

SPECIAL REPORT: TRUMP'S FAVORITE TECH COMPANY VS. THE PENTAGON

FORTUNE

APRIL 01, 2017 / FORTUNE.COM

**THEO
EPSTEIN**

**WHAT LOSING
TAUGHT HIM
ABOUT BUILDING
THE CUBS INTO
A WINNING TEAM**

NO. 2

**JACK
MA**

**HOW ALIBABA'S
FOUNDER IS EMPOWERING
ENTREPRENEURS GLOBALLY**



THE LIST

JEFF
BEZOS

MELINDA
GATES

JAMIE
DIMON

ELON
MUSK

JANET
YELLEN

MARC
BENIOFF

& MORE

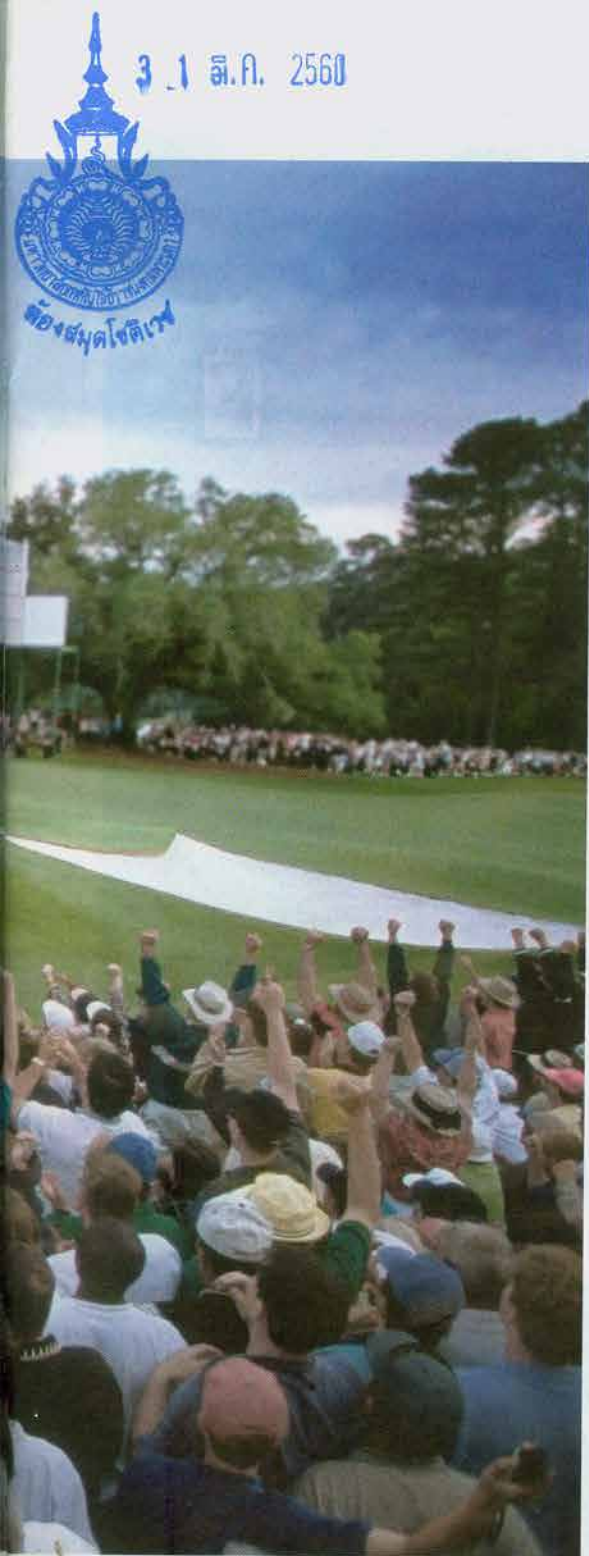
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TIGER WOODS 1997



THE MASTERS TOURNAMENT
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OYSTER PERPETUAL DAY-DATE 40



ROLEX

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APRIL 1, 2017



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By GEOFF COLVIN

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THE WORLD'S 50 GREATEST LEADERS

You Don't Know Jack

By ADAM LASHINSKY

Alibaba's Jack Ma is famous as one of China's richest men. But the e-commerce mogul and his company remain a mystery to many. For his next act, Ma plans to empower entrepreneurs worldwide, taking his place as a global leader.

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By TOM VERDUCCI

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By STEVEN BRILL

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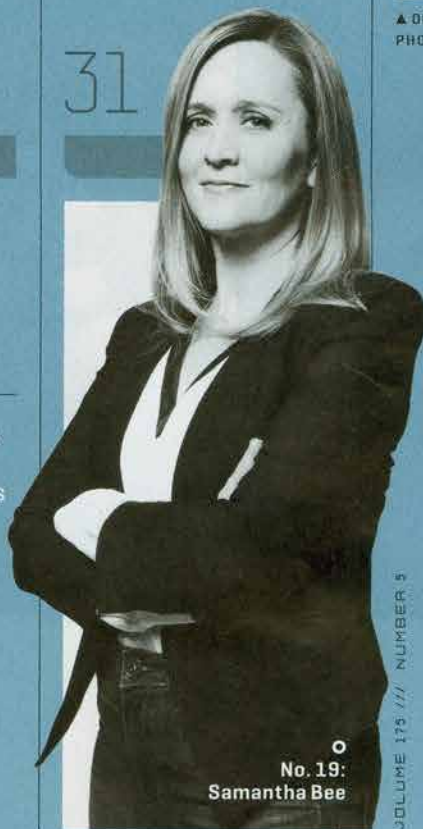
THE WORLD'S 50 GREATEST LEADERS

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By ERIKA FRY, MATT HEIMER, and the FORTUNE staff

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No. 19:
Samantha Bee



▲ ON THE COVER: JACK MA
PHOTOGRAPHED BY TONY LAW

VOLUME 175 / NUMBER 5

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Canberra



Wellington



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DEP: 23:00		ARR: 08:35+1		ARR: 15:05
WELLINGTON	→	CANBERRA	→	SINGAPORE
SQ292		MON, WED, FRI, SUN		MON, WED, FRI, SUN
DEP: 20:15		ARR: 22:05		ARR: 05:40+1
		SQ291		
		DEP: 09:50		
		SQ292		
		DEP: 23:30		

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All flight timings will change due to daylight savings in Australia and New Zealand.

*1 arrives the next day



A STAR ALLIANCE MEMBER



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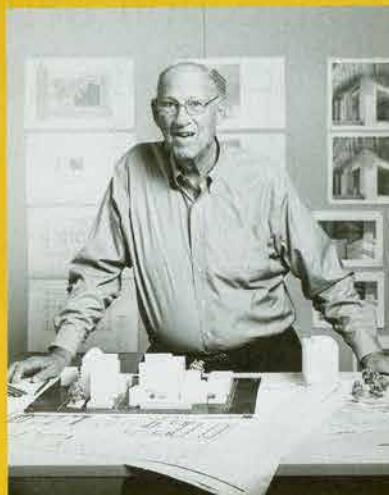
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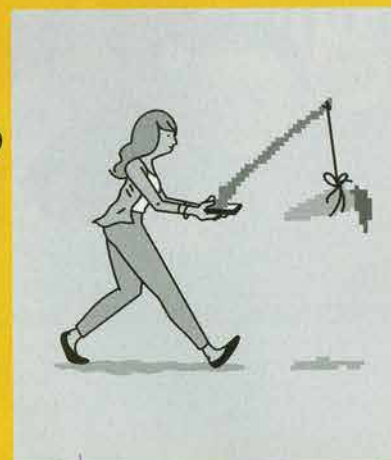
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THE GREATEST ASSIGNMENT

"BUSINESS IS OUR LIFE," said Henry Luce in a speech he delivered in March 1929, just 11 months before launching *Fortune* magazine. "It is the life of the artist, the clergyman, the philosopher, the doctor, because it determines the condition and problems of life with which either artist or philosopher, let alone ordinary mortals, have to deal."

Luce's business partner Briton Hadden, with whom he had launched *Time* magazine six years earlier—and who would die from a blood infection at age 31, just weeks before Luce spoke the words above—was far less enamored of the idea of starting a business magazine, as Robert Elson relates in his compelling history of Time Inc. There were a few such publications out there already, and they hadn't made much of a splash.

But Luce was convinced that the others had misunderstood the mission. His offering wouldn't chase boorish tycoons for gossip, but would instead explore the wild terrain of free enterprise with fairness and daring and sophistication. Indeed, he thought, the task of covering this realm accurately and vividly would be "the greatest journalistic assignment in history."

As it happened, that assignment was still in the planning stages when, in October 1929, the stock market collapsed, ushering in a lasting Wall Street panic and, ultimately, a devastating economic depression. Luce was undeterred: The Great Crash, he thought, made his proposed magazine more relevant to American lives, not less. And when the first issues of *Fortune* appeared in 1930—priced unabashedly at a buck apiece—they seemed to fulfill Luce's promise: "The most notable fact about them," said one observer, was their "daring." When it came to business, Time Inc.'s bold new magazine was quickly becoming America's fearless storyteller.

Nearly nine decades later, I'm proud to say, it still is—a contention borne out in mid-March as my spectacularly talented colleagues won an astounding six top prizes from the Society of American Business Editors and Writers.

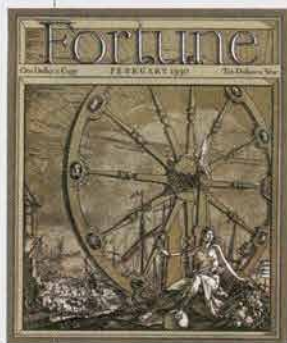
And in this issue, we offer a deeply reported saga that speaks beautifully to this tradition as well: an investigation by veteran journalist Steven Brill into one company's valiant, if quixotic, attempt to sell a piece of battlefield technology that actually works to a Pentagon interested only in one that doesn't (see "Donald

Trump, Palantir, and the Crazy Battle to Clean Up a Multibillion-Dollar Military Procurement Swamp").

Brill's feature may well be the most eye-opening story on the military-industrial complex I've ever seen. It also just happens to be a great read: the tale of an ex-Army commander who simply won't quit—even when taking on the entire U.S. military bureaucracy, a host of powerful defense contractors, and at least half a century of clubhouse dealing.

Finally, while business itself may have changed dramatically from the time of *Fortune*'s first issue, the qualities necessary to report on it—honesty, accuracy, forthrightness, fearlessness, and ambition—have not. The 17 *Fortune* editors who have come before me carried that understanding in their hearts. And as the 18th editor to lead this great brand, I promise to do the same. ■

CLIFTON LEAF
Editor-in-Chief, *Fortune*
@CliftonLeaf



○
The debut issue
in February 1930
featured a cover
illustration
by art director
T.M. Cleland.

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THE
WORLD IN
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PAGES

BRIEFING

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APRIL 1, 2017



France's far-right presidential candidate, Marine Le Pen, poses for selfies with voters.

The Business Guide to Europe's Wild Year

The next 12 months could remake the EU, and the rest of the world financial order with it. BY VIVIENNE WALT

POLITICS

IN NORMAL TIMES, French presidential races are so predictable that many people snooze through months of the campaign, then snap awake in the final days to pick one of the various recycled politicians on offer. But these are not normal times. For months the major candidates in France have been mired in financial scandals, judicial probes, and back-stabbing plots in a gloves- ➤

BRIEFING

▷▷ off fight to move into the Élysée Palace.

Out front, astonishingly, are former Rothschild banker Emmanuel Macron, in his first election, and far-right National Front leader Marine Le Pen, until recently believed unelectable and under investigation for misusing EU funds. They're both polling far higher than the long-assumed front-runner, Republican François Fillon, who faces charges

for allegedly paying his wife and kids about 1 million euros (\$1.1 million) in public funds for no-show jobs. The ruling Socialists' candidate, Benoît Hamon, trails all three, as a result of President François Hollande's rock-bottom ratings.

The soap-opera elements may be entertaining, but there's no ignoring the stakes. The two rounds of voting, on April 23 and May 7, could transform not

just the rules of business in Europe's third-biggest economy, but the EU itself.






France's election is just one of the political moments in Europe this year with major implications for the world economic order. In Britain, Theresa May is attempting to strike a Brexit deal with the EU that retains preferential trade deals for U.K.-based companies (good luck with that, Prime Minister). Scotland's leader wants

a fresh vote to leave Britain, complicating ties with its largest trading partner, England. German Chancellor Angela Merkel, a pillar of Western liberal democracy, could face defeat in September elections. And Greece's next bailout package could be in peril if the International Monetary Fund pulls out of the process under pressure from the U.S.

European populism has driven much of the unrest.

EUROPE, IN CONTEXT

SLOW GROWTH AND IMMIGRATION FEARS HAVE SHAKEN UP POLITICS ON THE CONTINENT.

	 FRANCE	 GERMANY	 NETHERLANDS	 UNITED KINGDOM	 U.S.
REAL GDP GROWTH RATE (ANNUAL, 2016)	1.2%	1.7%	2.0%	2.0%	1.5%
GOVERNMENT DEBT (2015, % OF GDP)	121%	78%	78%	113%	126%
UNEMPLOYMENT RATE (2016)	10.0%	4.1%	6.0%	4.7%	4.9%
FOREIGN-BORN POPULATION (2016)	11.8%	13.3%	12.1%	13.3%	13.4%
ASYLUM APPLICANTS (2016)	83,000	745,000	21,000	39,000	84,000
IMMIGRATION ARRIVALS (2015)	364,000	1,500,000	167,000	631,000	1,400,000
	French voters are tired of the status quo: Either one of the two leading candidates, Marine Le Pen on the right and Emmanuel Macron in the center, would be the first President not from one of the country's two leading parties in 60 years.	Refugee inflows and years of funding eurozone bailouts have fueled nationalism in Germany. However, Chancellor Angela Merkel's most formidable challenger in the upcoming September election appears to come from the pro-EU left.	High immigration and terrorist attacks elsewhere in Europe have strengthened the voice of the far right in the Netherlands. But an improving economy helped mainstream parties win the March elections and kept Prime Minister Mark Rutte in power.	Britain's exit from the EU threatens to mess up every aspect of its economy, from its trade to its workforce to its public finances. It may also lead Scotland to pursue independence: First Minister Nicola Sturgeon is calling for a new vote.	Despite low unemployment, slow wage growth has helped fuel a new skepticism toward trade in the U.S. President Donald Trump has let an EU trade deal languish, and his recent meeting with EU champion Merkel was less than friendly.

Forces like globalization, refugee inflows, and fights over austerity have given grist to both far-right movements in the north (like Germany's Alternative for Deutschland) and their left-leaning counterparts in the south (see Greece's Syriza).

Happily for world markets, populism's rise may have peaked. In the Netherlands' recent elections, nationalist candidate Geert Wilders increased his vote share but failed to win, as some expected. In Germany's September contest, Merkel's most formidable challenger isn't from the far right but the pro-EU left. And in France, Le Pen still faces big hurdles in winning the presidency.

Right now, Macron looks poised to become France's most pro-business leader in years, with plans to slash hiring and firing costs, trim the government's payroll by 125,000 people, and deepen EU integration.

The result may be a stronger EU than existed at the beginning of 2017, if the pro-EU politicians win. Even if Le Pen is elected, it's difficult to imagine her wrangling enough support in Parliament to enact radical change. Still, the risks are real. If successful, Le Pen could conceivably trigger a world financial crisis by pulling out of the euro and even the EU. The union can likely withstand Brexit. Frexit? Not so much.

—With additional reporting by Geoffrey Smith

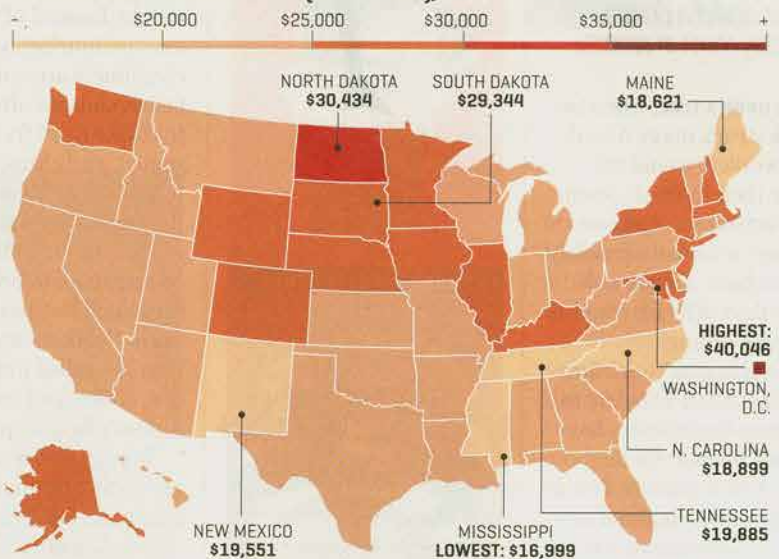
PAYCHECKS

HOW MUCH YOUNG PEOPLE ARE MAKING

Millennials may act as if they're entitled to ultrahigh salaries, but in most parts of the U.S. they still don't earn them. Outside of Washington, D.C., and fracking mecca North Dakota, full-time year-round workers under age 35 made substantially less on average than \$40,356—which was the national average for workers between 35 and 65.

MEAN INCOME FOR MILLENNIALS (AGES 18-34), 2015

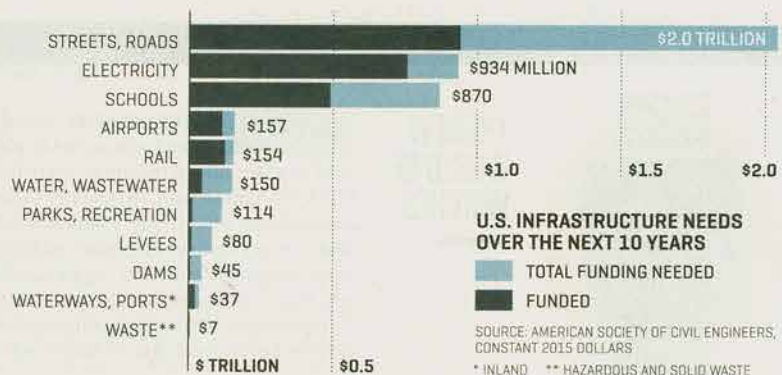
SOURCES: IPUMS-USA; CENSUS BUREAU



BEATEN PATHS

INFRASTRUCTURE UNDER DURESS

The American Society of Civil Engineers has released a grim report on the status of the country's critical infrastructure. The group found that miles of U.S. roads, in particular, badly needed repair, but that governments weren't spending the money to make it happen.



BRIEFING

FOOD

Lunch Is Dead

Younger consumers are opting for quick, fast snacks over a proper midday meal. BY JOHN KELL

ONCE UPON A TIME, when the clock struck noon, American workers would set aside their tools, sit down, and eat lunch—maybe a burger or a salad—possibly with a beer. But the halcyon days of lunch could soon be ending.

Restaurants' lunchtime traffic dipped 2% in 2016, a slump the industry has largely blamed for its recent slow growth. Part of the problem, analysts say, is that e-commerce has cut down on trips to physical stores, hurting once-popular mall restaurants. Also not helping: An increasing numbers of Americans are working from home—and eating there too.

YOUR LUNCH



+



YOUR FATHER'S LUNCH



○ Eating habits are changing—the sit-down lunches of yore are being replaced by desk-side snacks.

But lunch's largest existential crisis is the millennials and Gen Z-ers who are replacing the midday meal with snacks. There are now 12 billion annual visits to restaurants and food-service outlets that amount to just a quick nibble. Instead of three-martini lunches, younger consumers are opting for faster, cheaper alternatives like fresh fruit, yogurt, and chips.

Industry watchers say the trend shows no signs of abating. "Lunch is likely ceding share to breakfast," says Fitch Ratings director Carla Norfleet Taylor. The firm has called out breakfast, coffee, and snacks as industry bright spots.

To compete, restaurants are getting promotional. Starbucks has a new \$8 "Power Lunch," and Buffalo Wild Wings is promising that if lunch isn't served in 15 minutes or less, the meal is on the house.

In times of desperation, it turns out, there really is such a thing as a free lunch.

ANATOMY OF A VERY BAD DEAL

-93%

VALEANT STOCK PRICE CHANGE IN THE TWO YEARS BILL ACKMAN OWNED IT

After first buying Valeant Pharmaceuticals stock for \$161 a share in early 2015, Pershing Square hedge fund manager Bill Ackman dumped the rest of his shares recently for \$11 apiece.

\$4.08

BILLION TOTAL SUM

ACKMAN LOST ON HIS VALEANT INVESTMENT Riding Valeant down amid drug-pricing and accounting scandals, Ackman's massive bet is among the worst in hedge fund history.

\$7.7

MILLION

WHAT ACKMAN LOST EVERY DAY HE OWNED THE STOCK

Over the course of about two years, Ackman's investment evaporated at a rate of \$7.7 million for every day the market was open.

—JEN WIECZNER

THE NEW WORLD OF WATCHES

LUXURY

TECH INDUSTRY insiders may not care much about the Apple Watch—Apple sold an estimated 6 million of them in the last quarter of 2016, compared with 78 million iPhones. The watch industry cares a lot, though. Analysts estimate the Apple Watch now represents more than half of luxury-watch sales, leading brands like Tag Heuer, Tommy Hilfiger, and Hugo Boss to scramble to create their own smart timepieces by teaming up with another tech titan—Google. Let the watch wars begin. —AARON PRESSMAN



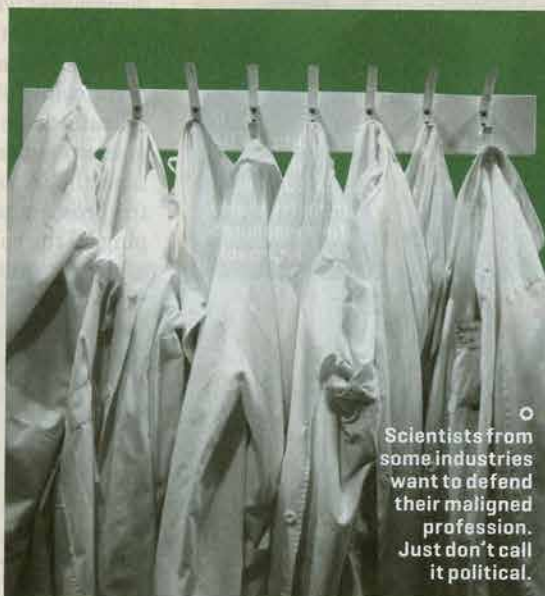
TAXES

CAN STEVE MNUCHIN MAKE THE IRS GREAT AGAIN?

THE U.S. Internal Revenue Service has been a favorite Republican pincushion for most of the past decade. So when incoming Treasury Secretary Steven Mnuchin jumped to the defense of the agency during his confirmation hearing,

saying he was "concerned" that "the IRS is under-resourced," it was akin to crossing a picket line. Mnuchin even proposed an IRS expansion, like adding online services on par with the e-commerce industry's, and a hiring spree to help it

collect more money. But his vision may not get far. The White House's new budget calls for a 2% reduction in IRS funding. A Treasury spokesperson says new tech and more e-filing will make up the shortfall. —JEN WIECZNER



Scientists from some industries want to defend their maligned profession. Just don't call it political.

