but a lack of knowledge on how to drive change across entire school systems, so that every student receives the premium education that only some currently receive.

Given my own fortunate upbringing in those premium educational settings, I've spent the last five years trying to understand how I could help. Over time, I heard many common areas of blame: funding gaps, lack of access to early learning options, teachers' unions, or limits on charter schools. However, I also learned that there are numerous examples where changing these factors did not improve outcomes; the opposite held true as well when there was great success when none of these factors were altered.

Of course, I have also listened to those who feel strongly the solution is hurting the existing public school system. But for this to be the best option, every district would need to be failing. Fortunately, there are districts scattered around California that are changing the odds for their students year after year – regardless if they're rich or poor, white, Latino, or African-American.

Understanding the common denominators across these public schools is the key to serving all children well. Here is what I, as well as experts in the field, have observed in successful districts:

- a culture of high expectations for students, teachers, and administrators
- data systems that use an improvement science framework where data is used as a flashlight (rather than a stick) for continuous learning
- training that empowers administrators, principals, and teachers to work together to improve educational quality
- stable leadership that can execute decisions

When these elements are in place, additional initiatives are likely to work.
When these elements are missing, even the most well-intentioned actions and investments are doomed from the start.

It's all about the underlying system. Every system is perfectly designed to get the results it gets. This profound truth should be hung in every superintendent's office.

In academic circles, this principle is well understood, but the challenge is translating theory into improved educational practices. After years of searching, I began working with and funding Principal's Exchange, an education training, research, and consulting firm that has dramatically reduced the achievement gap in numerous districts in California for 20+ years. Now, it is focusing on scaling it's impact. Three years ago, it joined Think Together, one of the largest expanded learning providers in the state. Together, it is now serving 200,000 students. This year, it is launching Project 2 Million to end the achievement gap for the two million students that are failing in California schools every year. It's an audacious plan, but given its 20 years of proven results, I believe it can do it. I will be dedicating my time and the majority of my philanthropy towards this initiative.

I'm truly excited and fortunate to collaborate with the team at Principal's Exchange that is creating a more equitable and just future for all children, no matter their circumstances. California has the resources and desire. Now we have a path to make this a reality and I look forward to working with Principal's Exchange and a coalition of the willing to walk down this path, together.



**Favorite app?**Kindle reader



Last book read?

Measure What Matters



Mentor or role model?

Mahatma Gandhi



What inspires you?
Helping others and
overcoming obstacles



QUIET, AND SAFE.

EVEN BETTER,

IT IS DIGITAL.

#### **ELECTRIFY EVERYTHING**

lot has changed in the last few years, and policy to address climate change and protect the environment has not been a federal priority. But the technology and the market to supply solutions to this problem have matured dramatically, and the technical strategy to reduce emissions is no longer an academic debate. A viable, market-driven solution has emerged, and no region in the world is better prepared to lead it. That strategy is best summarized as "Electrify Everything."

It is now clear that the common currency of the clean energy system is electricity. For decades, innovators have struggled to identify alternative fuels for transport: ethanol, biodiesel, natural gas, and hydrogen. Despite billions in investment, and years of effort, transport has essentially made no progress in replacing fossil fuels with an alternative fuel. In contrast, the electricity economy "the grid" has made astounding progress in reducing the greenhouse gas impact of electricity.

The electrical grid of the future, complemented by distributed generation-like roof-top solar, provides the alternative fuel that alludes other sectors of the energy economy. The best part of the solution is that the alternative isn't a fuel at all. There will be nothing to buy from a corner gas station, or to manually pipe into a home or business (considering all of the associated risks of liquid or gaseous fuels).

Electricity is instant, clean, quiet, and safe. Even better, it is digital. Electricity flows through a circuit, and no region of the world has a firmer grasp of the hardware and software required to create and manage circuits than Silicon Valley.

The first step of "Electrify Everything" is to clean up the grid, which is already well underway. Coal has disappeared from California. Natural gas will complement solar and wind, but will also fade into a minority of the energy mix as prices for clean electricity and storage continue to decline. Next, transportation - starting with buses, urban cars, and trucks - will all transition to electricity. Even sectors traditionally dominated by thermal fuels will start to erode, as heat pump technology replaces furnaces, modern inductive stoves replace gas ranges, and water heating technology replaces digital.

We are excited and honored to play our part in "Electrify Everything" at our company, Proterra, by providing state-of-the-art EV's for transit bus fleets. We're working nationally to "Electrify Everything" but some of our most important early adopter partners are here in the Bay Area. Transit agencies like Santa Clara Valley (SCVTA), San Joaquin Valley (SJVRTD), San Mateo County (SamTrans), Santa Cruz (SC METRO), and Antioch (Tri Delta Transit) have already begun to electrify their bus fleets with Proterra vehicles.

Equally important, many are already pursuing complementary technologies like on-site solar, storage, and LED lighting. "Electrify Everything" is the path forward to solve the climate crisis, combat our local air pollution, and enable more economic energy productivity. There is no better region to "Electrify Everything" than Silicon Valley, and we appreciate the opportunity to partner with transit fleets, utilities, and elected leaders to make that future a reality.



