

The background of the entire image is a vibrant, futuristic digital landscape. It features a hand reaching up from the bottom right, holding a glowing blue globe with circuitry patterns. The scene is filled with glowing blue and red lines, binary code (0s and 1s) floating in the air, and a city skyline with illuminated buildings visible in the lower half. The overall color palette is dominated by blues, purples, and oranges.

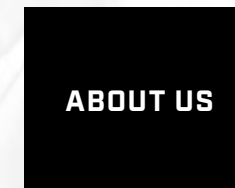
THE GREAT TRANSFORMATION

A Field Guide for the Next Economy

FUTURE CRUNCH

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THE GREAT TRANSFORMATION

WE LIVE IN EXTRAORDINARY TIMES.

THE WORLD IS CHANGING AT SUCH A RAPID RATE.

Information pours onto our screens at unparalleled speed, office buildings are no longer the places where work gets done, entire cities are now powered by the wind and the sun, and we are manipulating the code of life itself to cure disease.

Technology, once a sector on its own, has become a layer across every aspect of the global economy.

AS WE TRANSITION FROM AN INFORMATION POOR BUT PREDICTABLE WORLD, TO AN INFORMATION RICH, BUT HIGHLY UNPREDICTABLE ONE, A NEW WAY OF DOING BUSINESS IS BEGINNING TO EMERGE. IT IS NOT BUILT ON THE PRINCIPLES OF EFFICIENCY, OR EVEN SUSTAINABILITY, BUT ON ADAPTABILITY.

History is full of tumultuous moments like this, inflection points that represent a gateway between one world and the next. There are different names, different ideas, for what lies on the other side.

*Build back better;
The next economy;
The fourth industrial revolution.*

*For us, it's even bigger. We call it
The Great Transformation a once
in a hundred-year revolution in
every industry at once.*

What happens next is not a foregone conclusion. Nor is it the dystopia your newsfeeds would have you believe. It's an opportunity to redefine what business is for, and it will be decided by the actions, mindset and courage of today's leaders.

It's time to explore the frontiers of technology, science, political economy, management and social theory, to gather the information we need to make this leap. If we want to change the story of the human race in the 21st century, we have to change the stories we tell ourselves.





INTELLIGENT OPTIMISM

Bad news is viral. Fear and negativity spread through the world's digital networks far quicker than hope and optimism. This is an ancient, evolutionary truth that is on full display right now, and while the risks are real, fear rarely produces good solutions.

The challenge for leaders and organisations is to access reliable information and act responsibly, and yet maintain an attitude we call, Intelligent Optimism.

Intelligent Optimism is not unbridled optimism. There is nothing naïve or simplistic about it.

Intelligent Optimism is a choice, inspired by stories of human progress and environmental stewardship, and informed by today's incredible advances in science and technology. It encourages leaders to take a long, hard look at the current operating environment and say, "we can do better."

Within the kernel of every crisis lies an opportunity. Intelligent optimists don't ignore the problems we create; rather, they imagine improving our capacity to solve them.

In a world where the old rules have been turned upside down, there is an unparalleled opportunity for leaders to harness the forces of technology and narrative to drive cultural and economic change. The key that opens the door to business success is the same as the one that drives progress for people and the planet - creating more value than we capture.

Only then, can we step into a new era that works for all.

*You have to be able
to hold two ideas in
your head at once.
The world is getting
better, and the
world is not yet good
enough.*

- HANS ROSLING

THROUGH 2030, THE TIME SPENT USING ADVANCED TECHNOLOGICAL SKILLS WILL INCREASE BY 50% IN USA AND BY 41% IN EUROPE.

BY 2030, DEMAND FOR SOCIAL AND EMOTIONAL SKILLS WILL GROW ACROSS ALL INDUSTRIES BY 26% IN THE USA AND 22% IN EUROPE.

- MCKINSEY GLOBAL INSTITUTE

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THE TOOLKIT


The future of work is already here, ushered in ahead of schedule by a global pandemic. As we move through the Great Transformation, leaders need to rethink how work is organized within their company, what new skills they need to personally acquire.

We've all heard that technology is paramount, that culture eats strategy for breakfast and that both hard and soft skills matter – but what are these skills and how do they help leaders adapt to the unknowns of the future?

The Great Transformation is underpinned by Nine Technology Trends. Successful leaders need to understand how they work in order to harness

their powerful effects for innovation. There will be a substantial increase in demand for teams with hard skills across these different technological frontiers, and leaders who understand that what really matters is not the technologies themselves, but what they choose to do with them.