Corporate Scientists Go to Washington

BY ERIKA FRY

PROTESTS

ON EARTH DAY—Saturday, April 22—employees from DSM, an \$8 billion Dutch nutrition and materials firm, will hit the streets of Washington, D.C. (among other cities around the world), to celebrate science. Some will teach lessons on the National Mall; others, in the spirit of the day,

will simply show up, proudly bear their corporate logo, and shuffle along in support of the March for Science.

The global demonstration, planned in the wake of the Women's March on Washington, is aimed at countering the "mischaracterization of science as a partisan issue"—see climate change, vaccines, and GMOs—and the dubious policy that has arisen as a result. The event is avowedly nonpartisan, and Hugh Welsh, DSM's president of North America, says that's the point. "There are a number of folks who use science as a political tool rather than as an evidence-based way to make a decision," Welsh says. "We think science is apolitical."

Of course, there's the chance that not everyone will see the nation's scientists marching on Washington that way. The risk that some will interpret DSM's participation as po-

litical action is one that its leadership wrestled with; ultimately they decided the message of the march was too important. The company, which specializes in fortified foods and environmentally friendly products like Clean Cow (to reduce cattle methane emissions), has become so unnerved by the rising tide of skepticism and vilification of science in recent years that it even launched a PR campaign to increase appreciation for the field and of world-changing scientific breakthroughs.

Joining the march seemed a natural extension of that work. DSM won't be alone: Verily, Alphabet's life-sciences arm, also plans to participate as an organization. But far more corporations are leaving it to their scientists to take a stand on their own. Google, Unilever, GSK, and Biogen, for example, won't have any formal involvement, but all expect some employees will attend.

COMPENSATION

GOLDEN PARACHUTE, MEET GLASS CLIFF

YAHOO CEO Marissa Mayer's exit deal may be less outlandish than it looks. Big paydays are commonplace for ousted CEOs, who usually have the deals built into their contracts when they're hired. Companies can avoid golden-parachute payments by firing an exec "for cause," but that's legally messy. Thus, even Yahoo's COO, whom Mayer fired, and Fox's Roger Ailes, evicted amid scandal, left with hefty payouts. —GEOFF COLVIN



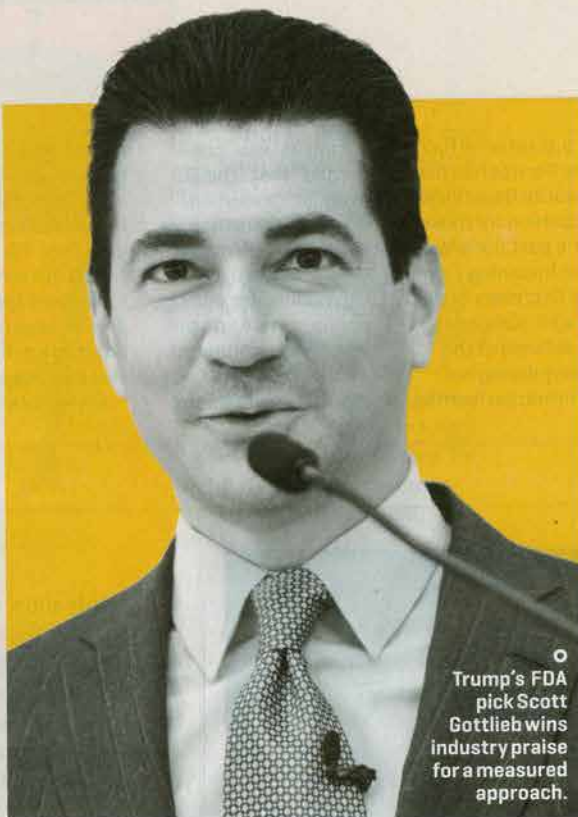
MARISSA MAYER
SOON-TO-BE-FORMER YAHOO CEO
\$23 MILLION



HENRIQUE DE CASTRO
FIRED YAHOO COO
\$58 MILLION



ROGER AILES
DEFENESTRATED FOX NEWS CHAIRMAN
\$60 MILLION*



Trump's FDA pick Scott Gottlieb wins industry praise for a measured approach.

REGULATION

Next Up for FDA Approval: Fewer FDA Rules

But not all Big Pharma executives are on board with the streamlining. BY SYMUKHERJEE

PRESIDENT DONALD TRUMP is planning to take the ax to Food and Drug Administration regulations. "[We're] going to be streamlining the process so that, from your standpoint, when you have a drug, you can actually get it approved instead of waiting for many, many years," he told a collection of Big Pharma CEOs, including the chief executives of Merck, Novartis, and Johnson & Johnson, during a White House meeting earlier this year.

It's a cause the President has been championing for a while. Trump has promised to roll back 75%

to 80% of the agency's regulations and doubled down on the vow during his February address to a joint session of Congress. "If we slash the restraints, not just at the FDA but across our government, then we will be blessed with far more miracles just like Megan," he said, referring to a young woman in the audience suffering from a rare disease and whose life was saved thanks to a breakthrough treatment.

But while plenty of executives see the value of less regulatory red tape, they're not cheering the prospect of scrapping all the rules. Part of the reason is that a drug-approval process perceived as rushed could cause insurance companies to balk at reimbursing treatments that aren't proven effective. Then there's the barrier to entry that regulations represent to would-be competitors. Industry heavyweight Merck's R&D head Roger Perlmutter has said the FDA's balance right now is about right, and several biotech execs have publicly urged caution.

One change to the FDA that the industry *does* like? Trump's pick for commissioner, Scott Gottlieb, who gets high marks for plans to trim red tape—but not too much.

*According to reports.

RETAIL

Tourism Woes Threaten Retail

Luxury retailers have come to depend on foreign travelers. Losing them could hurt. BY PHIL WAHBA

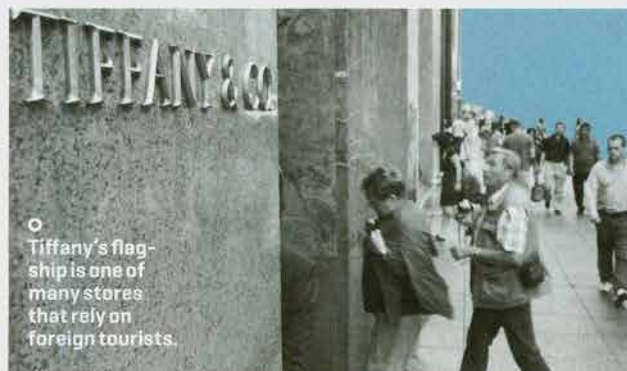
THE LAST THING beleaguered high-end U.S. retailers need right now is for another big chunk of their customer base to go AWOL.

U.S. shoppers pulled

back from luxury purchases in the wake of the Great Recession, leading stores to become more dependent on Chinese, Brazilian, and European tourists to pick up the slack. Now they're caught in a geopolitical pickle. More international visitors are cutting back on trips to the U.S. because of the perception that the country is becoming inhospitable to foreigners, the travel ban on citizens from six countries, and global headlines about hassles at customs. Plus, the strengthening U.S. dollar against the euro and the yuan has made shopping here less appealing.

Tourism Economics, a firm that provides U.S. cities with international travel projections, recently flipped its forecast for growth in 2017 and now expects as many as 6.3 million lost visits to the U.S. next year, representing \$10.8 billion in spending.

The cities that will feel the biggest pinch? Gateway destinations like Miami, San Francisco, Los Angeles, and New York. It promises to be painful. Tiffany & Co.'s Fifth Avenue flagship in Manhattan, not far from Trump Tower, gets 40% of its sales from foreign shoppers.



○ Tiffany's flagship is one of many stores that rely on foreign tourists.

CHANGE IN ESTIMATES FOR 2017 U.S.-BOUND TOURISM



SOURCE: TOURISM ECONOMICS

COUNTING COINS

Many people have made money on Bitcoin; fewer have paid taxes on it.

—JEFF JOHN ROBERTS

3,361%

Bitcoin value increase from 2013 to the end of 2015.

\$17 BILLION

Market-cap value of all the Bitcoins in existence as of March.

802

People who reported cryptocurrency gains (or losses) to the IRS in 2015.



○ For stevia sweetness, a plant may not be necessary.

TRENDS

FOOD TECH'S NEW BUZZWORD: "FERMENTATION"

YOU'RE GOING TO start hearing a lot more about fermentation.

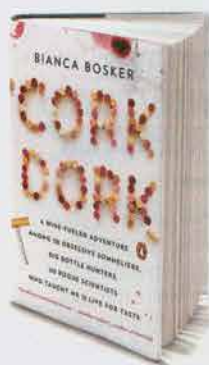
No, we're not talking about kombucha. Rather, it's a process increasingly used by food companies to answer a ballooning demand for hard-to-come-by natural ingredients. Instead of sourcing them from nature, food scientists are creating them through an industrial method of fermentation. Here's how it works: Scientists identify the desired genes in a plant or an animal and insert them into a host like yeast, which is then fermented. The desired ingredient is then purified out of the remaining broth.

Startup Perfect Day is using the process to make cow's milk sans cow; vegetarian meat company Impossible Foods is using it to make a key flavoring; and Cargill is using it to make steviol glycosides, the sweet stuff in stevia. No grow houses required. —BETH KOWITT

What You Should Read This Spring

EXECUTIVE READ

From Sheryl Sandberg's treatise on grief and recovery to Michael Bloomberg's capitalist manifesto on climate change, we review the season's top titles.



CORK DORK

BY BIANCA BOSKER

Journalist, wine rube, and obsessive personality Bianca Bosker embarks on a madcap 18-month journey into the wine industry to uncover the answer to the casual drinker's perennial question: What is the deal with wine? Bosker interviews some of the world's finest top connoisseurs, scent scientists, wine economists, snobs, and antisnobs from Napa to Virginia Beach. Her gleeful approach to the subject is as informative as it is, well, intoxicating.

—RACHEL SUGAR

Buyers beware: A wine's price matters for quality up to \$60, one expert says. After that, it's mostly branding.



MEGATECH

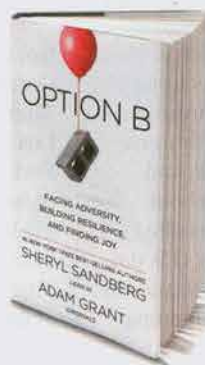
EDITED BY DANIEL FRANKLIN

The technology of the future feels close in this shrewd and delightfully prognosticatory essay series, edited by *The Economist's* Daniel Franklin. Quantum supercomputers? On the way. "Cowborgs"? That's cyborg cows—comin' right up. But doubts linger: Humanity could bask in the magnificence of its coming megatech, or it could be annihilated if everything spins out of control. Too soon to tell which.

—ROBERT HACKETT

Cocktail-party fodder:

Tech's biggest threat isn't an AI uprising; it's nuclear advances—think "suicide bombers with kiloton yields."



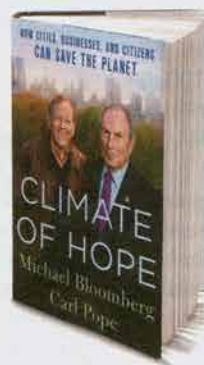
OPTION B

BY SHERYL SANDBERG
AND ADAM GRANT

Though it's inspired by grief, Facebook COO Sheryl Sandberg's latest book is as much about living a better life as it is about dealing with death. Cowritten with Wharton professor Adam Grant, *Option B* is part memoir and part research-based exploration of overcoming adversity. Despite its heavy subject matter, the book is surprisingly light, thoroughly educational, and a widely applicable read.

—VALENTINA ZARYA

What to say: Instead of asking someone who has just suffered a personal tragedy, "How are you?" try, "How are you today?"



CLIMATE OF HOPE

BY MICHAEL BLOOMBERG
AND CARL POPE

This book of climate-change solutions from Mike Bloomberg and environmentalist Carl Pope is nothing if not blunt. In his first three sentences, Bloomberg comes out in favor of the Keystone pipeline, fracking, and nuclear power (but against Birkenstocks). The pair make a compelling economic case for piecemeal short-term action from cities and companies—but it still leaves you wishing for federal action too.

—ANNE VANDERMEY

Trial and error: Drivers foiled Mexico City's antisnogg plan to ban cars with odd-numbered plates certain days by just buying an extra car.

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Google's data center in Hamina, Finland.



DATA CENTERS GO EXOTIC

Some companies are getting creative with their server farms in an effort to cut energy costs and enhance security.

BY JONATHAN VANIAN

BUSINESS IN THE CLOUD

A LOT GOES ON BEHIND THE SCENES every time you “like” your friend’s baby photos or search for recipes. Thousands of powerful computers retrieve and update the information on your screen.

Although important, the windowless, football-field-size buildings that house those computers aren’t exactly exciting. But a number of companies have built data centers in unusual locations, giving them a touch of mystique.

In Sweden, for example, Facebook constructed a data center that uses chilly Arctic wind to prevent the computer servers inside from overheating. Meanwhile, Microsoft is researching how to build underwater data centers that would require less energy to cool.

Whatever the case, companies carefully consider where to open data centers, keeping in mind security, cost, and proximity to their users. Here are some of the most atypical data centers and a couple of out-there ideas for future facilities.

© COURTESY OF GOOGLE

ICE FISHING IN THE WINTER

Google's data center in Hamina, Finland, was originally a paper mill built in the 1950s. Its location directly on the Gulf of Finland makes it easy to pump in ice-cold seawater to help cool the thousands of servers inside.

SWISS FORT KNOX

Switzerland-based SIAG Secure Infostore operates two data centers under the Swiss Alps. These former military bunkers,

referred to as the Swiss Fort Knox, protect digital data instead of gold bullion.

A DATA CENTER WITH A VIEW

The world's tallest data center, all 32 stories of it, isn't the prettiest tower on New York City's skyline. So its owner, Sabey Data Center Properties, is giving the former Verizon Building a face-lift, including new glass walls to make it more attractive.

DATA YACHT


Startup Nautilus Data Technologies is trying to develop a floating data center on a barge that it believes would save companies money on their energy bills by providing easy access to seawater. It hopes to have a version of its experimental design operating at the Port of Stockton, in California, by early 2018.

10,000 LEAGUES UNDER THE SEA

One futuristic way to chill a data center with

seawater is to build the facility in the ocean itself. In 2015, Micro-soft came up with a prototype of a portable mini data center that it submerged 30 feet off the California coast for more than 100 days.

NORTHERN LIGHTS

Facebook built a data center in Lulea, Sweden, just 70 miles from the Arctic Circle. The usually freezing air outside is used to help cool the massive facility. 

A NUMBER OF
COMPANIES
HAVE BUILT
DATA CENTERS
IN UNUSUAL
LOCATIONS,
GIVING THEM
A TOUCH OF
MYSTIQUE.



Yoky Matsuoka

BRAINSTORM TECH

RETURNING TO THE NEST

Meet the tech whiz who will headline *Fortune's* Brainstorm Tech dinner in April. BY ADAM LASHINSKY

YOKY MATSUOKA is the veritable Renaissance woman of Silicon Valley. A onetime semi-professional tennis player in her native Japan, she became a roboticist at Carnegie Mellon, a MacArthur Fellow "genius award" recipient, a founder of the Google X moonshot lab, and an early employee at Nest, the "smart" thermostat maker now owned by Google. She has also been on an unusual journey in recent years. She left Nest for Twitter, then went to a startup of her own, and finally to Apple, where she worked

briefly on a hush-hush health care project.

Now Matsuoka, who has been studying artificial intelligence (AI) her whole career, is back at Nest as its chief technology officer. Her assignment: designing the company's product strategy. She isn't saying what exactly that will be, but it's certain to include a heavy dollop of AI. "We are finally at the point where we're crossing over from academics and movie dreams to reality in people's homes," she says. Computer "vision" is a perfect example, she says. It has gone

from a lofty idea to cameras being embedded in everything from automobiles to drones to help with navigation, for example.

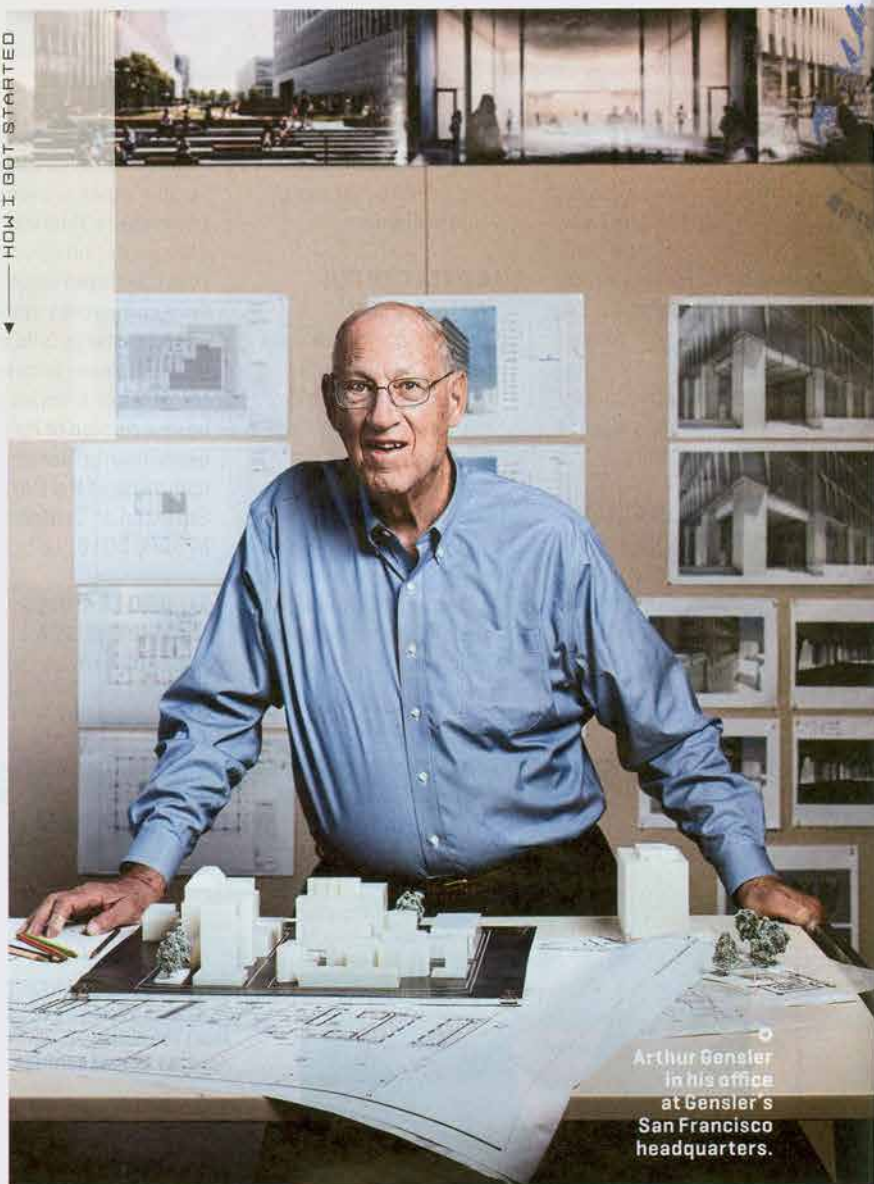
Matsuoka will reflect on her diverse interests and experiences at an April 6 dinner in San Francisco meant to kick around ideas for *Fortune's* Brainstorm Tech conference in Aspen in July. She has a keen sense of timing. "I focused on the right thing at the right time," she says, referring to her academic work on robotics and the like. Timing is, after all, everything.

DESIGNING A WORLD INSIDE

Arthur Gensler's architecture firm, the largest on the planet, has conceived interiors for Apple Stores, Facebook, Airbnb, and many other clients. But he started with three people, drafting on spare doors. **INTERVIEW BY DINAH ENG**

ART GENSLER STARTED his architecture firm 52 years ago with no business plan—and no money. Counting the cash every Friday night, he initially paid himself \$14,400 a year. Today the operation now known simply as Gensler is the largest architecture firm in the world, and it's best known for designing interiors—everything from the original Apple Stores to headquarters for Facebook and Airbnb. Its current projects include the Shanghai Tower, the Abu Dhabi Financial Centre, the San Francisco International Airport, and more. The firm's revenue last year was \$1.3 billion, and the founder, now 81, is happy to just be an adviser.

HOW I GOT STARTED



Arthur Gensler in his office at Gensler's San Francisco headquarters.

I'VE WANTED to be an architect since I was 5. I was born in Brooklyn, and my father was a salesman for a building-materials company. He's the one who taught me how to sell and communicate and the importance of service to the client.

I graduated first in my class at Cornell University's College of Architecture, Art and Planning in 1958, and after 52 interviews, I got a job for \$2.50 an hour with the firm that designed the Empire State Building. Back then, my wife Drue, two sons, and I lived in a basement apartment in Jackson Heights, Queens, near LaGuardia Airport.

I moved my family to San Francisco in 1962 and got a job with Wurster Bernardi & Emmons, which got a contract to do the architectural standards for the Bay Area Rapid Transit system. I was put on a small team and ended up running the whole thing.

One day I was having a drink with a friend from Cornell who needed tenant development work done for the new Alcoa Building. I asked him what tenant development was, then said, "Give me three months to prove I can do it. The only catch is, I need to get paid every two weeks because I only have \$200 and I've got a family to feed."

He agreed, and I explained to [William] Wurster that I wanted to start my own firm but didn't have any money. I asked, "Could I work for you in the morning and work for myself in the afternoon?" He said yes, so for three months that's what I did.

You've got to take unexpected opportunities and believe in yourself enough to take a gamble. So in the fall of 1965, I started M. Arthur Gensler Jr. & Associates Inc. My wife became the office manager, and we hired one employee. I had no business plan and no money but felt something would happen.

We rented a space and used a T square, doors for drafting boards, and sat on wooden stools. At first we were living paycheck to paycheck. I was taking \$1,200 a month from the firm. I'm not a borrower and would hound people till they paid me if I had to. We got lucky that the cash flow came through, and I quickly hired two to three people.

A tenant would move into the Alcoa Building, and we'd get paid by the developer for doing plans to determine the space tenants needed, which helped get the lease signed. Then we would be paid by the tenant to do their interior design. We got to know developers and real estate brokers, and they introduced us to other clients.

Word spread, and we were selected to do the interior design and planning for the Bank of Denver, where we opened our first office outside California. Then Pennzoil hired us, and we opened in Houston. We were always asked to come to a town and ended up building permanent operations there. Annual revenue the first year was about \$200,000.

A year and a half in, I realized I was running a business and went to the University of California Berkeley Extension. After three weeks of night school, I knew I'd never learn it all fast enough. So I hired a professor as a consultant, and every Tuesday night he would give a tailored session with eight or nine of us. We got a mini-MBA on how to run a business, with exams based on practices at our firm.