**Favorite app?**Tesla Vehicle App



Last book read?

Comanches: The History of a People



Snowboarder & Environmentalis





**What inspires you?** A hike on the Coastal Trail in Half Moon Bay, CA



CHANGING DEMANDS.

### **EDUCATION FOR BETTER OUTCOMES**

y mission this year is to help college students find their pathway to fulfilling work. One of the crises in America today is that young people are not getting jobs at the level they need or are capable of performing. Young people invest in expensive education, and yet don't see the return. Many don't get degrees, and those who do often end up in jobs that don't really require one.

This country is a very different place than it was even ten years ago. People feel threatened by income inequality, globalization, and automation. While the upper class experienced an 18 percent gain in real wages from 2000 to 2017, the middle class gained only 5 percent.

This disparity is also present in educational attainment. In 2015, 74 percent of Americans in the highest income quartile received bachelor's degrees, as compared with only 26 percent in the lowest income quartile. Meanwhile, Americans are afraid of technological changes, with nearly three in four worried about a future in which robots and computers haven taken over human jobs, and 40 percent believing that free trade agreements have been detrimental to the United States.

Today, good jobs are tied to increasingly expensive degrees. At the moment, 37 percent of college students don't graduate, and of those who do, 44 percent end up in jobs that don't require a degree. If the goal of education is a good, rewarding job, it is failing.

Like any business, education has a lifecycle, and it needs to evolve to keep up with rapidly changing demands.

Eighty-five percent of students say that they're going to college in order to get a better job, but the careers of tomorrow-such as machine learning, data science, and engineering-aren't what most students are being trained for.

Worse, as well as being expensive, education does not allow for the reality of what modern college students are experiencing-their financial needs and their employment prospects.

40 percent of college students are older than 25; 42 percent are minorities; 40 percent work more than 30 hours a week; and 26 percent have children. Students drop out of college because they don't have the money they need to survive: If class and work are at the same time, they're forced to choose work and drop out. It's devastating to consider that one in three college students is food insecure, constantly having to choose between nourishment and books.

Those that are dedicated and lucky enough to graduate are often saddled with debt and faced with a job market in which their degrees are increasingly irrelevant.

In 2019, Chegg will focus more than ever on helping young people make informed decisions about the cost and return on their education. We help employers see beyond simplistic credentials, and connect them directly to talent, ultimately leading young people on a path to a rewarding career in which they can make positive change in their world.



Favorite app?
Instagram



Born to Run



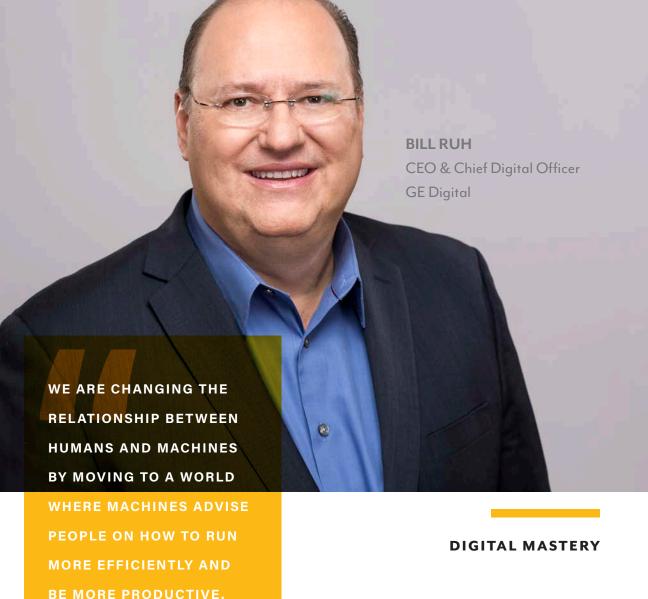
Mentor or role model?

Former Chairman & CEO of Intuit



What inspires you?

Hope - The idea ot it, being hopetul, and being around hopeful people



e are at a critical inflection point for the future of business. Digital is reshaping every sector, and industrial companies know they need to own the productivity of their assets in order to succeed. This is especially true in manufacturing, power generation, oil and gas, aviation, and other critical industries, where system failures and lengthy downtime can result in high-risk, high-cost, or critical safety situations. Take Gerdau, for example, the largest producer of long steel in the Americas. When the company experiences an asset failure, it loses an average of \$12,000 per hour of downtime.

All of industry is going to have to master digital to compete in the future. Industrials need to leverage digital technologies to improve efficiency and move beyond autonomous systems. At GE Digital, we are changing the relationship between humans and machines by moving to a world where machines advise people on how to run more efficiently and be more productive. We do it by understanding and mastering assets - the foundational capability needed to transform digitally.

Through the Predix portfolio, GE Digital's platform and applications for the Industrial Internet, we support customers across the industry to help them run their operations more efficiently.

The New York Power Authority (NYPA) is the largest state public utility in the United States. Leveraging GE Digital's software, data analytics, and applications, NYPA's new digital "mission control" center allows engineers to process gigabytes of data and mine it for valuable insights. It also enables it to control all 16 of NYPA's power plants as well as key points within its massive power transmission network - supplying a quarter of the state's electricity. By leveraging Predix applications, NYPA is turning data into actionable insights to provide affordable, reliable, and sustainable power.