Simultaneously, the demand for soft skills - finely tuned social and emotional prowess - will increase, with a shift towards higher cognitive skills. **We call these the Nine Human Skills.** In a world where technology is a layer over everything, these skills, the ones that make us uniquely human, will become our biggest assets. While some of them are innate, others can be taught and honed.



The possibility for utopia is still here: we are powerful thinkers, and we can think our way out of this crisis by using such technologies as language, the rule of law, the scientific method, and justice. Because technologies don't just involve machinery. Technology is the full spectrum of ways we organize our relationship to the natural world.

-KIM STANLEY ROBINSON



9

**THE NINE
GLOBAL
TECHNOLOGY
TRENDS**

CONNECTIVITY

*The mobile revolution,
global connectivity*

1

Over three quarters of adults on earth have a smartphone. This is the quickest and biggest technological uptake in human history. It's created a new digital form of globalisation, opening the door to developing countries, small companies, start-ups and to billions of individuals. The coronavirus pandemic has only accelerated this trend – in areas like remote work and e-commerce, we've seen ten years of technological adoption crunched into one.

Payment technologies extend the web of global finance to every corner of the world, satellite imagery and connected sensing devices give us eyes and ears everywhere and cloud computing has shifted the power of change into the hands of billions of individuals.

DIGITISATION

*Remote work, e-commerce,
fintech, blockchain*

2

Value is shifting from physical and social assets to digital assets, with data flows now driving more global GDP growth than the world's physical goods trade. The power of digital technologies is that they create a universal language: information, ideas, behaviour and representations of the physical world can be stored, analysed and shared on a mass scale.

This is why seven of the world's ten most valuable companies are now tech companies. We've already seen the disruption of the media, retail and transportation industries. In the next decade, we will see similar disruptions in the finance, property, legal, and healthcare industries.

DIGITAL ASSETS NOW
ACCOUNT FOR ALMOST
20% OF GLOBAL GDP.

- WALL STREET
JOURNAL

COGNITION

*Artificial intelligence,
machine learning*

3

Artificial intelligence is arguably the single most revolutionary technology trend in the world right now. AI (or 'machine learning') is the combination of self-learning algorithms with computer systems able to perform tasks that normally require human intelligence. AI isn't coming. It's here.

From route-finding, language translation and biometric identification, to political campaigning, industrial process management and food supply logistics, AI now saturates the modern connected world at multiple levels. Successful organisations understand that just as digital technologies became a part of every business in the last three decades, cognitive technologies will do the same in the decades that lie ahead.

SIMULATION

*Virtual reality, augmented reality,
mixed reality, digital twins*

4

As devices become exponentially more powerful, and increasingly intuitive, new ways of interacting with machines are quickly evolving. These include virtual reality, which enables users to immerse themselves in a digital environment; augmented reality, which overlays the real world with digital information and images; mixed reality, which is a seamless blend between the real and digital worlds; and digital twins, which are virtual replicas of physical objects or systems in the real world.

These 'simulation' technologies run the entire spectrum from the real to the virtual and are set to revolutionise every industry from gaming and travel to healthcare and education.

*Software might be
eating the world but
AI is going to eat
software.*

- JENSEN HUANG

5

MANIPULATION

Additive manufacturing, material sciences, nanotechnology

The digital revolution is changing the way we make things. Recent advances will make additive manufacturing and nanotechnology powerful competitors to conventional mass production. Easy-to-change software means advanced manufacturers can turn out one-off items and prototypes with the same equipment and materials needed to make thousands.

New technologies are capable of extending manufacturing's reach into matters biological, and all the way down to the microscopic and nano scales. Economies of scale and design restrictions are disappearing, resulting in higher productivity, lower lead times, less supply chain risk and less environmental and financial costs.

AUTOMATION

Robotics

Improved power systems, new materials, advances in computing, manufacturing and new, better algorithms are accelerating robotics. Robots are becoming faster, stronger, cheaper and more perceptive, allowing them to interact dynamically with their surrounding environments and carry out complex tasks. We are moving into a highly automated world.

In the same way that smartphones became widely available in the last decade, robots will become cheap, easily accessible and deployable for everyone in the next. These technologies will minimize human intervention in areas we previously thought could never be automated - for example, driving a car, building a house, or delivering packages.

6

DECARBONISATION

Renewable energy, electric vehicles, zero-carbon construction, sustainable agriculture, circular economy

7

We are in the midst of the greatest energy transition of all time. The race to limit climate change and prevent ecological collapse means that decarbonisation is happening far quicker than anyone predicted. The high-carbon economy of coal, oil, cars, cows and logging is being replaced by a low-carbon one of solar, wind and storage; greener construction; electric transportation systems; circular supply chains, sustainable and regenerative agriculture, and ecosystems treasured for what they truly are — the source of all life — rather than just providers of economic services.