In 1968, I started profit sharing because I saw that architects used to have to work until they died. Then in 1988 we started an employee stock ownership plan. We usually pay a two-weeks' bonus at Christmas and a month's bonus in June. We pay bonuses to those most in need first, then

MY BEST ADVICE

ARTHUR GENSLER
Founder of Gensler

LISTEN TO CLIENTS. respect them, and become their trusted adviser so they hire you over and over again. If you help clients solve their problems, you become more than a hired gun.

WELCOME TALENT BACK. If employees leave us for another job or because their spouse got a transfer, we make it clear to the most talented that they're welcome back. When people return, we give them a boomerang with their initial employment, departure, and return dates on it. About 5% of our firm are boomerangs.

BE ONE FIRM, without silos. We have a Monday morning phone call with all 47 offices to share information. We start with Asia, then go to the Middle East, Europe, and the Americas, and the conversation is transcribed that afternoon for all. We share money, people, and clients. If a client in New York wants a job done in Chicago, whoever's best for the project does it.

move up to the senior managers.

We've had tough times with major recessions where we had to lay off people and I didn't take anything. But I was born in 1935; all of us in that generation saved. We still count the cash every Friday night so we know how much is in the bank.

Opportunities can come anytime. About 30 years ago, I was speaking on design at a conference where Steve Jobs was speaking about what computers do. We talked, and he had us design the first 100 Apple retail stores. One of my guys took a job with Microsoft, which offended him, so he fired us. But after he died, we got back in.

One lesson I learned early on happened when a competitor cut me out of a project. I was really upset, and when one of the competitor's key employees said he'd like to get out and work for me, I hired him. He turned out to be a jerk who just wanted to do big projects and have a big expense account. So we let him go. I had hired him for spite and didn't take the time to evaluate him.

I learned not to rush into things without proper vetting. We have a practice now of not giving titles for lateral hires. People have to wait a year and prove they really understand the Gensler culture. We don't have star designers. The team works together for the good of all.

I'm great at listening to people and hearing what they want, knowing how far to push and stretch them. Balancing the organization of business and design is what I do. Great architecture is the result of teamwork between the architect, designer, and client.

I stepped aside as chairman in 2010 and sold my remaining ownership. I'm getting older, and one of my goals was to see the company go on forever. I asked other people to get out of the way and retire as well, to let the next generation take responsibility.

I'm happy to just be an adviser to the firm now. I stay busy by serving on the boards of three non-profits. I love to work and interact with people. I only look forward. I don't look back. ■

HELP SAVE THE FRIDGE

Spitsbergen, Norway.

© Wild Wonders of Europe / Ole Joergen Liødén / WWF-Canon

The fridge needs help. Because much of the energy we need to power it produces waste and changes the climate. The world has come to an agreement on how to tackle catastrophic climate change. Now we need to put that plan into action, shifting from fossil fuels to renewable energy. Your votes, your voice and your actions can help – stand with WWF to create a sustainable future. Let's look after our shared home together. panda.org/togetherpossible



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HIDDEN TREASURES OR MONEY PITS?

The stocks of housing giants Fannie Mae and Freddie Mac have languished ever since the government bailed them out. The Trump administration could get share prices off the floor, but for investors, it's a fixer-upper of a bet. **BY MICHELLE CELARIER**

INVEST

IN THE FALL OF 2008, during the worst of the financial crisis, software architect Matt Hill began looking for stocks that were poised for a comeback. He settled on what seemed a sure bet: Fannie Mae and Freddie Mac, the mortgage giants that guarantee and securitize home loans for middle-class Americans.

The companies had been put into conservatorship by the federal government at the height of

the turmoil. But Hill figured he would share in the gains after they were nursed back to health, as promised at the time by then-Treasury Secretary Henry Paulson. "I kind of believed all that," recalls Hill, who lives in Sacramento. "I knew housing would come back."

More than eight years later, Hill, now 46, is still waiting for his payday, as are thousands of others, including several influential hedge funds. Housing did come back, and so did profits for Fannie and Freddie. But the government-sponsored entities (GSEs) remain under federal control, with their shares trading for the price of a drive-thru burrito. And their crisis-era investors are entangled in a skein of costly legal battles over the GSEs' future.

Shareholders' happiness may now depend on newly appointed Treasury Secretary Steven Mnuchin. Mnuchin, who once headed Goldman Sachs's mortgage securities trading desk, has vowed to return Fannie and Freddie to private ownership. But that's an abrupt departure from what many politicians have advocated, which means investors today are betting on a long-shot policy change. "If you're wrong, you'll lose all >>

▷▷ your money, but if it works out, you can make three- to 10-fold,” says one finance pro who owns the stocks in his personal account.

Like much of the economy, Fannie and Freddie were brought low by mortgage defaults during the Great Recession. When the Treasury took over in 2008, it maintained warrants on 79.9% of their common shares. The remaining 20% continued to trade in the public market, where they soon fell under \$1 a share. (They had peaked at \$86 in 2000.)

The bailout, which totaled \$187 billion, was based on the assumption that many loans on the

Paulson, and Bill Ackman joined the battle. Recently unsealed court documents from one of those cases suggest that the sweep wasn't necessary—and, moreover, that Treasury officials knew that at the time. But so far litigation has not borne fruit: A federal district court ruled in the government's favor in 2014, and in February an appeals court upheld that ruling.

Since 2012, Fannie and Freddie have sent some \$255.8 billion in profits to the Treasury; for 2016 they reported net income of \$12.3 billion and \$7.8 billion, respectively. But since those profits don't flow to common shareholders, the primary reason to own the GSEs is to bet that they'll be set free. “People who are buying the common shares are acting on a wing and a prayer,” says banking analyst Dick Bove, vice president of equity research at Rafferty Capital Markets.

The target of the prayers is Mnuchin, who has signaled his sympathy for GSE shareholders. “It makes no sense that these are owned by the government and have been controlled by the government for as long as

they have,” Mnuchin said in November. Were the GSEs to go fully public, taxpayers would have a lot to gain. “Fannie and Freddie have a value of \$200 billion. That's 20% of what Donald Trump needs for his infrastructure spending,” says Tim Pagliara, CEO of CapWealth Advisors of Franklin, Tenn., who put his clients into preferred shares in 2008.

It's unclear when Mnuchin might act, however. For the Trump administration, Obamacare “repeal and replace” and corporate tax reform are the top priorities. Then again, tax reform might push Mnuchin to act sooner: A lower corporate rate could force the GSEs to write down their deferred tax assets, which could hurt their balance sheets and necessitate another bailout. Mnuchin could also decide not to have any more profits sent to the Treasury, which would signal that the administration wants to let the GSEs build reserves so they can operate independently again. (The next payment is due March 31.)

The best case for investors would be for Fannie and Freddie to end up like insurer American International Group, which got a \$180 billion crisis-era bailout. AIG restructured its operations and paid back the Treasury, which sold off its shares in 2012. AIG is struggling today, but in the three years after the govern-

ment divested, its stock more than doubled. To assuage fears of future bailouts, some investors argue that GSEs should essentially become utilities—public companies that would be heavily regulated so they would avoid risky behaviors that tripped them up before.

For now, tempted investors may be best off buying preferred shares. Owners of those shares have a stronger case in the ongoing court battles. Even if Fannie and Freddie are driven out of business, preferred shareholders would have priority over common-stock investors in recovering assets in liquidation or bankruptcy.

Whatever the outcome, today's Fannie and Freddie investors will at least know they didn't buy high. “If I had known [federal officials] were not going to honor the commitment to preserve these entities, I would not have bought the shares” in 2008, says Pagliara. “Nobody would have.” ■

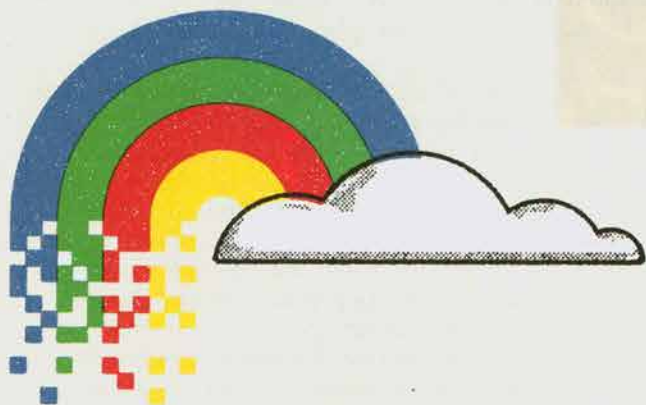
WAITING FOR A DIFFERENT KIND OF BAILOUT

FANNIE MAE AND FREDDIE MAC trade at just a fraction of their pre-recession highs. They have fluctuated with investors' moods, driven by speculation about when the firms might be freed from federal control.



GSEs' books were still shaky. Few losses materialized, however, and by 2012 the giants were on the verge of turning profitable again. That's when the Obama administration implemented what's known as the “net worth sweep.” Saying that Fannie and Freddie remained at risk, the Treasury deemed that it needed to take all their profits—including dividends from so-called preferred shares they issued during the crisis—to pay itself back.

Aggrieved investors went to court, arguing that the Treasury had taken their property. Big names like Fairholme Capital's Bruce Berkowitz and hedge fund managers Richard Perry, John



CHASING RAINBOWS

In today's gloomy political climate, it's worth remembering that some tech startups really are making the world a brighter place. **BY ERIN GRIFFITH**

IN RECENT MONTHS I've seen Facebook posts spark workplace arguments and inaccurate tweets go viral, distorting my understanding of what's real and what's fiction. My cortisol levels have taken more than one roller-coaster ride when a devastating piece of information reverses itself on social media an hour later. Whatever your political persuasion, President Trump's short time in office has produced an exhausting amount of anxiety. More than half of people surveyed in January by the American Psychological Association reported substantial stress about the political climate. Meanwhile 29% of people said they have been less produc-



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boom.

tive at work since the election, according to a survey by software startup BetterWorks.

Allow me to offer a bit of hopeful counter-programming. Technology startups often profess a desire to make the world a better place, and it can be fun to mock the idealism and self-importance of such posturing. (Me? *Never.*) But amid today's daily deluge of leaks, fights, scandals, and tweets, it's worth reminding ourselves that some of them really are achieving positive progress in the world.

Take Andela. The three-year-old startup trains software developers in Kenya and Nigeria and places them in remote jobs for international companies like IBM and Microsoft. The company has trained about 200 engineers; its ultimate goal is to foster a generation of great tech founders in Africa. Last year the company raised \$24 million in funding from the Chan Zuckerberg Initiative and the venture arm of Alphabet, Google's parent company.

Or Tala, a microlending startup based in Santa Monica. The company uses mobile device data to make microloans to people in Southeast Asia and East Africa who would otherwise have no access to credit, using location and transaction information from their smartphones to assess risk. With more than 80 employees, the company now delivers around 10.5 million loans per month. In February the two-year-old company raised \$30 million in funding.

Both companies are examples of legitimate businesses intended to turn a profit for their investors and generate social impact. This style of investing—often called “impact investing” or “social good”—is increasingly popular with investors. (And magazines: Look for our Change the World issue in September.) ImpactBase, an online database, counts 417 funds with more than \$31 billion in assets under management. Even private equity is getting in on the trend: The growth investment arm of TPG is raising a \$2 billion impact fund called Rise.

And if you're feeling inspired to trade social media for social good, consider Catchafire.org. The website allows professionals to donate something beyond money or physical labor—e.g., sales savvy, coding competence, or PR prowess—to causes ranging from cancer research to Meals on Wheels. Do it to make a difference in the world; do it to make a difference in your stress levels. I won't judge. ■

AI'S KILLER APP? DUH...MARKETING

Here's what happens when microtargeting machines begin to learn on their own. BY DAN LYONS



HOW DID DONALD TRUMP defy the swelled-head mediocracy to become President? From the fringe of the tech world a theory has emerged: It was artificial intelligence. No, not just regular AI, but rather a “weaponized” artificial intelligence, says Jonathan Albright, a data scientist and professor at Elon University in North Carolina.

The Trump campaign used an AI-powered system made by Cambridge Analytica, a U.K. outfit that reportedly gets funding from Robert Mercer, a billionaire Trump supporter, and that was whispered to have Trump strategist Steve Bannon as a board member. (A spokesperson for Cambridge Analytica would not comment on Mercer and would say only that “Steve Bannon is not a board member.”) In any case, the company hoovers up mountains of consumer and lifestyle data—including what you watch on TV—in order to build a “psychographic” profile of you, the individual voter. It claims to possess



DAN LYONS
is the bestselling
author of *Disrupted:
My Misadventure in
the Start-Up Bubble*.

profiles of 230 million Americans—each based on 4,000 to 5,000 discrete data points.

Armed with that insight, the company can fill your social feeds with ads and content designed to push your emotional buttons. The goal is to make you do something—such as vote.

While the notion of using hidden psychic levers to affect a person's political behavior may sound skeezy and invasive to some, it's really no different from what consumer goods marketers have done for years to sell soap. So, no surprise, that's precisely where CA is headed now—applying its AI sauce to “brand and commercial marketing” so that clients (which CA won't name) can “identify new customers and persuade them to engage with their brands.”

And AI, it turns out, is the Dale Carnegie of the modern age: precise, personal, and a whole lot faster than a door-to-door salesman in closing the deal. Super-brains can crunch mountains of data in milliseconds, A/B testing thousands of messages to see which ones work best on which people, adapting and evolving on the fly. “It's a level of social engineering I've never seen before,” says Albright, who is quick to point out that CA is hardly the only one doing this—or things like it.

AI-powered machines are also now creating content, he says. An AI platform called T, for instance, creates “news” videos on YouTube, many related to politics. Each video contains photos and text culled from blogs and websites and is “narrated” by a computer voice. Albright claims T was churning out a fresh video every three to four minutes. (The professor says he has found at least 80,000 videos but reckons “there might be hundreds of thousands or even millions of them.”)

For marketers this sounds like a dream come true. If a “weaponized” AI sales agent can push people to get off the couch and actually vote, then certainly it can persuade people to choose Samsung instead of Apple, or Chevy over Ford.

Our poor manipulatable psyches don't stand a chance. ■

I am very Sensitive to Lights and Sounds

Jacob Sanchez
Diagnosed with autism

Sensory sensitivity is a sign of autism.
Learn the others at autismspeaks.org/signs.

 **AUTISM SPEAKS**



HEAD WRITERS

ERIKA FRY
AND MATT HEIMER



CONTRIBUTORS

DANIEL BENTLEY, STEPHANIE CASTILLO,
SCOTT CENDROWSKI, JONATHAN CHEW

WORLD'S 50 CR

WHY ARE TARNISHED LEADERS so much easier to name just now than shining ones? Think of disgraced Wells Fargo CEO John Stumpf, indicted and jailed Samsung boss Lee Jae-yong, fired National Security Adviser Michael Flynn, forced-out Democratic National Committee chair Debbie Wasserman Schultz—all those and more brought down over the past eight months. And Donald Trump's approval ratings are lower than those of any new President for whom such poll-

ing exists. What's going on?

Here's a hypothesis: Our age of radical transparency is far likelier to reveal bad stuff than good. Virtually every fallen leader of recent times has been undone by the dramatically expanded availability and light-speed portability of digital data—as mundane as electronic financial records (Lee) or as advanced as remote surveillance (Flynn's conversations with Russian Ambassa-

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GREATEST LEADERS

dor Sergey Kislyak). It all reveals what's hidden, and the things people try to hide tend to be bad.

Get used to it. Evidence suggests that for broader reasons, radical transparency may be raising the base level of tumult to uncomfortable new highs. In business, for example, easier access to information for customers, competitors, and others causes industry dominance to change more quickly, corporate life spans to decline, and executive tenures

to shorten. Knockout leadership gets harder to maintain.

Yet it's out there, and we've found it. Some of those whom we salute in this fourth annual ranking of the World's Greatest Leaders are famous—Amazon CEO Jeff Bezos, Fed chair Janet Yellen, basketball great LeBron James. Many are not but should be, such as Lithuanian President Dalia Grybauskaitė, the “Iron Lady” who has dared to call out Vladimir Putin for his misdeeds, and bioengineer Rebecca Richards-Kortum, whose Institute for Global Health is finding innovative >>

THOMAS KOLDITZ DOERR INSTITUTE, RICE UNIVERSITY ◊ MICHAEL PORTER HARVARD BUSINESS SCHOOL ◊ JOEY REIMAN BRIGHTHOUSE

◊ JUDITH RODIN ROCKEFELLER FOUNDATION ◊ MICHAEL SCHLEIN ACCION INTERNATIONAL ◊ DOV SEIDMAN LRN ◊

RICK WARTZMAN DRUCKER INSTITUTE ◊ AND THE FORTUNE STAFF

LEADER

The World's 50 Greatest Leaders Introduction to the List

» ways to save babies. And then there's Chicago Cubs president of baseball operations Theo Epstein, No. 1 on our list, famous among baseball fans as a data nerd but not as a leader. Turns out, there's much more to him than you think.

All those on our list excel at leading effectively in today's environment. Three lessons they teach:

- **Acknowledge reality and offer hope.** This central leadership task is more difficult and important in uncertain times. JPMorgan Chase's Jamie Dimon is again proving excellent at it, talking bluntly about the bank's challenges, offering optimism without sugarcoating. It's a fine line to walk.

- **Bring followers physically together.** Research shows that when groups meet in person, face-to-face, they trust each other more, become better problem solvers, and are markedly more creative. Those are outcomes every organization needs more of. Pope Francis understands the power of physical presence, having set by far the most torrid travel pace of any pope and gathered followers in 27 countries to date, sometimes by the millions. The organizers of the Jan. 21 Women's March on Washington surprised even themselves when millions of marchers turned out worldwide, drawing energy and inspiration from one another.

- **Build bridges.** As the acerbity of political discourse threatens to infect the whole culture, the best leaders stay refreshingly open to other views, engaging opponents constructively rather than waging war. Republican Gov. John Kasich of Ohio and Democratic Rep. John Delaney of Maryland, for example, advocate positions the other party favors—and both won reelection easily the last time they faced their home voters.

Remember as you scan our list that we evaluate each leader within his or her own field of endeavor. Someone leading a small organization effectively may rank above someone far more famous nudging global issues. Our point isn't to declare that, say, No. 7 on our list is "greater" than No. 9. The point is that great leaders can be anywhere—at the helm of a giant corporation, running a rural college, or in a cramped office exerting influence through sheer personal energy.

The age of radical transparency draws attention away from today's shining leaders, but they haven't disappeared. We give 50 of them their due here.

—Geoff Colvin



01 THEO EPSTEIN

PRESIDENT, BASEBALL OPERATIONS • CHICAGO CUBS

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50WGL

IN THE FALL OF 2016, as partisan distrust and division reached abysmal depths, fascination with the Chicago Cubs became that all-too-rare phenomenon that united America. As the Cubs fought to end a 108-year championship drought, television ratings for the World Series soared by almost 50%. Even casual fans who didn't know a bunt from a beanball stayed up late to watch the excruciating extra-inning Game Seven that turned baseball's most famous lovable losers into winners at last.

In his book *The Cubs Way*, *Sports Illustrated* senior baseball writer Tom Verducci details the five-year rebuilding plan that led to the team's victory. The Cubs owe their success to a concatenation of different leadership styles, from the affable patience of owner Tom Ricketts to the innovative eccentricity of manager Joe Maddon. But most important of all was the evolution of

club president Theo Epstein, the wunderkind executive who realized he would need to grow as a leader in order to replicate in Chicago the success he'd had with the Boston Red Sox. In the following passages, Verducci describes how a deeper understanding of important human qualities among his players—the character, discipline, and chemistry that turn skilled athletes into leaders—enabled Epstein to engineer one of the most remarkable turnarounds in sports.

A FEW WEEKS before spring training of 2012, in the ballroom of a budget hotel in Mesa, Ariz., Theo Epstein stood before nearly every person connected with the baseball operations of the Chicago Cubs and told them how the Cubs were going to win the World Series.

Epstein devoted the first three days of the session to on-field strategy: hitting philosophy, pitching philosophy, defense, and baserunning. But the entire last day was devoted to character. The Cubs, Epstein insisted, would acquire only players with outstanding makeup. Even Epstein realized himself how far he had evolved since he put so much faith in numbers when he began as general manager of the Red Sox. Now character did not just matter. It was essential to Epstein's blueprint to win the World Series.

There was a reason character loomed so large in Epstein's thinking, a reason that helped explain why Epstein was spending spring training in Arizona with the Cubs and not in Florida with the Red Sox. Epstein's devotion to a *Moneyball* approach—data-driven analysis that helped teams identify and accumulate players with little-noticed but crucial strengths—had succeeded inestimably in Boston, where he steered the team to six playoff appearances and two World Series titles in nine seasons as general manager, helping the team break its own 86-year-old championship drought along the way.

But character and chemistry were strengths that a “quant” approach couldn't capture, and in 2011, in what turned out to be Epstein's final season in Boston, their absence was painfully clear as the team underwent a late-season collapse. The more the team lost, the more it broke apart from within. Players feuded with one another. The egos that had created cracks in the clubhouse while they were winning caused deep fissures as they lost.

So toxic was the atmosphere that, as Boston's lead slipped away, one unidentified player began to shrug it off by saying, “Why do we want to play in October anyway? We don't get paid for that.” True enough—players get their annual salary based on the 26 weeks of the regular season—but the sentiment, even if expressed in a joking



Adapted from
The Cubs Way: The Zen of Building the Best Team in Baseball and Breaking the Curse, copyright © 2017 by Tom Verducci. Published by Crown Archetype, an imprint of Penguin Random House LLC.

manner, revealed a deep problem with the character in the clubhouse. Epstein heard about it and wondered, *Who says that?* And he knew the answer: *a losing player.*

Once he'd joined the Cubs, Epstein gave his scouts very specific marching orders. On every prospect he wanted the area scout to give three examples of how that player responded to adversity on the field and three examples of how that player responded to adversity off the field. They were to dig into the player's makeup by talking to just about anybody who knew him: parents, guidance counselors, teammates, girlfriends, siblings. He wanted as many questions answered as possible: What's the family situation like? How does he treat people when no one's looking? What do his friends say about him? What do his enemies say about him? How does he treat people he doesn't necessarily have to treat well? What motivates him? Is he externally motivated where he wants money or followers?

Cubs scouting reports would never look the same again. Epstein wanted reports that went on for pages, like the Russian novels his father had him read as a boy. The scouts who didn't take to the long-form scouting reports didn't last. Epstein ran them off. It wasn't hard, measurable data. But it was information nonetheless, and if Epstein was going to build a team around high-character, high-impact position players, he wanted as much of it as possible.

EPSTEIN MADE A BET on the importance of the makeup of the players he acquired, not to replace the

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WHAT BUSINESS CAN LEARN FROM THE CUBS' HISTORY-MAKING WIN

1. HIRE FOR CHARACTER

How employees treat one another or cope with adversity can be more important to your success than their sales numbers or skill sets.

2. SEE DATA'S LIMITS

A statistics-driven strategy won't help you if all your competitors are using similar techniques with similar data. Do you truly have an analytical edge?