Take the case of SIG, a leading global provider of packaging systems and solutions for the food and beverage industry. By deploying GE Digital's Predix Asset Performance Management (APM) and Predix ServiceMax applications, SIG will be able to build an end-to-end digital platform to help reimagine its supply chain, enhance quality control technologies, and evolve its portfolio mix. This will transform how SIG predicts, manages, and services the entire lifecycle of its machines. Through this large-scale, global collaboration, we will co-innovate packaging solutions and technologies to address the industry's two biggest needs today: improving asset performance and optimizing service delivery.

With an immense amount of data available, there is an opportunity to provide customers with increasingly valuable services. Industrial businesses that aren't able to make the transformation will find themselves increasingly irrelevant.

At GE, we have shifted from simply selling products to selling outcomes – from reducing equipment failures to increasing fuel efficiencies. We are building our industrial applications around our customer's entire system of assets from the edge to the cloud – enabling transformation and survival today as well as creating the intelligent systems of tomorrow.

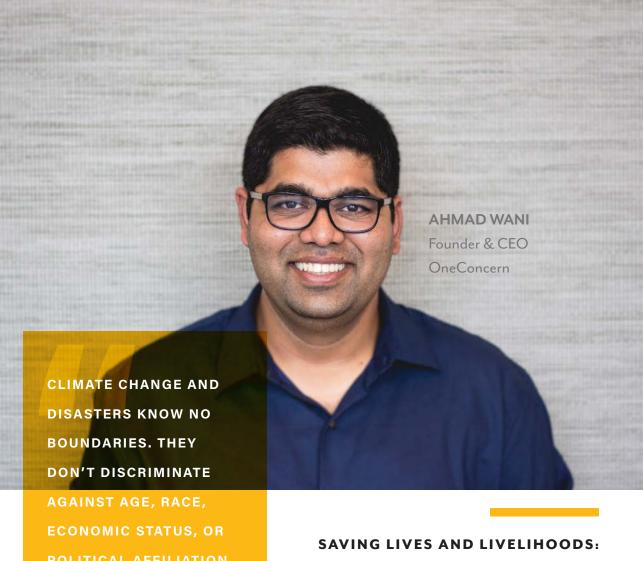






Mentor or role model?
University of Virginia Professor &





### HOW ALIS CHANGING THE GAME FOR

#### NATURAL DISASTERS AND URBAN RESILIENCE

ince 1970, the number of disasters worldwide has more than quadrupled to around 400 per year. In the last 40 years, natural disasters have caused more than 3.3 million deaths and \$2.3 trillion in economic damages and the problem is only getting worse; 2017 was the second most expensive year for disasters on record, according to Munich Re.

For industrialized nations, climate change and extreme weather events have sharp, immediate, and observable impacts on a city's infrastructure, economy, and environment. For industrializing nations, these issues exacerbate poverty and conflict creating food security issues, climate refugees, and terrorist breeding grounds.

Given the "spider web" of interconnectivity that now exists in cities and across regions, "down time" is no longer a relevant measure of economic losses. "Disruption time," as measured through resilience functions rooted in science and data, is a more appropriate way to think about the true cost of business disruption caused by disasters; that's the problem that we're tackling at OneConcern.

#### Changing the Game

Urban development needs a radical change using solutions that reduce the impact that chronic stresses and acute shocks have on people of all races, religions, and socio-economic statuses.

It's at this nexus that OneConcern seeks to change the game and create an entirely new category for benevolent intelligence and lead the global market for resilience.

Our vision focuses on planetary-scale resilience where everyone lives in a safe, equitable, and sustainable world. Climate change and disasters know no boundaries. They don't discriminate against age, race, economic status, or political affiliation. Equally, social inequity can only be solved when leaders are informed about the impact of data-driven policies. Long term, we envision a world where benevolent intelligence helps to level the playing field for all cities, integrating resiliency into the fabric of life.

To achieve our vision, we've developed an artificial intelligence (AI) and machine learning-driven platform that predicts the impact of natural disasters - and their cascading effects - at a high resolution and a high degree of accuracy.

Behind OneConcern's solution, each line of code is a fundamental invention across multiple disciplines of science and technology, including structural and earthquake engineering, fluid mechanics, atmospheric sciences, meteorological sciences, remote sensory, and dozens of others. Every prediction made at any point on the map is carefully validated across millions of data points using the power of thousands of distributed servers.

Al sits at the core of these fundamental inventions, helping to unlock new ways of understanding the manner in which these complex disciplines interact.

In 2019 and beyond, we will expand our efforts to bring new Al-enabled resilience solutions to communities across America and across the world. With the combined power of innovative technology like what we're developing at One Concern and the forward-thinking leadership of our partners, I believe we are on the precipice of a truly game changing era for disasters and urban resilience. It is my hope that we look back on 2019 as the start of a movement to create true planetary-scale resilience.









## GAME 2019 CHANGERS Ideas, Innovation, Inspiration

### Aknowledgements

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