If we can change the climate of the world by accident, imagine what we can achieve by trying?

- BJARKE INGELS

EVOLUTION

Biotechnology, genetics, microbiomics, CRISPR, precision medicine, brain machine interfacing, life extension

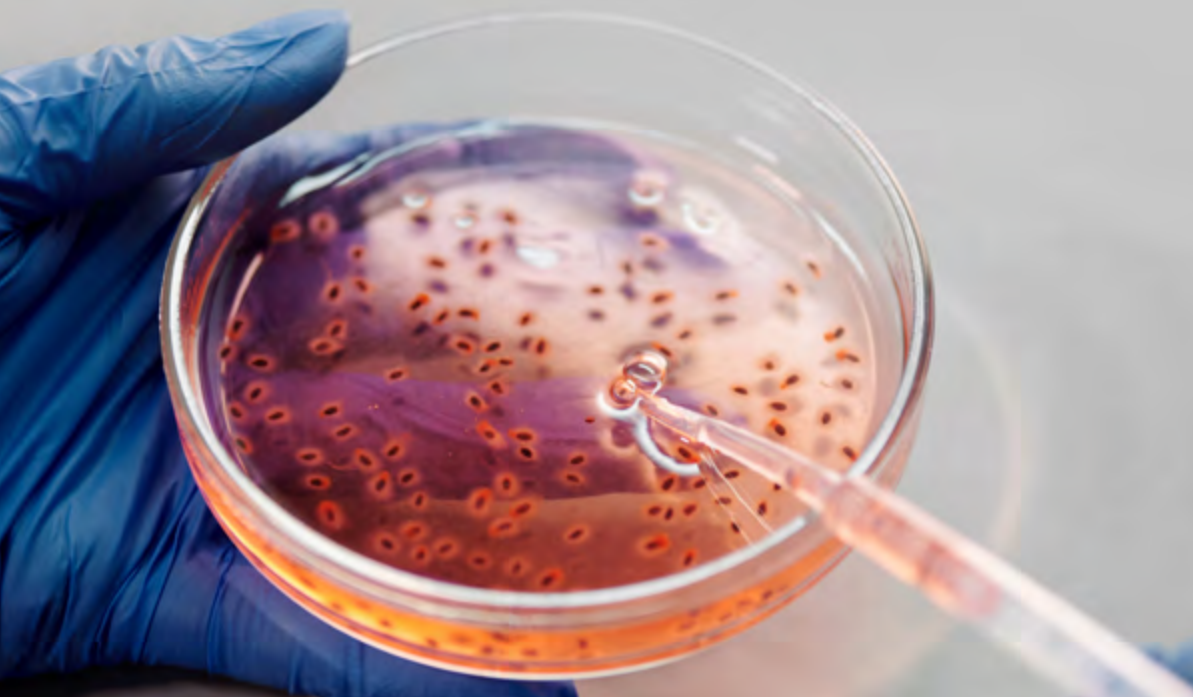
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A transformation of medicine is underway. We are moving from the science of treating disease to one of preventative health. Thanks to incredible technological advances we can now decode the human genome, cut and paste our own DNA, and connect digital technologies to the human brain. Our ability to manipulate the code of life is upending previously age-old ideas around what it means to be human, and a new range of external and implantable brain-machine-interfacing-devices are creating new forms of biological and chemical enhancement that will greatly enhance people's intellectual and physical capabilities. The age of personalised medicine is dawning.

Biotechnology today is where information technology was 50 years ago: on the precipice of touching all of our lives.

Biotechnology is not an industry vertical; it will be a part of every industry.

- ANDREESSEN
HOROWITZ



9

REORGANISATION

Remote working, gig economy, sharing economy, technological unemployment, basic income, agile product development, team of teams

As work becomes increasingly digitised and, in some areas automated, a new organisational model is experiencing success. Smaller, more mobile, modular teams prioritise adaptation over efficiency, and diversity over groupthink. Skills such as communication, collaboration and creativity provide more effective pathways to success.

Effective 21st century organisations have more highly developed research and development arms, are obsessed with user experience and customer satisfaction, and focus on fostering productive internal cultures. They create iteratively better projects, using agile and lean methodologies. They have incentive systems for employees to create the best products.