3. FOSTER CONNECTIONS

Epstein credits the Cubs' success in part to the years-long relationships among their core players. "People don't like working in isolation," he says.

edge in analytics he once wielded in Boston but to enhance it. He made this bet just as baseball teams more and more resembled technology companies. The baseball operations offices swelled with brilliant people with math and science degrees. The spin rates of pitches and the launch angles of balls hit off bats were being studied with the rigor of major science research projects. Players were donning "wearable" technology to collect data on how hard their bodies were working. Teams were fiercely guarding all kinds of proprietary statistics to find hidden value in players. Catchers were being schooled on how to subtly cradle pitches with their fingers to influence umpires into calling balls as strikes. Baseball teams were obsessed, at unprecedented intellectual and scientific levels, with finding "the next inefficiency."

The brilliance of what the Cubs did was to put their faith not just in numbers, but also in the type of people they acquired. The four pillars of the rebuild—first baseman Anthony Rizzo, future Most Valuable Player Kris Bryant, outfielder Kyle Schwarber, and shortstop Addison Russell—were all acquired because the Cubs valued their character, not just their skill.

Epstein and his assistants had come a long way from when they couldn't wait to tear into an analytics project for Boston in 2002. This time there was no proprietary formula, no algorithm, for acquiring self-motivated, high-character players and creating an environment to allow them to flourish. They never stopped searching to find edges, but they made a fundamental decision early after coming to Chicago that the one edge they could exploit was found in a very old-school resource: people.

Said Epstein, "If we can't find the next technological breakthrough, well, maybe we can be better than anyone else with how we treat our players and how we connect with players and the relationships we develop and how we put them in positions to succeed. Maybe our environment will be the best in the game, maybe our vibe will be the best in the game, maybe our players will be the loosest, and maybe they'll have the most fun, and maybe they'll care the most. It's impossible to quantify.

"When people do things they weren't even sure they were capable of, I think it comes back to connection. Connection with teammates. Connection with organization. Feeling like they belong in the environment. I think it's a human need—the need to feel connected. We don't live in isolation. Most people don't like working in isolation—some do, but they typically don't end up playing Major League Baseball."



Epstein celebrates with his players at Cleveland's Progressive Field after the Cubs clinched a World Series championship in the early-morning hours of Nov. 3, 2016.

02

JACK MA / EXECUTIVE CHAIRMAN, ALIBABA GROUP



Alibaba, a sprawling and murkily understood digital conglomerate built around e-commerce, has made Jack Ma one of the richest men in China, with a fortune valued at nearly \$30 billion. And that success has rocketed him to prominence as arguably the first Chinese executive who's an easily recognizable figure on the global stage.

What's more, Ma is using his new platform in unexpected, invigorating ways, positioning himself as a champion of both free trade and philanthropy—and arguing that open digital marketplaces like Alibaba's can power the world's economy by

enabling small businesses to reach an ever-expanding pool of customers. That's the premise that emboldened Ma to promise then-President-elect Donald Trump during a sit-down in January that Alibaba would help create 1 million jobs in the U.S. over five years.

To realize his vision, Ma has urged the lowering of trade barriers while proving to be a surprisingly warm, optimistic, and effective diplomat on behalf of capitalism—one known to disarm visitors by greeting them wearing sandals and Buddhist prayer beads. For more about Ma's emergence, read our feature in this issue.



I'm in awe of the way Pope Francis has used his powerful role to spread a message of unconditional love, forgiveness, humanity, and humility."

ARIANNA HUFFINGTON
Founder,
Thrive Global

03

POPE FRANCIS / HEAD OF THE ROMAN CATHOLIC CHURCH



As he begins the fifth year of his papacy, the first Latin American pope continues to inspire and surprise as he reconciles the conflicting demands of traditionalism and modernity within the Catholic faith. Last spring, in a publication titled *Amaris Laetitia*, he nudged the church hierarchy to become more welcoming to divorced Catholics and LGBT worshippers. And earlier this year he took aim at a millennium-old tradition of clerical celibacy by urging the church to consider allowing *virii probati*, or "tested" married men, to become priests, to help alleviate a worldwide

shortage of Catholic clergy.

But beyond his church's walls, it's the pope's critique of capitalism without conscience that ensures his enduring influence. In December at a gathering of CEOs convened by *Fortune* and *Time* at the Vatican, Pope Francis called on business leaders to do more to reach the billions of people shut out from the fruits of the global economy. "Give them a voice, listen to their stories, learn from their experiences, and understand their needs," the pope urged his audience, backing up his challenge with a moral authority that virtually no other leader can wield.



MELINDA GATES

COCHAIR • BILL & MELINDA GATES FOUNDATION

IN FEBRUARY, Melinda Gates reiterated her foundation's pledge to make birth control available to 120 million women globally by 2020, doing so in a passionate personal essay that reminded readers of the link between reproductive rights and economic growth. Her words sparked conversation among allies and foes alike; the fact that they carried so far shows the respect Gates has earned as the public face of the foundation she and her husband, Bill Gates, started. That clout is the fruit of real results: The nearly \$37 billion worth of grants the foundation had paid out through 2015 has had an enormous impact in empowering women and reducing infectious disease in the developing world.

06 AVA DUVERNAY

FILM DIRECTOR AND SCREENWRITER

DUVERNAY WAS THE FIRST African-American woman to direct a film nominated for a Best Picture Academy Award (2014's *Selma*). But her snub in the directing category—and the zero Oscar nods for nonwhite actors in successive years—stirred controversy over Hollywood's lack of diversity. DuVernay helped keep the issue alive as the Academy of Motion Picture Arts and Sciences tweaked its rules to include more minority voters. She earned an Oscar nod this year (for the documentary *13th*), and she's now busy as the first black woman to helm a movie with a \$100 million budget: Disney's *A Wrinkle in Time*.

05

Founder and CEO,
Amazon

JEFF BEZOS

It's no exaggeration to say that Bezos has revolutionized not one but two industries. Amazon.com, which accounted for 43% of online sales in the U.S. last year, put the fear of God into retailers, pushing them to sell more cheaply and deliver more quickly. And Amazon Web Services, his cloud-computing arm, has upended the economics of information technology. Entertainment could be the next industry to be Bezos'd: This year Amazon Studios scored three Academy Awards, showing its growing muscle in content delivery.



07

U.S. National
Security Adviser

H.R. MCMASTER

Leaders of both parties cheered President Trump's selection of McMaster. A three-star general, McMaster has been famous since 1991, when he led a tank troop to a stunning victory over Iraqi forces in Operation Desert Storm. Iconoclastic thinking has distinguished his career: His 1997 book, *Dereliction of Duty*, which lambasted U.S. leadership in Vietnam, is regarded in military circles as a classic. At issue now is what will happen if and when his adamantly independent thinking conflicts with his duty of loyalty to the President.



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WILLIAM SHATNER
LAWRENCE
FORD TO 2015
COURTESY WOLFGANG
PETER

TO HAVE WHO?
AND TO HAVE
HAPPY AND HONORABLE
FOLLOWING HIM
DURING HIS
TO THE
TO THE
TO THE

H.R. McMaster fought his way through the tactical myopia of the Army hierarchy to become one of our country's most trusted defense futurists and strategists. He is an independent thinker who will challenge the politicians and work on behalf of the United States."

BRIG. GEN. THOMAS
KOLDITZ (RET.)
Doerr Institute
for New Leaders

BEZOS: WESLEY MANN; MCMASTER: KEVIN LAMARQUE—REUTERS



▲ PHOTOGRAPH BY CHRISTOPHER PATEY—CONTOUR/GETTY IMAGES



0 TSAI: JORGE CARRERA—REUTERS; MERKEL: MICHAEL KAPPELER—AP; MCCAIN: SAMUEL CORUM—GETTY IMAGES; JAMES: MADDIE MEYER—GETTY IMAGES

08

President,
Taiwan

TSAI ING-WEN

Tsai captured headlines in December with a phone call to then-President-elect Trump, the first between U.S. and Taiwanese leaders since 1979. It was a bold move for Taiwan's first female President, who's steering a cautious path between the U.S. and China. Tsai is sympathetic to independence; when Beijing tried to punish Taiwan after her January 2016 election by restricting its citizens' visits, she wooed Southeast Asian travelers to spark a tourism boom. She is also pushing economic reforms, including shortening the workweek to five days from six.



09

U.S. Senator,
Arizona

JOHN MCCAIN

It has been nearly three decades since the U.S. last elected a President who saw combat in the military. That helps explain the enduring bipartisan appeal of McCain, the former Navy pilot and prisoner of war who just earned his sixth Senate term. McCain has become one of the nation's most trusted voices on defense by being both a backer of a strong military and a cautionary voice against ill-advised conflicts. As chair of the Senate Committee on Armed Services, he's uniquely positioned to help a new administration define what safety means.



10

Chancellor,
Germany

ANGELA MERKEL

The unflappable German Chancellor—now in her 12th year and gearing up for September elections—has her capable hands full, between a refugee crisis, the unraveling of Europe, rising right-wing nationalism, Russian aggression, and a new U.S. President who could change America's stance on all those issues and more. A committed internationalist, Merkel bristles at the idea that Germany is the liberal order's lead defender; still, since she's become the de facto leader of Europe, her dominance is clear. The free world is watching her.



11

Small Forward,
Cleveland Cavaliers

LEBRON JAMES

When James returned to Cleveland in 2014, he didn't promise an NBA title [though he delivered one last season]. "I have a responsibility to lead, in more ways than one," he told *Sports Illustrated*. James has realized this through the LeBron James Family Foundation, which will provide mentoring and full college scholarships to 1,100 underprivileged children in his hometown of Akron. He has also used his platform as his sport's biggest star to speak out on issues like the relationship between law enforcement and black communities.



12 GOV. Governor, Ohio

JOHN KASICH

Kasich's moderation didn't resonate with Republican voters in last year's presidential primaries. But as the leader of a politically consequential state, the Trump skeptic commands a key platform. Lately he has used it to rally GOP governors behind preserving the Affordable Care Act's Medicaid expansion, which allowed him to secure coverage for nearly 700,000 Ohioans. Kasich made his case directly to Trump in February, and it made a difference: Instead of immediately zeroing out federal support, the GOP's replacement plan would extend it until 2020.



13 U.S. Representative, Maryland

JOHN DELANEY

Being a House Democrat in a government Republicans dominate entirely sounds like a recipe for irrelevance. But one of the new administration's signature issues, rebuilding the nation's infrastructure, is a problem Delaney has focused on since he arrived in Congress four years ago. Delaney is pushing a business-friendly solution: He wants to tap proceeds from repatriated foreign profits to seed public-private partnerships that will take on new projects. That may be the best option for unleashing major spending without blowing a hole in the federal deficit.



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[Brian Chesky] feels it all the way through. I think he would be doing what he's doing if he didn't get paid a dime for it."

WARREN BUFFETT
CEO, Berkshire Hathaway,
from *The Airbnb Story*
by Leigh Gallagher

14 CEO, Save the Children International

HELLE THORNING-SCHMIDT

As Denmark's first female Prime Minister, Thorning-Schmidt helped steer the nation through the financial crisis. Today, in her dream job, she runs a charity with a budget of over \$2 billion that reaches 55 million children in 120 countries. Save the Children's latest campaign seeks to address 400 million "forgotten" poor children who are excluded from services like health care and education because they are girls, refugees, or disabled.



15 Director, Climate Science Center, TexasTech

KATHARINE HAYHOE

It seems Americans can't even agree on science these days: Disputes about the existence of climate change have deepened with the nation's polarization. Into this breach steps Hayhoe, a climate scientist who also happens to be an evangelical Christian living in Texas. From this perch and through her PBS web series *Global Weirding*, she has become a force in spreading the science. Hayhoe's approach is compassionate and empathetic, modeled after conversations she has had with her husband, a pastor who once had doubts about climate change.



16 Executive Director, Equal Justice Initiative

BRYAN STEVENSON

In its 28 years, the Equal Justice Initiative has rescued more than 125 individuals from death row and relentlessly called attention to racial biases in the legal system. Now Stevenson is encouraging all Americans to confront what he considers the root of those biases: the barely acknowledged history of "racial terrorism"—slavery and antiblack violence—that underlies race relations today. To lead the way, EJI is developing educational materials and building a racial justice museum and memorial for the country's 4,000 lynch-victim victims.



17 Chair, Federal Reserve

JANET YELLEN

When the Fed began raising rates in late 2015, there was reason to fear a meltdown, especially given that a generation of investors had come of age without experiencing a rate hike. That markets stayed sane is a testament to Yellen, who has been calm and consistent in making sure Wall Street and the public know what to expect from the world's most powerful central bank. Credit Yellen, too, for resisting populist pressure to raise rates earlier, when that could have hurt a fragile economy.



19 SAMANTHA BEE / HOST AND EXECUTIVE PRODUCER, *FULL FRONTAL*



Bee became an essential voice in late-night television in 2016 with the debut of her TBS show, *Full Frontal With Samantha Bee*. The presidential election provided plenty of fodder for comedians, and the Canadian-born Bee used her show as a weekly platform for dispensing incisive and often provocative political commentary while standing out as a rare female voice in an overwhelmingly male late-night landscape. Thanks to a stream of viral clips that has earned *Full Frontal*'s YouTube channel more than 168 million views—from Bee's interviewing President Obama to her ferociously tackling subjects like the Women's March—Bee's show has regularly beaten her former employer, *The Daily Show*, in the ratings.

BRIAN CHESKY

Nine years ago, Chesky and fellow cofounders Joe Gebbia and Nathan Blecharczyk were hustling to get a business off the ground that most investors scoffed at. Today the disruptive "home-sharing" platform claims some 160 million "guest arrivals"—2 million people slept in Airbnb accommodations this past New Year's Eve alone—and a private-market valuation of \$31 billion.

As CEO, Chesky—the only one of the three founders with no prior business experience—has scaled with the company and then some, steering Airbnb through regulatory opposition, headline-generating safety incidents and an existential crisis around discriminatory behavior on its platform. He has led the business to new heights too, overseeing an ambitious expansion into "experiences," events, and other services (coming soon, we're told: flights) and leading Airbnb to something few unicorns can claim: profitability.

Last month Chesky added head of community to his title, a shift to cozy up to the people who control and deliver the product he sells: Airbnb's hosts. The touchy-feely tactics set up a stark contrast to Airbnb's sharing-economy alter-ego, Uber, under attack for an allegedly aggressive and sexist culture and for a leaked video showing CEO Travis Kalanick berating an Uber driver. Kalanick has said he needs leadership help. He might take a page from his fellow disrupter's playbook.



PAUL POLMAN

Unilever doesn't have a corporate social responsibility department—that place where most companies relegate their do-gooding activities. Instead the consumer goods giant has integrated solving social issues, from food waste to climate change to poverty, into every part of its business. The strategy is the brainchild of Polman, Unilever's CEO since 2009, who had a vision of doubling its revenue and cutting its environmental footprint in half. Now Unilever has everything from a global handwashing campaign to an ambitious plan to improve the nutritional profile of its products.



JOHN ROBERTS

Roberts spent much of the past year as a leader in limbo: The Senate's refusal to consider President Obama's nominee to replace the late Antonin Scalia left the Supreme Court with a 4-to-4 ideological deadlock in several cases. But Roberts earned plaudits for keeping things humming relatively smoothly. And court watchers say it's telling that President Trump's first high-court nominee, Neil Gorsuch, is very much in the Roberts mold: a conservative with the intellectual and diplomatic skill to forge centrist consensus as needed.

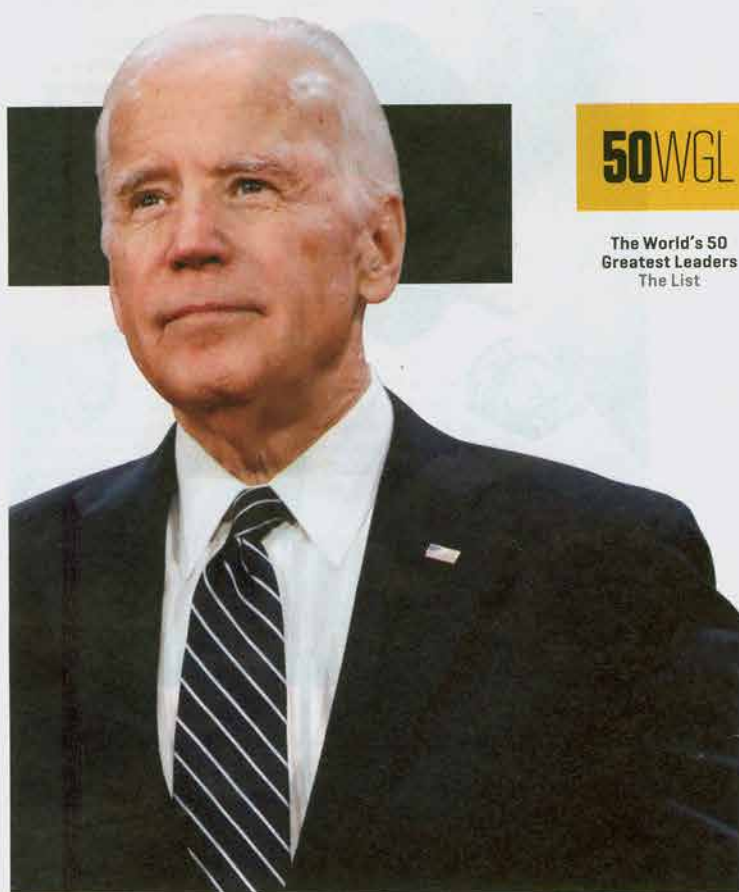


22 JANEÉ HARTEAU

CHIEF OF POLICE • MINNEAPOLIS

OVER THE PAST 18 MONTHS, Harteau has endured the kinds of challenges that every chief dreads. Growing tension with the police union. A spike in overall crime rates. And most challenging of all: the fatal shooting by police of an African-American man, Jamar Clark, under dubious circumstances that prompted an 18-day protest organized by Black Lives Matter.

Harteau weathered these woes with the steadiness that has made her a leadership role model. A 30-year veteran and the city's first female and first gay police chief, Harteau is the mind behind MPD 2.0, a drive to build trust in the community by putting more cops on the beat. Civic leaders credit her for dismissing cops for misconduct. The officers involved in the Clark shooting were not indicted, but local prosecutors are rethinking the use of secret grand juries in police-involved killings—a victory for the transparency that both Harteau and protesters favor. And Minneapolis was one of the few major U.S. cities to report a significant decline in homicides in 2016.



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IT WASN'T UNTIL the former Vice President lost his son Beau to cancer in 2015 that many people first came to appreciate Joe Biden as a leader. A childhood stutterer who was elected to the Senate at age 29 in 1972, then lost his first wife and baby daughter in a car crash just weeks later, the Delaware politician became a living example of perseverance that resonated with Americans across both sides of the aisle. He inspired further admiration when he responded to Beau's death by taking up the White House's "cancer moonshot" initiative, which, in its short tenure so far, has focused critical attention on breaking down barriers to research collaboration and data sharing. Biden's personal mission to cure the disease will be the focus of his career after politics, and he'll have public goodwill on his side: He left office with his Gallup approval rating at an all-time high of 61%.

ZHANG RUIMIN

Many CEOs call their employees associates; others call them partners. Zhang calls all 73,000 of them entrepreneurs—and actually means it. It's one sign of how Zhang is changing his company, the world's No. 1 appliance maker, and in the process reconceiving the large business organization more profoundly than anyone else on the planet.

He's winning in part by expanding through acquisition; in 2016 he bought General Electric's appliance business for \$5.4 billion. More fundamentally, Zhang sees a future that most CEOs don't. "Competitions in the Internet era are not between companies but between platforms," he tells *Fortune*. At Haier, teams of people who may not be Haier employees come together for projects and then disperse. A product can also be a platform for multiple companies. One example: For a networked "smart" oven project, companies that might sell food via the device could pay to be partners, enabling Haier to reduce appliance prices.

Haier consists of some 3,000 company-funded entrepreneurial micro-enterprises that live or die by their individual success, plus a few hundred teams funded partly by outside investment. "If a startup team cannot attract any venture capital, they can either consider how to progress and strive harder or they will be dismissed," Zhang explains.

So how do you turn thousands of corporate employees into entrepreneurs? Wrong question. "The task is not to turn Haier's internal staff into entrepreneurs, but rather to attract all the entrepreneurs in society onto our platform," Zhang says.



CARMEN ARISTEGUI

If the Fourth Estate is under siege worldwide, Aristegui stands as an immovable pillar. In Mexico, where nearly 100 journalists have been murdered or have disappeared in the past decade, Aristegui has spent 20 years exposing high-level corruption as a radio host and as the anchor of a show on CNN Español. She recently showed her reach and put pressure on the nation's elite when her website, *Aristegui Noticias*, reported an alleged conflict of interest involving Mexico's first lady, a contractor, and a \$7 million home purchase.



ARUNDHATI BHATTACHARYA

The first woman to helm India's largest bank has expertly steered SBI through India's demonetization scheme and an ongoing battle with bad loans. Bhattacharya has been transformative too, dragging the 211-year-old institution into the digital era and overhauling HR for its 200,000-plus employees. A six-bank merger she orchestrated last year will catapult SBI into the ranks of the world's 50 largest banks. That effectiveness and her outspoken style have earned her respect and a rare extension of her three-year term.





27

SHAKIRA

SINGER, SONGWRITER, AND PRODUCER

IF YOU DIDN'T KNOW that the multilingual singer was a force of nature in the philanthropic world, you're a little late to the party. Shakira's cause of choice: early-childhood development and education, particularly in her home nation of Colombia, where she launched the foundation Pies Descalzos [named after an early album, it translates as "Barefoot"] in 1997. She has also developed her public-policy chops as a founding member of the ALAS Foundation, spurring governmental action on early nutrition and schooling across Latin America. It's not just an academic exercise: In 2016 the foundation's schools fed and educated more than 6,000 children. Of course, it is performing that has given Shakira a uniquely powerful platform, with over 32 million followers on Instagram and 43 million on Twitter. Her 104 million fans on Facebook make her the most-followed female celebrity on the planet. But her real leadership comes in how she has leveraged those platforms on behalf of vulnerable kids.

Aristegui is an example of what journalism should aspire to be: someone who courageously pursues the truth, holds power accountable, and defends democracy."

MICHAEL SCHLEIN, President and CEO, Accion

28

CEO,
Last Mile Health

RAJ PANJABI

Tackling the "last mile"—the final, critical step of delivering products or services to consumers—is a conundrum for businesses, and in health care, last-mile problems hit poor regions especially hard. Panjabi's nonprofit, Last Mile Health, is striving to change that by training locals in developing countries in lifesaving measures, such as protecting themselves against pandemics and safely burying victims killed by infectious diseases. Last Mile has already proved its mettle; its work in Liberia helped stanch the spread of Ebola during the 2014 outbreak.



29

Founder, Citizens
Assistance Committee

SVETLANA GANNUSHKINA

In Putin's Russia, fighting for human rights isn't the safest career path. And yet Gannushkina, a 75-year-old mathematician, soldiers on. Her Civic Assistance Committee has helped over 50,000 people, mainly migrants and refugees, navigate Russia's byzantine legal system. Some of her successes: Pushing to amend refugee laws to grant citizenship to millions, and lobbying for the rights of refugee children to attend Russian schools. All this, despite her organization being labeled a "foreign agent" by the Russian government.



30

CEO,
Tesla and Space X

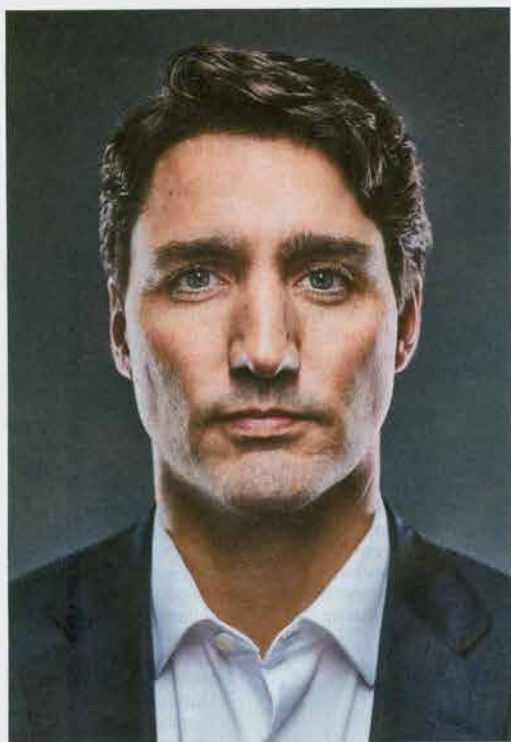
ELON MUSK

Visionary, ideologue, risk-taker: None of these shorthand labels quite capture who Elon Musk is. The billionaire entrepreneur is running two companies he cofounded that together employ 35,000 people. His aims are stratospheric. Tesla, the automaker and sustainable-energy company that acquired SolarCity in 2016, is Musk's pathway to a carbon-emissions-free world. [The batteries he's beginning to crank out at Tesla's "Gigafactory" in Nevada are another element of that strategy.] SpaceX, an aerospace startup, was founded to lower the cost of space transportation and ultimately enable the colonization of Mars.

Musk, who has admitted to keeping a sleeping bag near a production line at Tesla's factory in Fremont, Calif., has added another problem to his to-do list—soul-crushing traffic. His new business, the Boring Co., aims to find a way to quickly and cost-effectively dig networks of tunnels for vehicles and high-speed trains such as the Hyperloop, an idea he floated in 2013 that universities and startups are actively trying to develop.

Musk's aura as a technocratic seer has taken some lumps over the past couple of years. Tesla—experiencing production delays and falling short of delivery goals—hasn't always lived up to the bullish expectations of analysts and its legion of passionate fans. And the Tesla/SolarCity merger drew fire from critics who question whether the acquisition will benefit shareholders. But many still look to him as one of the tech world's foremost civic-minded voices. Musk advises President Trump as part of the Strategic and Policy Forum.





31 JUSTIN TRUDEAU

PRIME MINISTER • CANADA

IN A WORLD roiled by populist anger, Justin Trudeau stands as a lonely icon of moderation. As Prime Minister, he has helped Canada welcome more than 35,000 refugees from the Syrian conflict—more than double the number taken in by the U.S. [which has 10 times the population]. He has also achieved smooth relations with other leaders, including an unpredictable new President south of the border, increasing Trudeau's stature on the world stage. At home, Canadians are enjoying steadier economic times, with the country posting booming GDP growth in the second half of 2016 after a nearly stagnant 2015. Trudeau still enjoys status as a sex symbol, but now with the growing mantle of a statesman.

50WGL

The World's 50
Greatest Leaders
The List

The Women's March stands out as a remarkable example of leadership that eschews 'command and control' in favor of 'connect and collaborate,' two-way over one-way conversation, and wielding moral over formal authority."

DOV SEIDMAN
CEO, LRN
and author of *How*

32

Professor,
Rice University

REBECCA RICHARDS-KORTUM

Richards-Kortum and the Rice 360° Institute for Global Health were recently named semifinalists for a \$100 million MacArthur grant. It's not hard to see why. Richards-Kortum is a health pioneer and bioengineering prodigy who has brought groundbreaking yet affordable medical technology to some of the world's poorest communities. From light-based therapies for jaundice in newborns to high-resolution "micro-endoscopes" for cancer screenings, her innovations have improved care for thousands of underserved women and children.



35

President, University
of Texas at El Paso

DIANA NATALICIO

America's income-inequality crisis plays out on college campuses, where rising costs and cultural barriers mean low-income students struggle to get in and struggle to stay. In her 29 years at the helm of UTEP, a huge public university whose student body is 80% Hispanic, Natalicio has made wider access her priority, fighting to keep tuition low and creating flexible on-campus jobs. Academics, meanwhile, haven't suffered: UTEP has steadily climbed in national college rankings, and research funding has soared on Natalicio's watch.



33

Chairman,
Econet Wireless Group

STRIVE MASIYIWA

Few people have shaped modern Africa as much as Masiyiwa, whose telecommunications firm, Econet, came into being in 1998 after a long legal battle with the Zimbabwe government. His victory busted up a state monopoly and helped spur the development of private telecoms across the continent. Masiyiwa has since relocated to London, but his energetic and well-rounded philanthropy still makes an impact in Africa; he chairs numerous boards and has been lauded for supporting orphans, funding scholarships, and fighting hunger, poverty, and Ebola.



36

Minister of Happiness,
United Arab Emirates

OHODD AL ROUMI

How do you define happiness for an entire nation? As one of the world's few cabinet officials tasked with improving a country's mood, Al Roumi is reorienting the oil-rich UAE toward a more holistic understanding of quality of life, even as the country struggles to make progress on gender equality, freedom of speech, and the rights of migrant workers. Since her appointment last year, Al Roumi has tasked her subordinates to study the science of well-being; her next challenge will be converting that science into concrete reforms.



34

TAMIKA MALLORY, LINDA SARSOOR, BOB BLAND, AND CARMEN PEREZ / NATIONAL COCHAIRS, THE WOMEN'S MARCH ON WASHINGTON



WOMEN'S ISSUES, from equal pay to reproductive rights, have long been central to political debate. When Donald Trump won the presidential election on a platform that many people believed would roll back those rights, Mallory, Sarsour, Perez, and Bland wanted to send the message that these issues were nonnegotiable. Veteran civil rights activists, the four were able to coordinate the Women's March on Washington in barely two months. Their original 250,000-attendee estimate was eclipsed by a crowd that reached nearly half a million. Add simultaneous marches held in hundreds of cities worldwide, and the total approached 5 million—a testament to the leadership potential of vibrant, diverse, and self-organizing groups. To capitalize, the cochaurs launched 10 Actions/100 Days as a hub through which citizens could find nearby protests, strikes, and other events to sustain the fire they had started.

37

CEO,
BRAC

FAZLE ABED

In 1971, Bangladesh won a brutal war for independence, and some 10 million refugees returned to a country in urgent need of rebuilding. In stepped Abed, a former corporate executive who established the Bangladesh Rural Advancement Committee, now the world's largest nongovernmental organization. BRAC's fingerprint includes microfinance; its program has given out \$1.6 billion in loans to more than 5 million Bangladeshis—and education, where it has graduated over 11 million students.



38

President,
BT Japan

HARUNO YOSHIDA

Yoshida climbed the ladder by working abroad at foreign firms that promote women more readily than their counterparts in Japan's male-dominated business climate. Now back in Japan, she holds a unique position as a prominent female executive who raised a child as a single mother. She's outspoken about the challenges women face, once comparing their workplace disadvantage to "being chained by the leg." She has had a bigger megaphone since 2015, when Japan's powerful business association named her its first female executive.





THERE WAS a JPMorgan Chase before Jamie Dimon, but it was a shadow of its current self. Since he took over as CEO in 2006, the bank's assets have risen nearly 110%, while earnings have nearly tripled. Dimon's actions during the financial crisis were a master class in risk management, and his firm is now the undisputed biggest bank in the nation, with no sign of giving up that title. Just days after the President was elected, his transition team zeroed in on Dimon as the best choice for Treasury Secretary—an idea with support on both sides of the aisle. Dimon said no, however, and he now looks poised to lead by showing what a huge, well-managed bank can accomplish under a laissez-faire government.

50WGL

The World's 50
Greatest Leaders
The List

YURI MILNER

Named for the cosmonaut and first person to reach outer space, the Russian physicist-turned-investor made his billions placing early bets on technology names such as Facebook and Airbnb. Now he's backing bigger scientific gambles, such as a project to find signs of intelligent life elsewhere in the universe. He has also persuaded his pals, Facebook's Mark Zuckerberg and Alibaba's Jack Ma among them, to fund major awards for physicists, biologists, and mathematicians; the Breakthrough Prizes have given away nearly \$200 million to date.



RANDALL STEPHENSON

The head of one of the nation's largest employers (and, with \$163.8 billion in revenue last year, one of the world's largest companies), Stephenson has taken on a challenge befitting AT&T's stature: retraining more than 100,000 workers. In the face of rapid technological change, many CEOs have cut their people loose. But AT&T is launching a roughly billion-dollar push to teach them new skills through its sweeping 2020 initiative. The drive is already paying off: Last year AT&T filled more than 40% of open positions with internal candidates.



When people do things they weren't even sure they were capable of, I think it comes back to connection. Connection with teammates. Connection with organization. Feeling like they belong in the environment. It's a human need—the need to feel connected."

THEO EPSTEIN
President, Chicago Cubs, from *The Cubs Way*, by Tom Verducci

CHIMAMANDA
NGOZI ADICHIE

The prize-winning Nigerian writer has won admirers with her prose and a pair of viral TED Talks (one of which was famously sampled by Beyoncé). But Adichie has been most powerful in challenging her audiences to think differently and more expansively about Africa, identity, race, and gender. Many in the English-speaking world have embraced the invitation, and she has emerged as a feminist icon—she tells girls to get over being liked—and a fearless political and cultural critic.



MARC BENIOFF

In addition to leading his cloud-based software company to its first annual profit since 2011 last year, Benioff has stepped up his activism for LGBT rights. He was instrumental in getting Indiana to nix a law allowing businesses to discriminate against gay customers—and thanked the state by promising it 800 new jobs. Benioff took the same tack to pressure Georgia into vetoing a similar bill in 2016, then persuaded several firms to cancel expansion in North Carolina after that state adopted its anti-transgender bathroom law.



FRANK MUGISHA

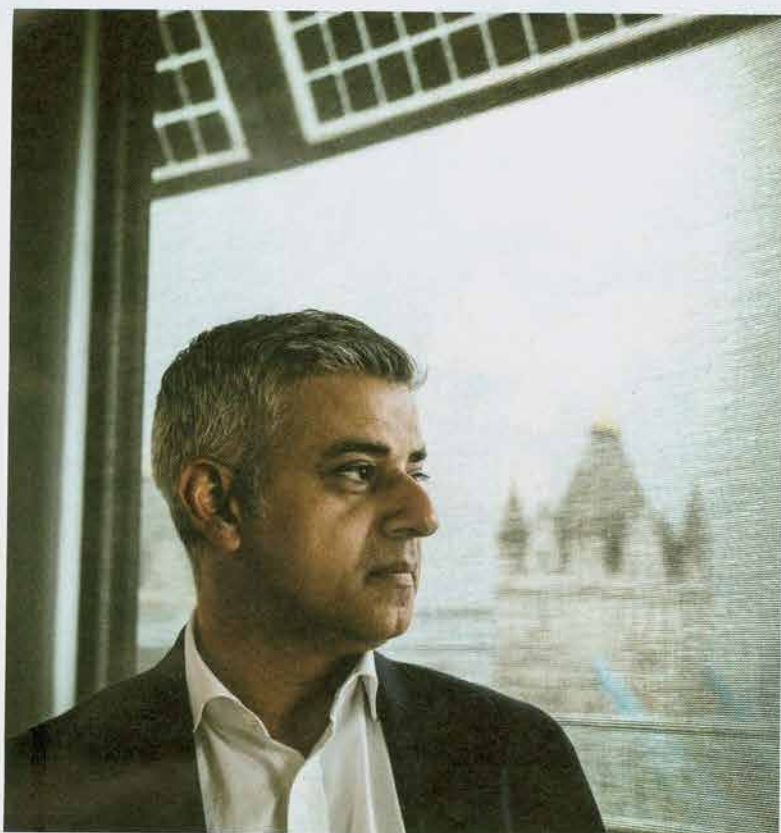
It is challenging enough to be a member of the LGBT community in the West. Imagine functioning in a society that still criminalizes—and even debates the death penalty for—homosexual activity. That is the world facing Frank Mugisha. The 37-year-old, who came out at 14, spoke out against the country's Anti-Homosexuality Bill, which mandated life in prison for LGBT Ugandans, and he led the campaign that eventually led to the bill's invalidation by the courts. More battles lie ahead for a leader of a community that faces open hostility.



DALIA GRYBAUSKAITE

She's not called the Baltic states' "Iron Lady" for nothing. Grybauskaite, who in 2009 became Lithuania's first woman President, began urging action against Vladimir Putin's breaking of international law before Russia annexed Crimea or launched its "influence campaign" in the U.S. election. Grybauskaite's frank, insistent style sets her apart (particularly among her mealy-mouthed EU peers), and as the 28-nation bloc ponders a resurgent Russia, she's not holding back in her calls for a strong NATO and a united European front.





48 SADIQ KHAN

MAYOR • LONDON

IT WAS A VERY DIFFERENT WORLD when Khan became London's first Muslim mayor last May. The son of Pakistani immigrants, Khan, a charismatic human rights lawyer and proud feminist, seemed the embodiment of the diverse, global city he was elected to lead. Less than a year later, in the aftermath of Brexit, Khan finds himself in a battle to preserve "open" London. The mayor has been unwavering in its defense, courting the business community while arguing that a hard Brexit, separating the city from the EU, will be disastrous for Britain's engine of growth.

46

Musician and Activist

CHANCE THE RAPPER

Chance, an author of infectious uplifting, Christian-infused rhymes, set a new template for the music industry this year when his mixtape *Coloring Book* became the first streaming-only recording to win a Grammy (in fact, it won three). He's also a political force as an antiviolenace activist in his hometown of Chicago. His latest bold stroke: A \$1 million donation to pay for arts and after-school programming in Chicago's underfunded public schools.



47

Editor-in-Chief, Caixin Media

HU SHULI

Hu is a paragon of important journalism inside China's notoriously close-fisted media environment. As a young reporter, she was suspended from her paper after asking it to cover the 1989 Tiananmen Square protests. Undeterred, Hu started the business paper *Caixin* and exposed everything from stock-market manipulation to a state cover-up of the SARS outbreak. Hu's current home, the media company Caixin, retains her penchant for provocation; last year she issued an extraordinary call against state censorship.



50WGL

The World's 50 Greatest Leaders The List

49

CEO, InterCorp

CARLOS RODRIGUEZ-PASTOR

Rodriguez-Pastor is a billionaire who runs a network of malls, pharmacies, and banks in Peru. In 2010 he took on a vital mission by launching Innova Schools, which provides 19,000 children with affordable, high-quality education. Recent testing indicates that Innova second-graders are far more proficient than average in math and reading—welcome news in a country whose education system ranked last among 65 countries in an OECD survey.



50

CEO, Advanced Micro Devices

LISA SU

Though she didn't get nearly as much attention as Marissa Mayer at Yahoo, Su's challenge when she joined struggling semiconductor maker AMD in 2014 was perhaps just as great—and what's more, Su has succeeded. A former chip designer, Su diversified AMD away from the PC market to focus on higher-growth areas like chips for videogaming consoles and data-center servers. She also made a savvy deal to license chip designs in China. Her reward: rebounding sales and a stock price that quadrupled in 2016.



FEEDBACK LETTERS@FORTUNE.COM

▲ PHOTOGRAPH BY ADAM FERGUSON—THE NEW YORK TIMES/REDUX



PHOTOGRAPH BY
TONY LAW

Ma at Alibaba
headquarters in
Hangzhou, China,
on March 14,
2017.

YOU DON'T KNOW

JACK

NO. 2

ALIBABA FOUNDER JACK MA IS FAMOUS AS ONE OF CHINA'S RICHEST MEN. BUT THE E-COMMERCE MOGUL AND HIS COMPANY REMAIN A MYSTERY TO MANY OUTSIDE HIS HOME COUNTRY. FOR HIS NEXT ACT, MA PLANS TO EMPOWER ENTREPRENEURS AROUND THE WORLD—AND TAKE HIS PLACE AS A GLOBAL BUSINESS LEADER. BY ADAM LASHINSKY

JACK MA IS ONE OF CHINA'S richest men, with a fortune valued at nearly \$30 billion. As executive chairman of Alibaba Group, he leads the dominant force in Chinese e-commerce, a company with a market value of \$264 billion and some 450 million customers. A global ambassador for Chinese business, he spent 800 hours aloft last year—visiting princes, Presidents, and Prime Ministers and lots of mere businesspeople too. “A professional pilot cannot travel

that much, or so I’m told,” he boasts.

Even so, the rich and powerful people who meet with Ma tend to come away from the experience with a fresh nugget of information, either about him or about the still poorly understood digital conglomerate he started with a bunch of friends 18 years ago in the provincial coastal city of Hangzhou. Jim Kim, a physician who is the president of the World Bank, met Ma four years ago over a dinner lasting more than three hours and was startled to find the billionaire wearing sandals, holding Buddhist prayer beads, and sitting cross-legged on his chair. Kim was so taken with Ma’s passion for facilitating global trade by focusing on small-business people that he’s rethinking his international development organization’s approach.

Others are moved by Ma’s humanity. Jean Liu, president of Chinese ride-hailing startup Didi Chuxing, has known Ma for years and considers him a mentor. (Alibaba is a Didi shareholder.) She recently learned, through family connections rather than from Ma, about how he repeatedly visited a seamstress he had met after learning she was ill. Says Liu: “He genuinely cares about the people around him.”

Then there’s the President of the United States, who met Ma for the first time a few weeks before his Inauguration. “Trump didn’t know that much about Alibaba,” reports company president Michael Evans, a former Goldman Sachs banker

ADDING UP ALIBABA

FOUNDED

1999

EMPLOYEES

46,819

HEADQUARTERS

HANGZHOU,
CHINA

ANNUAL ACTIVE
BUYERS IN CHINA

443 MILLION

COUNTRIES WITH
BUYERS USING
ALIBABA

200+

ANNUAL REVENUE*

\$21.7 BILLION

ANNUAL PROFITS*

\$5.8 BILLION

MARKET VALUE

\$264 BILLION

*12 months ended
Dec. 31, 2016

Sources: Bloomberg;
company filings

and Asia hand who helped set up the powwow. “He was fascinated to hear that Chinese consumers are interested in buying from U.S. small businesses. I don’t think that had occurred to him.” Ma used the sit-down to make a bold promise—that Alibaba would help create 1 million jobs in the U.S. over five years. The pronouncement was music to the President-elect’s ears. “It was a great meeting,” he declared before the cameras in the lobby of Trump Tower, a beaming Ma beside him. “Jack and I are going to do some great things.”

President Trump isn’t the only one who could stand to learn more about Alibaba. Despite its heft in China and the blockbuster 2014 public offering that raised \$25 billion on the New York Stock Exchange and introduced Alibaba to Western investors, Ma’s company remains a mystery to most non-Chinese. There’s a simple reason for that: Few outside the world’s second-largest economy are Alibaba customers. Ma is aware of this knowledge gap. It’s part of what drives him to keep logging frequent-flier miles to educate people about his company and his plans.

To realize his vision—which relies on technology to buy, sell, finance, and deliver goods on Alibaba’s digital platforms around the world—Ma has been busily recasting himself of late as a global leader. Already he is the first Chinese business executive who can claim to have transcended his homeland for the world stage. In his travels, Ma promotes the lowering of trade barriers, touts his own brand of philanthropy, and supports causes such as primary-school education. His version of globalization is carefully calibrated and expansive enough to be consistent with the goals of his own President, Xi Jinping, as well as with Trump’s America-first positioning.

As with so many effective leaders, Ma’s motives are complex. China is already a huge consumer market and one that’s still growing fast, but Ma knows that eventually he will need to conquer new territories for Alibaba to continue on its current trajectory. Like other Chinese champions,



Alibaba has thrived at home while foreign competitors have thus far been stymied from entering his turf. If that changes, foreign markets will be even more crucial. Ma also needs for Alibaba—plagued by criticism over the profusion of counterfeit wares for sale on its sites—to develop a reputation as trusted around the world as Jack Ma is cherished by his fellow bold-faced names.

Ma's opportunity is unique. After centuries of stagnation, his country has recently reassumed its position as a world leader—just as Alibaba, one of its marquee corporate names, has joined the ranks of world-beating companies. With characteristic intuition, Ma, 52, seems to realize that this is his moment to go beyond merely being famous and take his place among the globe's revered business leaders.

SQUARING OFF AGAINST AMAZON

If you're reaching for comparisons, Ma lines up favorably against a certain dogged American e-commerce entrepreneur: Amazon CEO Jeff Bezos, No. 1 last year on *Fortune's* annual list of the world's greatest leaders. Both are famous for their tenacity, their management philosophies, and their growing list of significant side ventures. (Like Bezos, Ma now owns a venerable newspaper.) One surprise, as the two companies enter the early phases of squaring off against each other outside their respective home markets, is that Alibaba's business is actually better than Amazon's, at least in terms of its profitability. Plus, Ma arguably has more felicitous government relationships than Bezos—both in Beijing and in Washington, D.C., given that the Bezos-owned *Washington Post* has repeatedly drawn Trump's ire.

Ma's current standing with the White House, however, rests heavily on his job-creating pledge to President Trump. And that bold promise is built on a bit of nuance. Specifically, Ma predicted that Alibaba will sign up 1 million U.S. small businesses to its various e-commerce platforms, primarily

Taobao, its mass-selling site for individuals, and Tmall, its higher-end site for established consumer companies. In China, Alibaba hosts 10 million merchants, and it has estimated that those businesses account for 30 million jobs. The 1-million-job pledge updated a general goal of helping U.S. small businesses sell in China that Ma had posited a year earlier in a *Wall Street Journal* op-ed. The company now estimates that each U.S. business that sells on Alibaba's platforms will typically hire one employee as a result, hence the 1 million new jobs.

Unpacked, the big promise is classic Ma, a born promoter and natural communicator with a finely tuned ear to the needs of government officials. Duncan Clark, a China-based investment adviser and the author of the comprehensive 2016 book *Alibaba, the House That Jack Ma Built*, labels the move equal parts "theatrics" and effective. "To me, it broke the tension," says Clark, at a time of deteriorating U.S.-China relations. "Jack is very good at seducing and working the room." A few weeks later, he notes, Ant Financial, an Alibaba affiliate controlled by Ma, announced plans to acquire the Texas payments firm Moneygram for \$880 million, an offer subsequently topped by the U.S. firm Euronet. Alibaba would have needed the U.S. government's blessing to prevail in the deal.