Perhaps most importantly, today's most successful firms understand that the most important skills are the human ones, allowing their people to work together—**because in the next economy, collaboration always trumps genius.**

9

THE NINE HUMAN SKILLS

The fact is that the kinds of “soft skills” we’re talking about aren’t the ones that come for free to anybody; they’re not the things taught in “manners classes” or in fraternity hazings. They come from studying people, paying attention to them, and understanding what they need even when they can’t express it themselves—and as such, are as brutally difficult a set of skills to acquire as any other professional expertise.

- YONATAN ZUNGER



WHEN INDIVIDUALS WERE COMPARED BASED ON THEIR INITIAL LEVELS OF OPTIMISM, RESEARCHERS FOUND THE MOST OPTIMISTIC MEN AND WOMEN DEMONSTRATED, ON AVERAGE, AN 11-15% LONGER LIFESPAN.

- BOSTON UNIVERSITY SCHOOL OF MEDICINE

INTELLIGENT OPTIMISM

1

The mindset flip

Diseases are being eradicated, war is decreasing, millions are being lifted out of poverty and billions are gaining access to the greatest information resource humanity has ever known. We can control robots with our minds, use machines to translate any language, cut and paste our own DNA, and we're taking brave new steps into space. The problem is, we're just not hearing a lot about it.

We know many of the challenges we face. Intelligent optimism is part of the journey into how – with boldness, creativity, and revolutionary technologies– we are rising to meet them. Intelligent optimism moves beyond the problems, considers the facts and then looks for new solutions to our challenges. It's a mindset flip that's proven to improve productivity and longevity.

PURPOSE

2

Driving organisational transformation

There has never been a more poignant time to embrace purpose driven organisational transformation. With disruption and digitisation, the war for talent, the emerging gig economy and ongoing global crises, business needs to be good for your people and good for the world. Workplace cultures that focus on metrics rather than meaning will struggle to respond strategically as AI and machine learning emerge.

Purpose is a transformational tool based on intrinsic motivation, enabling individuals and organisations to harness adaptability, build resilience, and pioneer unwritten futures. Put simply, purpose is what determines our willingness to adapt and evolve.

CREATIVITY

The essential fuel

3

Creativity is the ability to combine two previously unrelated concepts. This is what fuels start-ups and sustains successful global companies. It is an essential driver of the Great Transformation. Creativity is defined by our ability to unlock hidden information, and to spot patterns or processes to create new solutions and foster possibility.

The complexity of our current global and economic challenges requires organisations to influence stakeholders and shareholders with new and imaginative solutions. Conventional thinking will not solve the problems we face.

NARRATIVE

The most human skill of all

4

Humans are born storytellers. Our brains are hardwired for it. We build empathy and connection through shared narrative which makes story the ultimate tool for influencing others. If you can emotionally connect people to your message, you have the power to rally them to action. However, this is only one side of the narrative coin. We are also story listeners and it's easy to feel like we're drowning in a chaotic stream of news, tweets, posts, articles, and messages.

Now, more than ever, we need to control how information comes through to us and the quality of what we consume. Successful leaders therefore need to rethink their digital input and form a dietary philosophy for the consumption of information.

When I am working on a problem, I never think about beauty but when I have finished, if the solution is not beautiful, I know it is wrong. We are called to be architects of the future, not its victims.

- BUCKMINSTER FULLER



DIVERSITY

The power of un-like minds

5

For any ecosystem to thrive in the natural world, it must be diverse, and the same is true for our organisations. These differences can include our cultural background, class, age, political affiliation, brain structure, sexual orientation, race or gender, or in the way we think and express our opinions. Diversity by design is more than ticking quotas, it's about making diversity structural, so it becomes part of the foundation of a company rather than an 'add-on'.

Evidence shows that when diversity becomes part of a company's design, performance, efficiency and innovation thrive. The organisations that will thrive in the 21st century will be those that harness the power of unlike people, and unlike minds.

COLLABORATION

Collaboration trumps genius

6

Technology is forcing change in every part of business and society. No organisation is immune. We're seeing a move from large, 20th century style organisations that relied on economies of scale and well-defined hierarchies, to 21st century organisations that are mobile, modular and dynamic.

These are seamlessly networked organizations that use agile management practices with a culture of trust, delegation and collaboration. They are able to move and innovate more rapidly than traditional managements that are saddled with legacy cultures of hierarchical bureaucracy, slow-moving processes with approvals up and down the chain, and the structural barriers of organizational silos.

Alone we can do so little; together we can do so much.

- HELEN KELLER

For over a century, we've focused too much on relentless execution and depended too much on fear to get things done. That era is over.