Many assumed Ma's bonding with Trump presaged an Alibaba move into selling to U.S. consumers. For now, Alibaba professes to be more interested in helping U.S. businesses sell to Chinese consumers rather than the other way around. "People are always asking 'What's your U.S. strategy? What's your U.S. strategy?'" says Evans, Alibaba's president. What it isn't, he says, is competing against Amazon in the U.S. Instead, Alibaba's designs on the U.S. are threefold: work with established brands to sell on Tmall; help small businesses—the ones that would create new jobs—sell in China on Taobao; and match U.S. manufacturers with Chinese component makers on Alibaba.com, the company's original business. Evans says Tmall hosts

Above, from left: Ma met with President-elect Donald Trump at Trump Tower on Jan. 9, 2017, and pledged to create 1 million jobs in the U.S.; Ma hosted Canadian Prime Minister Justin Trudeau in Hangzhou, China, last September.



7,000 U.S. brands. Alibaba doesn't disclose U.S. figures for the other two categories, presumably because they are too small.

One company Alibaba does brag about is a hip sneaker consignment store in Manhattan's SoHo neighborhood called Stadium Goods. Evans relishes recounting how Alibaba invited the tiny company to a conference in New York a little over a year ago to learn how to sell on Alibaba, and how Stadium Goods subsequently shot up from a handful of workers to 60 employees.

That's true, says John McPheters, the company's cofounder and CEO, though only three of those employees, Chinese-language writers, are attributable to the Alibaba business. China is in fact a huge opportunity for his company, which is on track to move \$100 million of merchandise this year, nearly 90% of it online. Alibaba will account for about 10% of online sales, he says, and all of it will be on Tmall, the company's high-end site, which has much tighter controls to fend off fake goods. "Authenticity is a huge pillar of our business," he says. "We have a crazy checklist" to ensure what the company sells is legitimate.

○ Above: John McPheters, CEO of hip sneaker consignment retailer Stadium Goods in New York City, says Alibaba will account for 10% of his company's on-line sales this year. Opposite page, from left: Ma with Roberto Azevêdo, director general of the World Trade Organization, in Hangzhou in September; Ma with Australian Prime Minister Malcolm Turnbull.

"Chinese consumers are very focused on trust."

McPheters is being polite. By stressing his company's focus on Alibaba's Tmall, he's highlighting his unwillingness to sell on Taobao, which has been plagued with counterfeits. The problem is so bad that in December the U.S. Trade Representative reinstated Taobao on its "notorious markets" list, a "name and shame" tool intended to pressure non-U.S. marketplaces to clean up their acts. (Taobao.com appeared between the Russian site Rutracker.org and the Pirate Bay, an illegal-download site.) Alibaba has been struggling with this for years. The company typically says it is doing its best to police Taobao. Yet Ma himself has advocated more extreme measures. In a recent blog post on a Chinese social media site, he advocated treating counterfeiting like drunk driving, an endemic problem in China until the government imposed stiff prison sentences on offenders. "There is a lot of bark around stopping counterfeits, but no bite," he wrote.

The public call to action, which came during the government's annual National People's Congress, was a bold but canny move for Ma, says Clark, his



biographer. "They can never do enough to win over the trust of the brands and some investors," he says. "It's this cloud that is hanging over them."

TAKING THE WORLD STAGE

An academic-like curiosity has been a hallmark of Ma's success in business. He began his career as an English teacher, after learning the language by watching movies and chatting up Western tourists in his native Hangzhou. Ma was one of the first of a group of Chinese entrepreneurs to discover the Internet, and he had a Zelig-like ability to show up in the right place at the right time. In 1997, for example, while working for China's Ministry of Commerce between startup efforts, Ma was assigned to work as a translator for Yahoo cofounder Jerry Yang on a visit to Beijing. "He was inquisitive, confident, and clearly eager to learn about the new world of digital and the Internet," says Yang, whose company went on to invest \$1 billion in Alibaba in 2005 and who is on its board today. (Yahoo's stake in Alibaba is now worth \$40 billion.)

Ma relishes the role of teacher. "For more than 12 years I called myself chief education officer," he says during a video interview from his office in Hangzhou. In 2013 he stepped down as CEO of Alibaba. (The current CEO, Daniel Zhang, joined the company in 2007.) Yet no one doubts that Ma's is the singular voice that matters on all important decisions regarding Alibaba and its many affiliates, a group Ma himself acknowledges is complex. In fact, he likens Alibaba to the environment, in which he has taken a keen interest as a board member of the Nature Conservancy. For Ma, the environment and his company are two sides of the same complicated coin. Just as the different components of nature need to work together in an ecosystem, says Ma, "Alibaba needs to work with society, government, and all kinds of organizations." He would simplify his business if he could, he says. "But I cannot."

Ma has gotten involved with numerous international organizations, in the process raising his stat-

THE TAO OF JACK

As his success at Alibaba has shown, Ma is no ordinary entrepreneur. These three precepts are key to his approach.

PURSUAE AN "ASSET-LIGHT" STRATEGY.

Alibaba is a platform, not a retailer. It holds no inventory and a 47% stake in a logistics network rather than owning trucks and warehouses directly.

PLAY ON THE WORLD STAGE.

Like President Xi Jinping of China, Ma promotes the virtues of global trade—all the better if small businesses sell their wares on Alibaba's platforms.

PLAN YOUR RETIREMENT WELL IN ADVANCE.

Ma says he's been thinking about his departure from the company he built since was 45, seven years ago. But it's probably still not imminent.

ure and Alibaba's. Last year Ma was named a special adviser on youth entrepreneurship and small business to the United Nations Conference on Trade and Development, and he's a fixture at the World Economic Forum in Davos, Switzerland—the rare Chinese executive who mixes as easily with Western peers as with those in China.

In 2015, Alibaba bought the English-language *South China Morning Post* newspaper, about two years after Bezos bought the *Washington Post*. Like Bezos, he has taken a hands-off approach, meeting infrequently with its staff, having installed his longtime dealmaking confidant, Alibaba vice chairman Joe Tsai, as head of the organization. Whereas Bezos framed his purchase as aiding an institution integral to democracy, Ma explained his investment as ensuring that non-Chinese-speakers have access to high-quality information about China.

The Alibaba chairman sees his high profile as an obligation. "Running such a big economy"—his word for the \$485 billion worth of economic activity that took place on Alibaba last year—"you have the responsibility to share with people what you think. Our ideas, our policies, our decisions are going to affect the lives of half a billion people." The scope of Alibaba's business activity is instructive, again, in comparison with Amazon's. While Alibaba's revenues of nearly \$22 billion are tiny compared with Amazon's \$136 billion in sales, Alibaba is far more profitable. Ma's company had operating profits of \$6.7 billion in the 12 months ending Dec. 31, vs. Amazon's \$4.2 billion. Whereas Amazon owns warehouses and takes ownership of much of the inventory it sells, which explains its higher sales figure, Alibaba is an "asset-light" technology platform, making money mostly by charging for advertising and other sales-related fees.

There is a business imperative behind Ma's global leadership, given that nothing happens in China without the government's explicit or implicit permission. "I think Jack understands that as powerful as Alibaba is in China, his best protection is to diversify into a multinational," says Orville Schell,



From left: Ma with Victoria and David Beckham on Nov. 9, 2016, in Shenzhen, China, at a gala leading up to the 11.11 Global Shopping Festival for Singles Day, the world's largest online shopping event; Ma with actress Scarlett Johansson at a Singles Day party in Shenzhen on Nov. 10, 2016.

a China scholar and journalist who is director of the Asia Society's Center on U.S.-China Relations in New York City and who has known Ma for more than a decade. Schell, who lives in Berkeley, says that a few years ago Ma came to visit his son, who was attending UC-Berkeley, and aspired to stay for a while. "He got a house and furnished it, and hoped to live half time and audit courses, participating in the life of the mind," says Schell. "But then the siren song of his business and making it bigger, greater, and more global took over."

WHAT'S NEXT, JACK?

Ma has a startling confession: He wants to retire. He says he first began preparing for that day when he was 45. And he doesn't want to be one of those old men who attend board meetings long after they've lost their mojo. "They should give the young people a chance," he says. He demurs on revealing exactly when he plans to bow out, though he has ideas about what activities will occupy his time. One is teaching. The other is relaxing. "I have my own timetable," he says. "I don't want to die in my office. I want to die on the beach."

Few take this talk seriously, however. Multiple observers close to Alibaba point out that no major decisions happen without him and that he continues to shape strategy for Alibaba. He owns just under 8% of the company, not a controlling stake, yet everyone understands that people work for Jack—much the way Steve Jobs ruled Apple with an even smaller share of the company. And Ma's globetrotting serves Alibaba's global ambitions. A year ago it paid \$1 billion for a controlling stake in Lazada, a Southeast Asian online retailer. Alibaba and Ant Financial, which runs the dominant Chinese payments platform Alipay, have invested in Paytm, an Indian e-commerce player. And while Alibaba's operational forays into the U.S. market have been furtive, it has invested aggressively in U.S. startups, including Magic Leap, Lyft, and Snap. Says Evans, the company's president: "It is important for us to

keep abreast of things that could have an impact on any aspect of our business."

In the meantime, Ma is pursuing his twin goals of knocking down trade barriers and boosting the fortunes of small businesses. Alibaba has one of the simplest mission statements of any big company: "to make it easy to do business anywhere." In China, this meant investing in a network of logistics companies called Cainiao—Alibaba owns 47%—that vastly improved on the meager capabilities of the government's postal delivery system. Alipay is now boldly branching out from payment processing to loans, at times angering China's massive state-owned banks. Ma has crafted a new label for such initiatives: the World e-Trade Platform, or eWTP. It's a catchall phrase to explain the global integration of Alibaba's e-commerce systems.

A decade ago it would have been unfathomable that the leader of China's biggest e-commerce company would be perhaps the most prominent corporate voice on world trade—though no more unlikely than that the President of China would give a pro-globalization address to the World Economic Forum in Davos, as Xi Jinping did in January. Ma was in the audience when Xi spoke, and he met with Xi there. "He made a wonderful speech and a commitment to globalization," says Ma. "I think globalization is a great start, but it's just the beginning." Globalization is "a baby," he says, "and the baby is having growing pains," obliquely referring to Trump's full-throated trade challenges to China. "We should not kill the baby because he cries a lot."

Then Ma pivots from government to capitalism, extolling his belief in the power of business to accomplish what politicians cannot. "Maybe the business community has to drive this instead of government," he says. "I feel sorry for government. When you put 200 country leaders in the same room trying to realize something, it's impossible. But when you put 200 businesspeople in one room, we might work something out." And maybe Ma will be leading that conversation. ■

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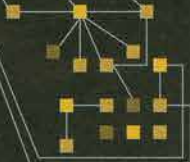
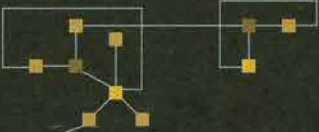
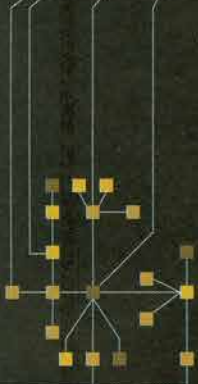


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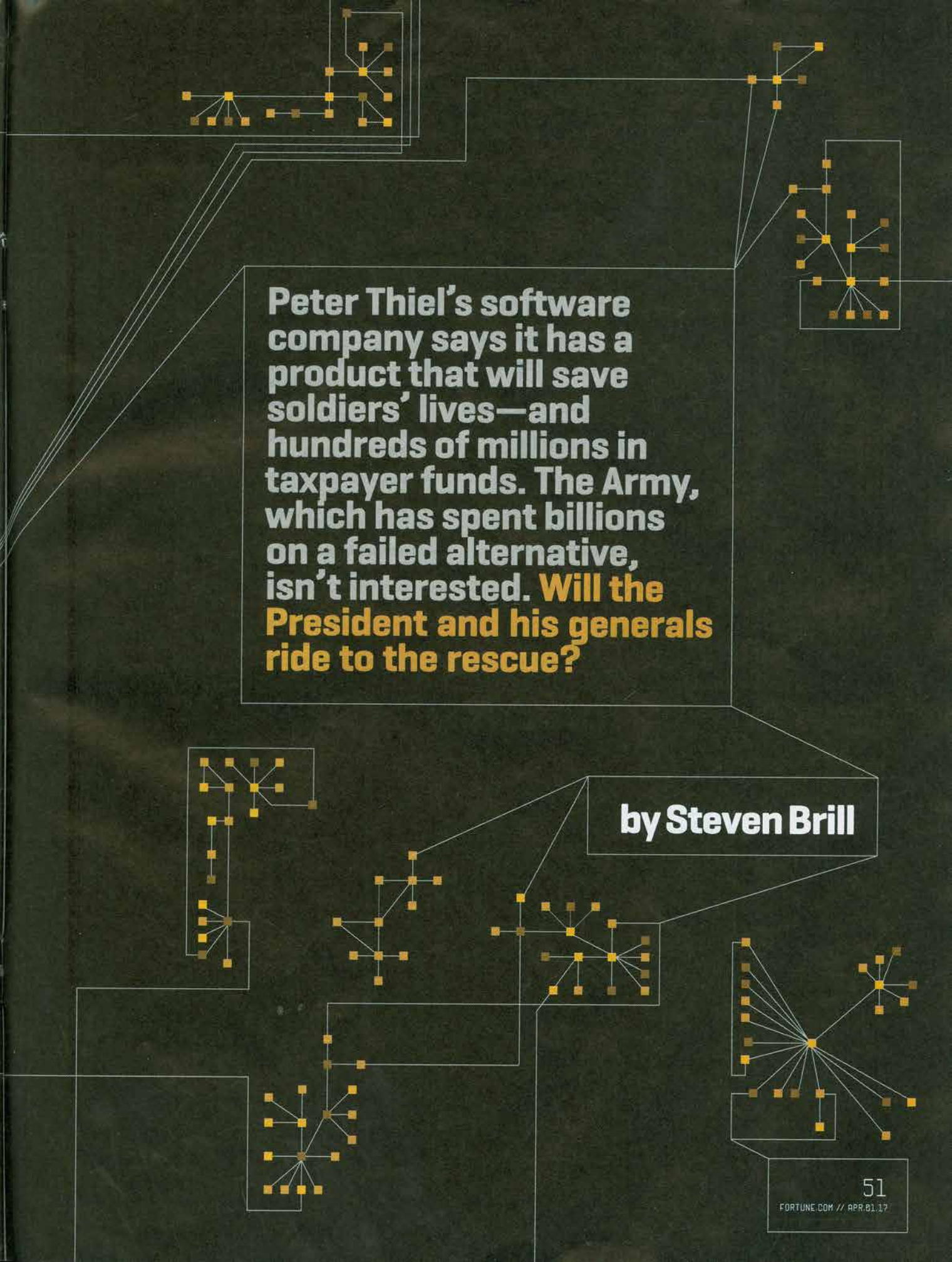


**SPECIAL
REPORT**

PALANTIR,



**AND THE CRAZY
BATTLE TO CLEAN
UP A MULTI-
BILLION-DOLLAR
MILITARY
PROCUREMENT
SWAMP**

The background of the entire page is a dark, textured charcoal grey. Overlaid on this are several white lines that form a complex, interconnected network. These lines branch out from various points, some leading to small yellow squares. The squares are arranged in clusters, some of which are enclosed in white rectangular boxes. The overall effect is reminiscent of a circuit board or a data network map. The main headline is contained within a large white rectangular box that is part of this network structure.

Peter Thiel's software company says it has a product that will save soldiers' lives—and hundreds of millions in taxpayer funds. The Army, which has spent billions on a failed alternative, isn't interested. Will the President and his generals ride to the rescue?

by Steven Brill

While Donald Trump was promising last year to drain the swamp in Washington, a long, quiet battle to drain an especially entrenched, money-wasting corner of that morass was reaching a surprising turning point in a courthouse that sits a few hundred feet from the White House.

Only days before the presidential election, a judge in the U.S. Court of Federal Claims ordered the Pentagon to reverse course in a major procurement bidding process. The decision marked the dramatic end of a long first round in what was an unusually bitter and consequential fight for this obscure court. As of press time, the ruling was being appealed through the usual legal channels.

However, the dispute's outcome may now be determined not by the courts, but rather by President Trump and some of his administration's most powerful players. They are all connected to a controversial company that began an unprecedented battle eight years ago to crash a long-running, exclusive party involving the annual dispensing of hundreds of billions of taxpayer dollars.

The company waging war is Palantir Technologies, one of Silicon Valley's biggest, most secretive software startups. Among other things, it's staffed with such ardent, even smug, believers in the superiority of their products that the enterprise—now numbering about 2,000 people in 15 offices around the world—is often described as a cult even by friends of those true believers.

These days Palantir's executive in charge of winning military contracts is jabbing at Department of Defense officials, rather than trying to persuade them. "This just became so personal, so bitter," says Douglas Philipponne, a 45-year-old former Army Ranger. "We started out politely, but now our basic message to them is, 'What you're asking for won't work and will waste money, so you're either stupid or corrupt.'"

The "them" Philipponne is referring to is an insular collection of procurement bureaucrats at the Pentagon.

Declaring that it's a toss-up whether your target customers are stupid or corrupt is not usually a good way to close a sale. Nor is charging, as Palantir did in legal filings, that they are "irrational," driven by "a desire to

cover up the failures of their own program," and motivated by "an instinct to preserve relationships with entrenched 'inside the Beltway' contractors (and perhaps the 'revolving door' relationships often entailed in those relationships)."

Palantir was blocked from bidding on a giant Army program that professed to be seeking a product that is the definition of the company's specialty: a data analytics platform. The one in question would give soldiers information, presented visually on a laptop or tablet, about everything from the weather to the terrain to the likely location of ambushes and roadside bombs to the latest intelligence on local tribal leaders.

The Army chose instead to favor an updated version of a deeply flawed system created by a team of defense contractors that epitomizes the Washington establishment: Raytheon, Lockheed Martin, Northrop

Grumman, and others. Over 16 years the system had produced cascading cost overruns, and bills of nearly \$6 billion. The result had been a platform that troops in the field and Government Accountability Office auditors agreed was so clunky to use, when it worked at all, that it often sat unplugged and shoved under desks at various outposts. Problems with that system even helped contribute, as we'll see, to the massive military information leak by Chelsea (then known as Bradley) Manning.

Yet the requirements for the new version disqualified what Philipponne believed was Palantir's proven, off-the-shelf platform, which could be supplied to all the troops for about \$100 million a year. Philipponne didn't think there was any doubt that it would work, or any reason that the Army should doubt it, because he had already sold that platform to smaller Defense Department units operating in Iraq and Afghanistan, and he had been told by soldiers in the field that it had saved lives.

All of that might drive anyone to become a less-than-polite salesman—especially if, like Philipponne, you were an ex-Army commander who had served in Iraq and Afghanistan and you knew what it meant to have an intelligence tool that actually worked.

The result was a long-shot lawsuit that could bring government into an age where Pentagon procurement officials, known for buying \$600 toilet seats and billion-dollar HR vaporware programs, can no longer ignore the technology companies that have revolutionized so much of the world. The Pentagon has long relied on the incumbent Beltway-centric contractors, which build overpriced, underperforming, custom-made products.

And because of the Trump ascendancy, Palantir's quest is no longer such a long shot. Even before he took office, Donald Trump made headlines attacking Pentagon cost over-

runs for Boeing's new Air Force One and Lockheed Martin's F-35 fighter (although the reduced costs he then took credit for had already been negotiated). That ostensible interest in looking for economies could upend Pentagon procurement.

That's hardly a sure thing, of course. As we'll see from the Kafkaesque details of the Palantir saga, the power and persistence of those who like things the way they are has long been enough to outlast the outsiders.

THIEL AND THE GENERALS

PALANTIR STARTED OUT as an anti-fraud algorithm at PayPal. In the wake of the 9/11 attacks, PayPal cofounder Peter Thiel and Alex Karp thought it could be used to look for terrorists. The two, who

knew each other from their days as Stanford Law students, cofounded the company and named it after a magical all-seeing crystal from *The Lord of the Rings*.

They launched the company in 2004, in part with funds from In-Q-Tel, an investment arm of the CIA. Palantir says it enables non-techies to take all varieties of data and fuse them into one coherent picture that, as its marketing materials put it, "empowers people to ask and answer complex questions without requiring them to master querying languages [or] statistical modeling."

Thiel, who became a golden-touch Silicon Valley investor following the sale of PayPal, is lately best known as the man who financed the litigation that destroyed Gawker Media and as Donald Trump's Silicon Valley cheerleader and favorite high-tech adviser. Karp—a flamboyant figure who was featured in a *Fortune* profile last year leading some of the troops at the company's Palo Alto headquarters in a morning tai chi class—became Palantir's CEO. Thiel is its chairman. (Thiel declined to be interviewed for this article. Karp, who deferred to Philippone to discuss the company's fight with the Army, would only say via an email that he hopes "our actions help improve the procurement system for everyone.")

Almost since its founding—because of the CIA backing and because it focused at the beginning on getting contracts from the intelligence community—rumors and conspiracy theories have swirled around Palantir, includ-

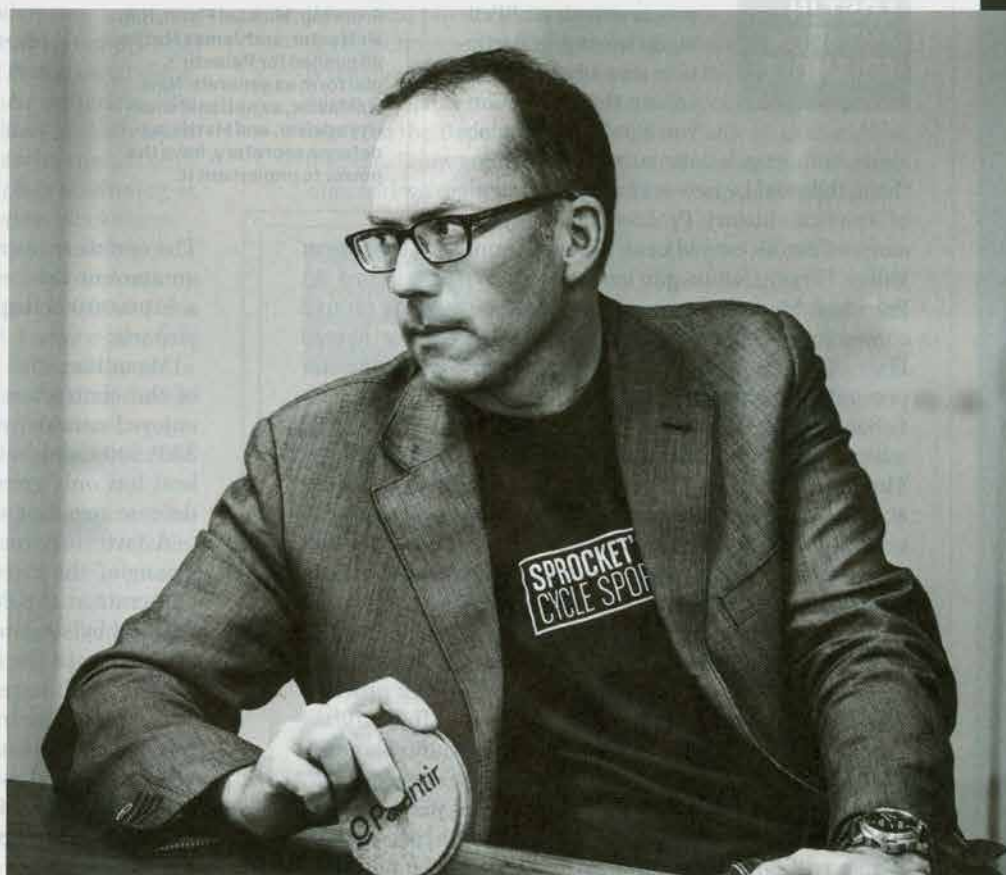
ing that its software helped find Osama bin Laden. (The company has repeatedly refused to comment about that.)

Palantir is now used by corporate clients for less exciting data analytics, ranging from fraud detection to supermarket-shelf positioning, and by governments and nonprofits for everything from coordinating disaster relief to identifying human traffickers. But the national security mystique around the company persists, heightened by the glow of a purported \$20 billion valuation that makes it one of Silicon Valley's hottest private ventures.

Given the Thiel-Trump connection, plus the fact that Thiel got Karp invited to a pre-inauguration meeting with Trump that otherwise included CEOs of technology giants that dwarf Palantir, one might think that Philippone's suit against the Army was a power play by an insider. Why worry about attacking the Pentagon if you've got a friend in the Oval Office?

In fact, Palantir has other connections who could turn out to be more crucial: Of the many generals, officers, and troops that the suit's complaint cited as praising Palantir's product, perhaps the most vociferous was a senior intelligence officer named Michael Flynn, who was widely respected on the battlefield in Afghanistan before he became famous as the loose cannon national security adviser who resigned after a chaotic 24 days in the post. Flynn's successor as national security adviser, H.R. McMaster, also requested Palantir for a task force he ran in Afghanistan.

Palantir's Douglas Philippone says the battle with the government became "so personal." His view of Pentagon procurers now: "You're either stupid or corrupt."



More important, a third general who became a Palantir fan early on was James Mattis. The Marines under his command ended up using Palantir and gave it great reviews, according to an internal Pentagon survey. Mattis is now secretary of defense.

So if Palantir succeeds in getting the Army to buy its product, it might seem that the fix was in.

That would be wrong.

Palantir's audacious suit against the Army began in February 2016, well before supporters like Thiel or Mattis had any juice in Washington and when few thought Trump had a chance of being elected. Cries of cronyism are likely to sweep through Washington if Palantir continues to prevail. But the Palantir story is about anything but that.

I've read all the documents in this case—briefs, exhibits, depositions—and interviewed key figures on both sides. In years of writing about legal disputes, I cannot remember one that was this one-sided. And one that so vividly tells a tale of long-running, systemic dysfunction when it comes to how the government spends money.

LOST IN THE IRON TRIANGLE

CALLING GOVERNMENT

procurement, and Pentagon buying in particular, a swamp is akin to calling the Grand Canyon a pothole. Scandals, along with regulations aimed at curbing them, followed by new scandals, are a staple of American history. Profiteering, cronyism, and turf battles caused near-starvation among the troops at Valley Forge. Cotton gin inventor Eli Whitney relied on President Madison's personal intervention to hang on to a contract to produce muskets. A Missouri senator named Harry Truman made a name for himself investigating war procurement abuses in 1941.

For decades the Pentagon buying machine has produced a bipartisan series of disasters with escalating price tags. The continuing money drain now occupies 3,000 people at the Government Accountability Office, which audits spending and operations throughout government agencies and issues more than 700 reports and studies a year citing management blunders and calling for reform.

The most notorious mega-fiasco is Lockheed Martin's F-35 advanced stealth fighter, the subject of Trump tweets before he was even sworn in as President. When procurement began under the Bush administration in 2001, the program was budgeted at \$233 billion for 2,866 planes. It is now expected to cost \$391 billion (68% more) for 2,457 (14% fewer) planes, with maintenance and parts over the life cycle of the program bringing the total cost to more than a trillion dollars. Each of the helmets the pilots use



From top: Michael Flynn, H.R. McMaster, and James Mattis all pushed for Palantir's platform as generals. Now McMaster, as national security adviser, and Mattis, as defense secretary, have the power to implement it.

on the F-35, with its array of miniature computer screens and projectors, costs \$400,000.

Whether it's the F-35 or any other program, the goal for Pentagon managers is always the same, says one GAO auditor: "Get a 'go' decision. Their careers are tied to that—putting a great new product out in the field. So their incentives," he explains, "are always to, first, present an estimate that is low enough that it doesn't get pushed behind some other program; second, to present really cool, cutting-edge features; and, third, have little enough actual knowledge of what it will cost and whether the features are achievable that you're not deliberately deceiving anyone. Once you get the project underway, it then becomes hard to stop."

The contractors don't object. Frank Kendall, who served as the Pentagon's undersecretary for acquisitions, technology, and logistics in the Obama administration, recalls that when he first reviewed the F-35 program, "I said, 'Who is running this, Lockheed Martin or us?' Once you begin production," Kendall explains, "it solidifies support, because you've spread the work out to lots of congressional districts... Everybody's happy." (For the F-35, Lockheed Martin involved hundreds of subcontractors in 46 states.)

A GAO report prepared during the first year of the Obama administration found that of the 63 largest Pentagon programs (all initiated before Obama took office), only 13 were on budget and on schedule.

The rest were over budget by a cumulative \$296 billion, an amount that would give nearly 3 million Americans a \$100,000 college education, or rebuild our 50 largest airports.

Meantime, the contractors have thrived. The stocks of the contractors delivering the 10 costliest programs enjoyed cumulative total returns that nearly tripled the S&P 500 index between 2002 and Election Day (and the lead has only grown since then on the expectation that defense spending will surge under Trump).

A favorite term to describe the problem is the "Iron Triangle," the three corners of which are acquisition bureaucrats at the Pentagon, the Beltway contractors and their lobbyists, and members of Congress and their staffs who listen to the lobbyists when funding has to be authorized (or increased when costs exceed the budget). "The reason the Iron Triangle always seems to win," says a veteran GAO auditor, "is that these people depend on each other and even may rotate from one place to another." As the auditor explains it, "It's not really a matter of personal corruption; it's just an insidious culture that is corrupting."

PALANTIR

**207,000
BUREAUCRATS,
THOUSANDS
OF PAGES OF
RULES**

THAT ALL SEEMS PRETTY GRIM. But it oversimplifies the problem, and it's not fair to the people involved, even the contractors. The Pentagon will spend about \$300 billion in the current fiscal year on outside goods and services, and it's not done with

the cavalier disregard that the phrase "Iron Triangle" suggests. Most of it is done by the books—and in fact one book is called the Defense Federal Acquisition Regulation Supplement (or D-FARS in the acronym-plagued building). It should be jaw-dropping to a freewheeling businessman like Donald Trump. It's so lengthy and spread among so many volumes and appendices that no one could tell me how many thousands of pages it is.

The big book is administered by 207,000 people—this is not a typo—who work in acquisitions and procurement. That's 43,000 more people than in the entire Marine Corps. The bloat is undeniable. But it's also true that these Pentagon legions are responsible for a portfolio of contracts and purchases that is multiple times larger than any corresponding activity in the private sector or in any other government.

At Fort Belvoir, Va. (as well as at 18 regional campuses), there is even a Defense Acquisition University that offers hundreds of classes, on topics such as applied cost analysis, small-business contracting, fraud awareness, making oral presentations, and "basic flowcharting." Last year, 150,000 acquisition specialists took the courses.

"The funny thing is that these are really good people," says Michael Sullivan, a veteran GAO Pentagon auditor. "They want to do the right thing. But their attitude is, 'We want the best weapons systems, regardless of the bottom line.' And we do have the best weapons systems... It's really a problem of culture. They see their job as winning at all costs and fighting off those who want to block them."

Four other factors make the process impossible to run like a conventional business. First, the taxpayers' money is at stake. That, combined with constant pressures from lobbyists and Capitol Hill on behalf of favorite projects, is what produces the paralyzing web of regulations. In theory, the rules are strict enough to preclude all discretion that might corrupt the process. In practice they enable misguided, unsure, stubborn, or biased procurement officials to justify any decision.

Second, the contractors typically earn much more than those who represent taxpayers on the other side of the table. That can produce a skills gap, or envy and a desire to please, or both. "We need sharp-penciled negotiators with an incentive to cut costs, but we don't provide those incentives," former Defense Secretary Robert Gates explains. "They'll go to work for a contractor some day, so they don't want to be perceived as a pain in the ass."

Third, there's the dynamic, not found in the private sector, that when the Pentagon thinks of a new plane or weapons system, it has to ask the vendors to invent something that only the Pentagon (and perhaps allied forces) will want to buy if it works. This means the suppliers have

the leverage and the justification to ask taxpayers to assume the risk of development. That busts many a budget, because no one can really tell how much time it will take to develop the new thing. And the contractor's incentive is to have it take longer and cost more. This is a key reason why buying an existing product should be preferred over making something from scratch whenever possible.

Fourth, when it comes to big projects that can take years to develop, requirements and technology can change. As anyone who's paid a contractor for a home improvement knows, change orders kill budgets and schedules. If you're building a fighter jet and missile-evading software suddenly gets better, you're not going to stick to the original plan. Software advances in particular outpace the five- or 10-year development path of a plane or weapons systems. It's impossible to imagine that kind of procurement not undergoing a rolling series of change orders.

Yet one reason the Palantir case is so pivotal is that taking advantage of new software doesn't necessarily mean spending more, especially if it's code created in Silicon Valley. The continual flow of software improvements also renders the buy-vs.-make decision more obvious: buying software that already exists and then licensing upgrades will almost always make the product cheaper and more up to date than embarking on a years-long development project using an architecture that may quickly become obsolete.

Ashton Carter, President Obama's last defense secretary, understands that. A Rhodes Scholar with a doctorate in theoretical physics, he served as undersecretary for acquisitions, technology, and logistics at the Pentagon and as deputy defense secretary before he assumed the top post. "Unlike when I began my career and the best technology was coming from the Department of Defense, that's all changed," he told me. "Now some of the best stuff comes from the outside, and we've sometimes been slow to acknowledge that."

**"I WAS
NAIVE,
STUPID."**

DOUGLAS PHILIPPONE would agree. Philippone joined Palantir in 2008, four years after the company was launched. A West Point graduate with a math degree and a master's in terrorist operations and finance, Philippone

did multiple tours in Iraq and Afghanistan and earned three Bronze Stars. He was so well regarded as an operational officer that on one occasion Gen. Stanley McChrystal intervened to prevent him from being transferred to a math-related position. As McChrystal wrote, "Doug is the single most aggressive and effective combat CDR [commander] I command." Philippone ended his career with three surgeries to repair his back. "I was an Airborne Ranger," he explains, "jumping out of planes and hunting terrorists. Being a parachutist that long beats down on your body." (He has recovered sufficiently to become an avid cyclist who competes in races in the Washington area.)

Philippone was finishing his recovery when a friend who was interviewing at Palantir called him excitedly. "He said, 'Holy shit,'" Philippone recalls, "if there was ever a company in the world that thought that a math-

ematician that hunted terrorists was a good combo... this is it. You have to check out Palantir.’”

Palantir had recently begun selling to agencies in the intelligence community. Philipponne's job was to go after a far bigger market: defense contracts.

“I was naive, stupid,” recalls Philipponne, whose blunt talk seems blunter because he usually speaks softly. “I figured I’d show this stuff to some generals who had been in the field and they’d have the same reaction I had when I first saw it: My jaw dropped, and I said, ‘I wish I’d had this in Ramadi.’”

What Philipponne and the other troops had tried to use was something called Distributed Common Ground System-Army. DCGS-A was supposed to gather different types of information on one platform so that it could be shared and viewed by commanders and troops in the field.

The first contract for development of DCGS-A was awarded in 2001. Among those who would share in the bounty were Lockheed Martin, Raytheon, and Northrop Grumman.

The Army’s website and those of the DCGS-A contractors celebrated DCGS-A as a breakthrough in battlefield intelligence technology. Raytheon promised that it was “capable of continuous on-demand intelligence brokering that will enable American and coalition forces to get the information they need to take action and influence events in hours, minutes, or even seconds.”

To most others that was a fantasy. “D-sigs [the nickname for DCGS-A] was a piece of shit, totally hopeless,” recalls a Marine captain who served as an intelligence officer in Afghanistan. “You had to toggle from one thing to the next. You couldn’t see anything as a whole,” he says. “It was completely nonintuitive. If you misspelled a name, it would not match up with other intel on the same guy or same place... You couldn’t download anything onto a thumb drive, so whatever information you recorded, no one else had, unless you happened to have a secure broadband connection, which you rarely did. It was all on your laptop, and if you left the field, the person who replaced you had none of it. Plus, it pretty much always crashed at some point when you did get a connection.”

Asked to provide an executive who could discuss the DCGS-A program and the criticism of it by troops in the field and by Palantir in its suit, Raytheon spokesman Michael Doble said

PALANTIR

Donald Trump with Palantir chairman Peter Thiel at a December meeting with tech-company leaders. Palantir CEO Alex Karp was also present, raising eyebrows about the relatively small company’s level of access.

his company would “pass on the opportunity.” (Northrop Grumman also declined to respond to criticism of DCGS-A, and Lockheed Martin vice president Rob Smith, who heads the unit overseeing the company’s participation in the program, would only say that “DCGS Increment 1 was developed by a team of contractors each delivering unique capabilities to the Army.”)

In 2008 the constant DCGS crashes plagued an Army private stationed in Iraq named Bradley Manning, whose job was to collect and make a record of battlefield engagements. According to a statement Manning later submitted in conjunction with the court-martial against him, he found the system so unreliable that he created his own backup disks of the information he was seeing from Iraq and Afghanistan, as well as diplomatic cables. Thus began the chain of events enabling the person now known as Chelsea Manning to transmit a trove of classified information to WikiLeaks.

“What I figured out soon after I started,” recalls Philipponne, “was that when it comes to procurement, there are two sovereigns at the Pentagon: the people who actually use the stuff in the field and the people who procure it—the ones you have to sell to—who don’t use it. I had no idea how to sell to them.”

Philipponne hired consultants and lobbyists to help him break through. But, he says, “they suggested we team up with Lockheed or Northrop or some of the others, who could sell it.” In those early discussions, he says, “we were told that the key is to focus on the technical requirements” that the procurement people spelled out. “They said, ‘Just give the government exactly what they want.’ We said, ‘That’s stupid.’ If they ask for a totally broken hippopotamus, we’re not go-



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ing to say, 'Yeah, we'll do that.'

Meantime, a series of appointments for Palantir to submit its platform for testing by the acquisitions staff were set up and then canceled. According to the subsequent court record, one official brushed off Palantir by suggesting that the company could more easily arrange a test if it worked for Northrop Grumman as a subcontractor.

Palantir added other consultants and lobbyists who had experience helping newcomers break into the Beltway club. Their advice was to get into the field and make modest sales directly to combat units below the Pentagon procurement bureaucracy's radar. "I told them to prove that people in the field loved it," says one lobbyist whose clients included SpaceX in its successful effort to break into the business of supplying rockets for the government.

Philippone and his team went off to the battlefields to make the pitch. Their first breakthrough was with a Special Forces unit in Iraq in 2009, which used its own discretionary budget to buy Palantir licenses for what Philippone says was less than \$100,000. By early 2010 a half-dozen other units (including one in the Army) had deployed Palantir in Iraq and Afghanistan, all by sidestepping the Pentagon budget-and-acquisition process.

As those initial small sales were being closed, Philippone came across a scathing attack on intelligence collection and dissemination in Afghanistan in an article published by the Center for a New American Security, a Washington think tank. The article, titled "Fixing Intel," charged that the Army's "vast intelligence apparatus is unable to answer fundamental questions about the environment in which U.S. and allied forces operate..." What was needed, the authors wrote, were "information centers" staffed by analysts who "must absorb information with the thoroughness of historians, organize it with the skill of librarians, and disseminate it with the zeal of journalists."

One of the critique's authors was McChrystal's deputy in charge of intelligence in Afghanistan: Lt. Gen. Michael Flynn. (Flynn declined multiple interview requests.) "I read that," recalls Philippone, "and knew that we had to get Palantir in front of this guy."

Flynn was so impressed when two Palantir reps in Afghanistan got in to see him that on July 2, 2010, he submitted a "Joint Urgent Operational Needs Statement," or JUONS, to the Pentagon, asking the Army to buy Palantir's offering for McChrystal's troops. A JUONS is a way for commanders to cut through red tape to get something imperative. "Intelligence analysts in the field do not have the tools required to fully analyze the tremendous amounts of information currently available in the theater," Flynn wrote. "This shortfall translates into operational opportunities missed and lives lost."

The Army—which by 2010 was spending \$550 million a year on maintenance and attempted upgrades of DCGS-A—rejected Flynn's plea. Procurement officials said that

**NUMBER OF PEOPLE
IN THE PENTAGON
PROCUREMENT
AND ACQUISITIONS
BUREAUCRACY:**

207,000

**NUMBER OF
MARINES CURRENTLY
ON ACTIVE DUTY:**

163,375

DCGS-A already did much of what Flynn said he needed and that improvements were on the way to provide the rest. The promised improvements were never delivered.

By the end of 2010, Palantir was supplying more than three dozen Special Forces and Marine units, and even some Army units using under-the-radar funding. But the Army continued to rebuff Flynn's pleas that his units be given the platform.

The list of supporters had grown to include James Mattis. Mattis was head of the Central Command (covering the Middle East, North Africa, and Central Asia, including Afghanistan and Iraq). A few of his units began using Palantir's product in 2010. In 2011 one of Mattis's colonels sought money to deploy additional Palantir

servers, writing that "Marines are alive today because of the capability of this system."

In 2012, Mattis had a general who ran the Marine Expeditionary Force in Afghanistan request funding for full deployment. In a memo to a Marine technical-support-funding office, the general wrote, "The innovative collaborative capabilities of Palantir have proven their mettle and effectiveness for conventional and special operations forces in combat." An elaborate PowerPoint presentation justifying the proposal mixed complaints about the incumbent DCGS platform ("not intuitive," "require extensive training") with highlights of the Marines' Palantir experience, such as "Our server at Delaram [an Afghan province] was online and operational within 1 hour of our plane touching down!" Ultimately, Mattis got Palantir for all the Marine units serving under him.

But the Army procurement bosses still resisted. All told, 28 urgent pleas from the field came in over four years. All cited the failure of DCGS-A and the success of Palantir, which was continuing to proliferate among Special Forces and other smaller commands.

Many of the requests were even blunter than Flynn's. "DCGS-A has continuously overpromised and failed to deliver on capability that will meet the needs of the warfighter," wrote an officer in the legendary 82nd Airborne Division. "Palantir actually works."

The response from the Pentagon acquisition bureaucracy was threefold: Palantir salesman were out there ginning up these requests (which was often true); Palantir couldn't do the job (which was contradicted by the success it was having among the units that used it, and which the acquisition brass would have no way of knowing because they had never tested it); and that DCGS-A worked fine and was in the process of being improved.

The pressure from the field became ammunition for Palantir's growing platoon of Washington lobbyists. Philippone and his staff often got copies of the email traffic going to the Pentagon, which their lobbyists passed along to staffers on Capitol Hill. Emails and memos—like one that saying "life and limbs" were being lost because of the DCGS—were hard for politicians in either party to ignore.

The Republican chairman and the senior Democratic member of the House Armed Services Committee wrote to Undersecretary Kendall, reminding him of all of the Army units that had requested Palantir because DCGS-A was not working. They cited two internal Pentagon studies that "have confirmed this assessment." One, from the Army Test and Evaluation Command, had concluded, they wrote, that DCGS-A suffered from "poor reliability" and was "not suitable and not survivable."

The committee chairman, Rep. Duncan Hunter (R-Calif.), a former Marine, says he became a believer during a congressional trip to Afghanistan, when he "saw DCGS turned off under people's desks. I asked about Palantir, and they all said they had heard about it from units that had it. They wanted it."

As the pressure from Capitol Hill increased, the Army promised to study Palantir.

"MARRY UP YOUR OBSERVATIONS"

THIS IS WHERE THE STORY begins to feel like the plot of a conspiracy thriller movie. In early 2012, Army Chief of Staff Raymond Odierno directed the same

Army Test and Evaluation Command (ATEC) that had done the mostly negative assessment of DCGS-A to evaluate the Palantir platform.

ATEC's April 2012 report, circulated internally as a draft, found that 96% of personnel using Palantir said it was effective and easy to use. The draft report recommended that the Army install Palantir servers.

But this version of the ATEC report was never issued. According to documents subsequently revealed in Palantir's litigation, copies of the draft report were ordered to be destroyed (one obviously wasn't and was produced in discovery). They were replaced with a new version that deleted the praise of Palantir's capabilities and the recommendation that the platform be installed. This was necessary, one email explained to the colonel who drafted the report, because there was "a sensitive issue with the G-2"—the Army intelligence unit that oversees the DCGS-A program—"about purchased systems in use that came outside the normal acquisitions process." The colonel was asked to "marry up your observations with those stateside."

A year later, in 2013, responding to more pressure from field commanders and Congress, the Army enlisted MITRE, a government contractor, to perform an independent evaluation of Palantir. MITRE produced a PowerPoint presentation of its findings—which were mostly positive, and included a declaration that, contrary to the Army's repeated insistence, the Palantir platform was interoperable with the databases and software used by DCGS-A.

However, following circulation of the MITRE draft, the study was canceled. No report was issued.

Instead, the Pentagon circulated reports on Capitol Hill, replete with detailed tables and diagrams prepared by the Army's acquisition office, that stated that Palantir was not interoperable and was incapable of doing what DCGS-A could do.

Much of the problem seemed rooted in the fact that Palantir was still not playing according to the rules and traditions of the club. When Philipponne and his staff showed up at the Pentagon for their initial meetings, for example, some wore their usual T-shirts, sneakers, and jeans. ("I told them not to dress like that," recalls one lobbyist.) And everyone, especially Philipponne, showed up with the attitude that the Army had spent years failing at data platforms, and that they could fix it all without some big, new development contract—the kind of contract the people on the other side of the table had devoted their careers to awarding and administering.

It added up to what one semi-sympathetic acquisitions Army staffer described, in an email to a Philipponne subordinate, as "an entrenched animosity" toward Palantir and toward Philipponne in particular.

"The Army," says Congressman Hunter, "is full of fiefdoms, where they all protect their people and their programs. Palantir had no chance. They were not the Army's kind of people. They weren't Lockheed or Northrop Grumman types."

In 2014, Palantir signaled its estrangement from the Beltway contractors on yet another front. Philipponne had originally set up shop in a part of Virginia lined with office buildings adorned with the logos of the defense industry's leading players. "It was always a culture clash," recalls one twentysomething staffer. Now the company moved its 300 local employees into a Georgetown building that sits across the street from the Potomac. With courtyards and food trucks outside and pool tables, quirkily named conference rooms, free drinks, pet dogs, and lunch at communal tables inside, Palantir had given up any pretense of blending in with the Lockheeds of the world.

BRIDGES TO NOWHERE

MEANTIME, Defense Secretary Carter was visiting Silicon Valley, declaring, "We're reaching out to America's wonderful innovative ecosystems... to build bridges... and inspire those innovators who want to make

a difference in our world."

Carter and Kendall, his undersecretary for acquisitions, were actually delivering a better bang for the taxpayers' buck on several fronts. By 2011 the F-35 program had largely been brought under control. More generally, the number of major acquisitions significantly above budget and behind schedule had dropped. "There have been real improvements," says the GAO's Sullivan. "They're much more careful about defining requirements, testing technology, and adhering to budgets than they used to be."

The improvements began soon after Obama took office and retained Gates as his defense secretary. Gates recruited Carter to run the acquisitions shop. Together, they got tougher on the Iron Triangle. "Some defense secretaries are happy if they are able to cut one or two programs," says Gates. "We cut 36." He did it by announcing most of the cuts at the same time, so the backers of each program couldn't claim to have been unfairly singled out, and, Gates recalls, "by ambushing people on the Hill;



I announced it while they were out of town.”

Gates and Carter had other kinds of wins too. In 2009, troops in Afghanistan were finding that the armored all-terrain vehicles that had been used in Iraq were vulnerable to improvised explosive devices embedded in the far different terrain in Afghanistan. Carter led an effort that cut through red tape to supply thousands of new MRAP (mine-resistant, ambush protected) vehicles within 18 months, all on budget. “The system was always suited to the lumbering pace of the Cold War,” says Carter. “Here, the key was agility and speed, so we worked outside the usual process.”

Which is what makes the next chapter of the Palantir story, beginning in 2014, such a jarring reminder that bureaucracy, especially one that’s part of the Beltway Iron Triangle, doesn’t yield easily. Even when the bosses want it to.

DEPLOYING THE NUCLEAR OPTION

BY DECEMBER 2014 it seemed momentum was moving against the DCGS. A GAO report noted that it required 80 hours of field training and even then was “not operationally effective or survivable.” Congressional pressure continued.

The Army, at long last, threw in the towel. Sort of.

Having spent nearly \$6 billion, it announced it was going to stop continued development and ask for bids on a contract for Increment 2 of the program. The message to Congress was that the Army was acknowledging the need to stop pouring money into Increment 1.

However, in a series of industry meetings to explain Increment 2, the message to contractors was that the Pentagon was going to ask for add-ons to the old thing to make it work better. Once again, the winning bidder would be

CEO Alex Karp leads Palantir’s staffers in tai chi. Employees there are known for an ardent, even smug belief in the superiority of their products, spawning jokes about a cultlike devotion.

paid based on how much time it took however many people the bidder decided to assign to build it from scratch—plus a negotiated profit margin.

Palantir sent letters to the Army urging a different approach. The initial messages suggested that there was a different way to do the project—that the buyers should explore whether Palantir and perhaps others had off-the-shelf products that could be adapted at a fixed cost and be delivered almost immediately. When they were ignored, the Palantir people became more strident. Finally, they wrote that the Pentagon’s repeated requests for information and descriptions of the work to be required “will lock the Army into an irrelevant and unusable ‘flagship’ intelligence architecture for the next decade.”

The Army responded to none of Palantir’s submissions. Instead, on Dec. 23, 2015, the procurement office formally issued its request for proposals to fulfill another open-ended, cost-plus development contract. One of the capabilities that bidders had to demonstrate was that they had in place an accounting system able to track the hours worked that would be billed to the government

as hundreds of staffers labored away writing the new software. Palantir, of course, had no such system because it charged a fixed price for its product, not for the time spent creating it.

Six weeks later, Palantir filed a protest with the GAO. It was a less formal and less expensive route than contesting the bid in the U.S. Court of Federal Claims.

The odds of winning were slim. Most of the approximately 2,000 GAO protests filed each year come from losing contractors claiming that some provision in the acquisition regulations was violated to their detriment. Many result in the equivalent of civil settlements, in this case agreements to modify a bidding process before a decision is rendered. But the overwhelming majority that continue as formal GAO protests—97% in the case of the Pentagon—are turned down.

Palantir’s claim was even more of a long shot. It did not allege a technical violation of the rules. Rather, it deployed a nuclear option of sorts: The protest challenged the process itself and the culture of government procurement. It demanded that the GAO get the Army to change what it was going to ask the bidders to bid on.

The company’s case rested on a law that seemed uncannily applicable to outsiders such as Palantir. In 1994, Congress had required the Pentagon to try to buy off-the-shelf software

before embarking on the kind of development odyssey the Army now seemed determined to pursue a second time.

The law's mandate seemed clear: "[A]n agency shall ensure that, to the maximum extent practicable," requirements in requests for proposals "are defined so that commercial items... may be procured to fulfill such requirements; and offerors of commercial items... are provided an opportunity to compete in any procurement to fill such requirements."

It seemed, at the time, that Congress had brought the hammer down on the make or buy issue, and was telling the government to buy existing products whenever it could. The House of Representatives committee considering the law issued a supporting statement that seemed to summarize the resistance Palantir would face 22 years later: "The Federal procurement system is still plagued with the all-too-common practice of buying expensive, specially designed products, when off-the-shelf, commercial products would do the job just as well."

Yet despite this seemingly unambiguous language and despite the fact that the Pentagon and other government agencies had awarded hundreds of development contracts in the 22 years since 1994, no one had ever sued the government for *not* following the law.

It wasn't that agencies like the Pentagon didn't routinely evade the law. It was that nobody had ever openly challenged it for doing that. The usual players vying for these contracts weren't about to object because they preferred the cost-plus, start-from-scratch development route. Even if they lost the bid, the odds were good that they would win the next one, or maybe even share in the proceeds from the current one by being hired as a subcontractor by the winning competitor. Conversely, the thriving outside-the-Beltway entrepreneurial software companies didn't think getting involved in a government procurement process was worth their trouble.

For Palantir, it was different. "For us, it was a much bigger fight than one contract," says Philipponne. "It was something we had to do."

In May 2016 the GAO turned down Palantir's protest, declaring that the statute requiring the Pentagon to consider commercial items nonetheless gave the agency the discretion to decide whether such commercial items met its needs. The statute nowhere reflects the GAO's conclusion that the Army had that kind of broad discretion, but the GAO typically avoids controversial de-

cisions in bid protests.

Palantir then upped the ante. The company turned to the high-profile firm of Boies Schiller & Flexner, run by famed trial lawyer David Boies. Boies (a friend of this writer) is known for, among other battles, suing Microsoft on behalf of the government, acting as cocounsel for the plaintiffs in the first Supreme Court gay marriage case, and representing Al Gore in *Bush v. Gore*. Behind those headlines, he has built a large, rich firm representing *Fortune* 500 clients, often being paid the kind of fat contingency fees sneered at by more traditional corporate lawyers. More to the point, Boies's firm—specifically, Washington-based partner Hamish Hume—had won Elon Musk's and SpaceX's battle to break into the Air Force's procurement competition for spaceships.

"We decided to go all in with Boies Schiller," says Philipponne, who estimates Palantir's bills from the firm as more than \$2 million so far. "We figured we had a 1% chance."

The result: a take-no-prisoners suit filed a month after the GAO decision, on June 30 of last year. The 81-page complaint attacked, even mocked, the Army's conduct: "DCGS program owners... have committed the Army to a failed procurement approach that is unlawful, that benefits no one but the incumbent defense contracting industry, that irrationally resists innovation from Silicon Valley, that wastes billions in taxpayer dollars, and that even risks the lives and effectiveness of our Soldiers in uniform." Adding a zinger to its complaint, the plaintiff in *Palantir v. the United States of America* accused the Army of having adopted "an attitude that effectively tells units in the field, 'Don't let your war get in the way of our program.'"

A Court of Claims case is mostly a dry set of briefs and hearings in front of a judge, who decides the case. The lawyers argue based on the paperwork developed during the bidding. But some limited discovery of new documents and even a few depositions of key witnesses for each side are allowed.

In this case, the new material—including internal

Philipponne (right) in Ramadi, Iraq, in 2005. Gen. Stanley McChrystal once called him the "single most aggressive and effective combat CDR [commander] I command."



Army emails that urged a lobbying campaign against Palantir and directed that the studies validating Palantir be shelved, and also the cross-examination of the Army's two expert witnesses during depositions—revealed just how defensive the Army and its lawyers were when it came to letting Palantir get a shot at the contract.

The Army's main defense was that it would have been happy to use fixed-price commercial software as the law requires, but Palantir did not meet the requirements it had laid out in its request for proposals. (For Palantir, of course, the issue was whether the requirements were written to exclude the company.)

Thus, one of the Army's two expert witnesses, who had submitted a declaration concluding that Palantir was unqualified, conceded when cross-examined that he had never considered whether Palantir could meet the needs of the program by making the modifications it always makes to its basic product when working with any new customer. Instead, the Army's expert said, he had been told to opine not on whether Palantir could fulfill the Army's need but on whether Palantir could fulfill the specified requirements—the ones, such as the accounting software, that Palantir claimed were written to exclude the company. He also conceded that he had "insufficient information" to know whether Palantir's platform could be tailored to meet the Army's needs.

This is the place where I should be quoting from the Army's legal filings attempting to rebut Palantir. I searched hard for the kind of pungent retort that makes most stories about high-stakes court cases like watching championship tennis matches. But there just aren't any good quotes. There are merely different versions of a vague argument that the 1994 statute required only that commercial products be used to the "maximum extent practicable." And that in this case the Army's judgment was that it wasn't practicable.

On Oct. 31, Court of Federal Claims Judge Marian Blank Horn ruled from the bench that she was enjoining the Army from going ahead with its bidding process and ordering that the process be restarted so Palantir and other possible commercial offerings could be considered. Citing "the failures to properly undergo an analysis [to] reach a considered commercial availability determination, and the unfortunate conduct of some of the Army personnel reflected in the administrative record," she ruled that the 1994 "statute is not meaningless, and there is a requirement to follow through with it."

"ARBITRARY AND CAPRICIOUS"

consideration. However, she refused to find that the Army had been operating in bad faith. The judge explained that the

JUDGE HORN later released a 104-page opinion detailing her conclusion that the Army had been "arbitrary and capricious" in not adhering to the law's requirement that commercial products be given priority con-

A GAO REPORT IN 2009 FOUND THAT OF THE 63 LARGEST PENTAGON PROGRAMS ONLY 13 WERE ON BUDGET AND ON TIME. THE REST WERE OVER BUDGET BY A COMBINED \$296 BILLION.

PALANTIR

limits of her court's process precluded an independent investigation, for example, of the Army's assurance that reports praising Palantir's offerings were not quashed out of any bias. What the Army did was wrong, she ruled, but she could not conclude from the unresolved, dueling accounts that it been done in bad faith.

"No one is ever the bad guy in their own narrative, and these people are not the bad guys in their story of what happened," says one of Palantir's lobbyists, who has extensive military experience. "They are true believers in their way of doing things."

One of those true believers was the Army official in charge of the DCGS-A procurement, Katharina McFarland, who was the Army's acting assistant secretary for acquisition, logistics, and technology. McFarland retired last fall after 30 years in the armed forces, having begun as a Marine Corps engineer, ascending to run missile technology procurement, and later serving as president of the Defense Acquisitions University. McFarland says she is retiring for real, not going off to some defense contractor. And she has a string of commendations and admirers collected over the past three decades that demonstrates her commitment to public service.

She spent an hour with me proudly talking about how she and the higher-ups on Ash Carter's team—including her former boss, Frank Kendall—had brought a "revolutionary, intellectual approach" to spending the taxpayers' money. Cost overruns on many big projects had been reined in. Planning and testing before production had become more rigorous. Acquisitions officers were being required to ask what something "should cost," not what the contractors proposed it would cost.

McFarland lit up when she realized I was aware of all this. But her tone changed when the Palantir case came up. "You really don't understand," she began, her smile disappearing. "These people came in and said, 'We have our own business model and we're going to fight to the death for it.' That's not what you do around here. We have rules that we have to follow... We've been doing this for a long time, and we've seen people like them come and go."

What about their claim that the Army's requirements had excluded them? "So what?" she replied. "Our commanders know the requirements, and that's who we listen to."

What about the commanders who had begged to get Palantir? "So, they had salesmen in the field who pushed a few people. That's not something we respond to."

The day after we met in mid-January, McFarland's former boss, outgoing Undersecretary Kendall, told me when I asked about the Palantir case that, in retrospect, he thought that "the Army did not do a good enough job of analyzing what was out there in the commercial market" and that there is "too much rigidity in the system" when it comes to setting requirements. Five days later, his boss, then-Defense Secretary Carter, said he agreed with Kendall's assessment and that "if disruptive companies disrupt us, that's going to be uncomfortable, but we have to do it."

I emailed McFarland to get her comment about Kendall's concession that Palantir may have been unduly shut out. "I don't know what else to tell you," she replied. "I am limited in my knowledge to the engineering, and I shared what I could given the legal limitations I have post employment... Now the Army has to act on the court decision... hope it doesn't hurt the Soldier." In a second email, she added, "I really believe there is no story here other than politics trying to overcome the policies demanded by the Federal Acquisition Regulation."

Although only one reporter (from Bloomberg News, which, along with *Wired* and *Politico*, has followed the case assiduously) was in the courtroom the morning that Judge Horn ruled, the Court of Claims case was a big deal. Not only because of its multibillion-dollar ramifications—again, Philipponne claims Palantir can do for "about \$100 million a year" what the Pentagon seemed poised to spend another \$6 billion on. But also because if Palantir and its often equally arrogant compatriots across the new technology world are half as good as they think they are, the decision threatens the entire Beltway spending culture while offering the promise of better tools faster.

Despite their retroactive regret, Kendall and Carter did nothing to fix the DCGS-A bidding process. It took Palantir's impolite litigation to mount a real challenge.

But has Palantir really won? The Court of Claims decision requires only that the Army go back and make a more demonstrable effort to consider alternatives such as Palantir. After the suit began, Palantir's lobbyists persuaded Congress to write a requirement into the current defense appropriations law intended to force the Army to use a commercial product for any new intelligence platform, but only for smaller military units of the kinds that Palantir was already serving. As for the macro-project that is the subject of the court's order, "they can still screw us on the requirements," says Philipponne. "Or just accept our bid, then decide against us."

That's true, as is the fact that the Army could decide to appeal the Court of Federal Claims ruling and somehow get lucky in the Court of Appeals for the District of Columbia. Indeed, just before Trump's inauguration, the Justice Department filed notice that it would appeal. Philipponne and his lawyers speculate that the filing was a placeholder pending a decision by the new administration about whether to continue fighting the decision. When asked in February if the Army would proceed with the appeal in light of the fact that the new defense secretary was among those who had championed Palantir, the chief bid protest lawyer for the Army's Legal Services Agency, Scott Flesch, declined comment. *

The court proceedings would be moot if Defense Secretary Mattis instructs his procurement team to consider Palantir. Mattis (whose office said he would decline comment for this article) wasn't asked about Palantir during his confirmation hearings. But, in a written response to a question about procure-

ment, he said that the Defense Department "should not waste time and money trying to duplicate capabilities that already exist on the commercial market."

Mattis and National Security Adviser McMaster—who had requested Palantir's platform when he was a field commander—now report to and advise a President who loves to be a disrupter, who prides himself on cutting the best deals, and who consults on technology with Palantir's founder and chairman, Thiel.

TRUMP AND THE PENTAGON

TRUMP, SO FAR, has given no public hint of a position on the dispute. Lindsay Walters of the White House press office told me the President would not be available to discuss the case or his approach to defense

contracts. In February, Trump included a \$54 billion increase for the Pentagon, a 10% hike, in his budget proposal. Normally that would not be a good sign that a Commander-in-Chief is interested in being budget conscious. On the other hand, he has tweeted repeatedly about the cost of the F-35 and Air Force One and had his ostentatious meetings with the CEOs of the two companies producing them (Lockheed Martin and Boeing). What's more, he has promised that with a premier dealmaker at the helm, the government is going to be much smarter when it comes to writing checks.

Whether Trump is serious and, if so, whether the Iron Triangle can ultimately beat him back remains to be seen. But with a judge having ruled in Palantir's favor, and with its boosters being so close to Trump, the Palantir-Army fight seems to be the most likely instance where Trump will keep that promise. He or Defense Secretary Mattis simply have to tell the Army not to appeal a losing case and to do what the Court of Claims ordered. In other words: Give Palantir a fair chance.

The more important question is, What happens after that? Will Palantir's victory become, as Philipponne says he hopes, the case that finally forces the government to buy superior products from private-sector technology companies rather than pay Beltway contractors to make products from scratch that rarely meet projected costs or work as planned?

History suggests the odds are steep. In 2010, J. Ronald Fox, a Harvard Business School professor who has spent much of his career studying Pentagon procurement, wrote a book about taming the Pentagon's checkbook. "Since 1959, seventeen Defense Secretaries have made commitments to bring about effective and efficient management of the defense acquisition process," Fox concluded. "Indeed, each has taken specific steps to identify problems and initiate improvements. But each has left office before reform implementation has become institutionalized." Palantir may prevail in this instance, but it will take a lot more than one defeat to break up the Iron Triangle. ■

"THESE PEOPLE CAME IN AND SAID, 'WE HAVE OUR BUSINESS MODEL, AND WE'RE GOING TO FIGHT TO THE DEATH FOR IT,' SAYS THE ARMY'S FORMER PROCUREMENT CHIEF. 'THAT'S NOT WHAT YOU DO AROUND HERE. WE HAVE RULES THAT WE HAVE TO FOLLOW.'"

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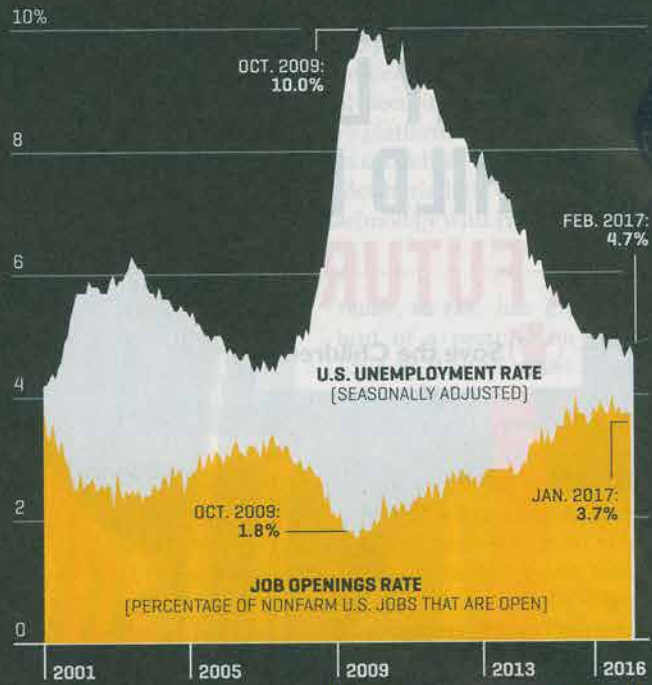
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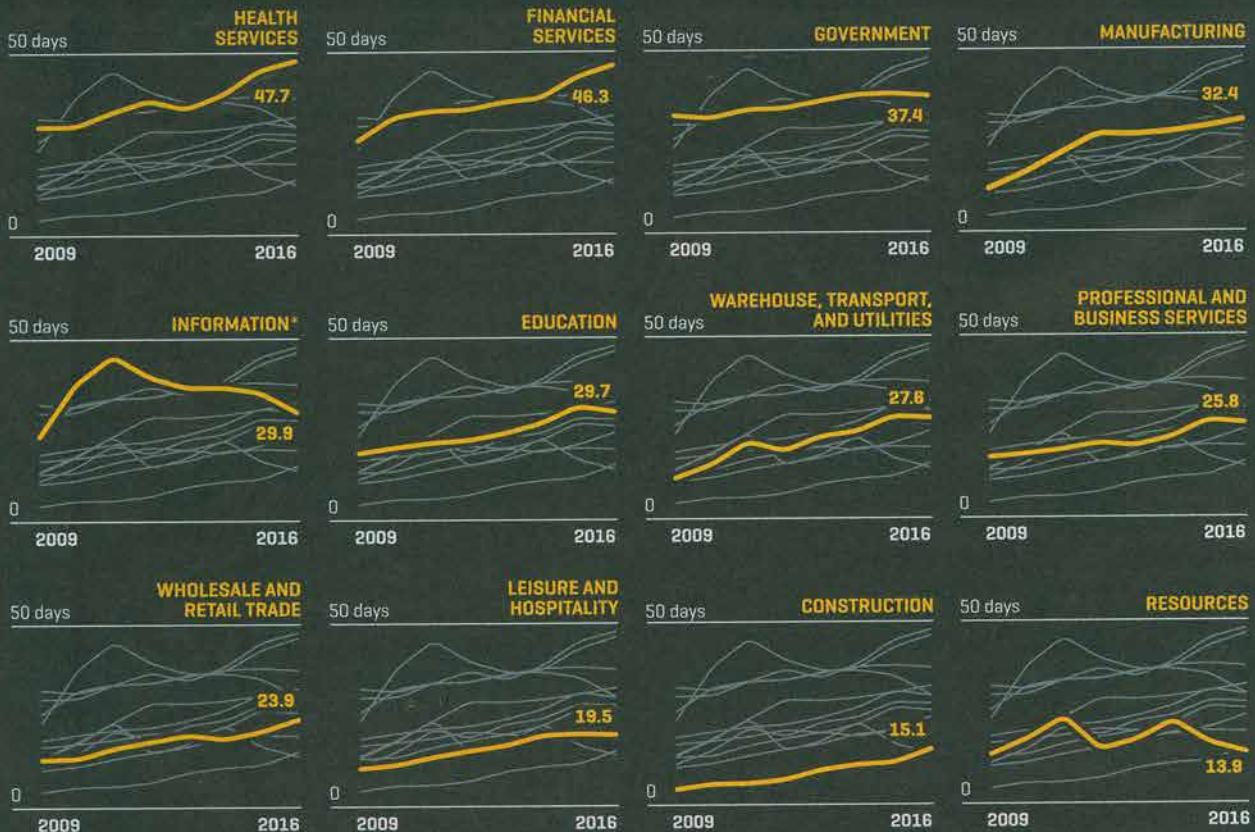
*Child's name changed for protection. ©2017, Save the Children. All rights reserved. Photo: Louis Leeson.

IT'S GETTING HARDER TO HIRE

IF THE U.S. IS NOT at full employment, we are surely close to it. So says Steven J. Davis, a business and economics professor at the University of Chicago and the cocreator of tools measuring labor-market tightness for data provider DHI Group. In recent months the U.S. unemployment rate has hovered at lows last seen before the Great Recession. The percentage of jobs waiting to be filled, meanwhile, is close to eight-year highs. DHI data shows that the time it takes to fill open positions has been on the rise in most industries, suggesting increased competition for top-flight workers. For employers, that means upward pressure on wages. —BRIAN O'KEEFE



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