- AMY EDMONDSON

WELLBEING

High performance leadership

7

To lead high performing teams and companies, you need to become a high performing leader. Working harder and longer can be counterproductive in an ever-changing and unpredictable business environment, leading to poor performance and burnout. Your organisation and team are directly affected by the energy, stress, mood and focus you bring to the table each day and your performance will rise and fall depending on the levels of stress and rest applied to your life.

Great leaders proactively manage their energy by resetting their rest to work ratio. Planning and scheduling rest and recovery on a daily, weekly, monthly yearly and even a whole career basis creates the renewable energy needed to thrive. Workplace wellbeing goes beyond trendy labels and external programs to a full integration of wellbeing into the design of work itself.

COURAGE

Unarmoured leadership

8

The greatest barrier to courageous leadership is armour. Armour is the fortified combination of thoughts and behaviours that we use to protect ourselves when our authority is challenged or the ground beneath us shakes. For many years 'armoured' leadership has operated as the default model, based on control, hierarchy, certainty and efficiency.

However, as the world becomes increasingly unstable, we need leaders who can foster courage and curiosity, who value getting it right over being right, who value asking better questions over giving the best answers, who listen and lean into uncertainty. Courage in the workplace is contagious – it gives others around you permission to remove their armour too.

ADAPTABILITY

The new competitive advantage

9

What's the key quality for success in this world of constant change? You've heard of IQ and EQ; this century belongs to those that are quick to read and act on signals of change. People with a high Adaptability Quotient (AQ): the ability, innate or learned, to thrive in unpredictable environments. Instead of being really good at doing one thing, adaptive people are really good at learning how to do new things.

AQ is what the Harvard Business Review calls, "the new competitive advantage." The latest insights from the worlds of technology, neuroscience and management suggest that the best predictor of success is how individuals and organisations embrace rapid experimentation and adaptable thinking. Understanding what it takes to foster AQ and how to identify it in others can be a superpower for anyone looking to maintain an advantage in the next economy.



LEADING QUESTIONS

OPTIMISM

Intelligent optimism is a mindset flip, the juggling act of holding reality in one hand, possibility in the other and asking "what's next?" It's an understanding that our greatest problems are our greatest opportunities. **Where am I looking at problems and not at solutions?**

PURPOSE

Most companies are founded on idealism, but as they grow, they take more out of the ecosystem than they give back. To sustain purpose in the unwritten economy, return on impact is paramount. **Am I creating more value than I capture?**

CREATIVITY

We don't lack the means to solve the world's biggest challenges, but rather the imagination. Creativity is one of our most powerful human advantages. We should use it. **How can I tap into creative resources to solve a current problem?**



NARRATIVE

The stories we tell ourselves today create the reality we live in tomorrow. We need to tell them wisely, compassionately, and beautifully, in order to capture the attention of people who matter. **What story am I telling myself about the current environment and what future narrative am I creating?**

Our bodies and brains are not evolutionarily equipped to process the amount of information we're consuming. And despite the volume we consume, we're deficient in good quality evidence-based information. **What is my information diet and how does it need to change?**

DIVERSITY

The core truth of the natural world is that to have a thriving ecosystem, you must have diversity. The same is true for the ecosystem of humanity and business. It's time to restore the vibrancy of our organizations. **Is your organization diverse by design and if not, how can it be redesigned?**

COLLABORATION

In the unwritten economy, collaboration trumps genius. As the rate of change and technology continues to accelerate, remaining in our silos and echo chambers only limits our potential. **What is one problem that could be solved by going outside your industry?**



WELLBEING

The secret to sustainable energy over your workday and career is not about working longer but working smarter, managing energy flows and prioritising rest and downtime. **What habits and routines do you need to break or create to enable productivity and performance?**

COURAGE

Courage underpins one of the biggest revolutions in leadership. It's rarely a one-off event. Instead, courage is cultivated through a constant, conscious practice of showing up in the face of risk, uncertainty and exposure. **How can I create a daily practice of courage? When do I reach for my armour?**

ADAPTABILITY

Adaptability is the essential skill for navigating the Great Transformation. To thrive in unpredictable environments you need flexibility to respond to changes and challenges. **Am I willing to show people that I have changed my mind?**



LEADERSHIP

A CALL TO LEADERSHIP

The Great Transformation is a revolution in the scientific and technological foundations of the modern economy, harnessed for the betterment of people and the planet by a tribe of dynamic leaders with a new vision for the role of business.

These are the kind of leaders who place purpose above profit, and create the future by making it, rather than predicting it. Leaders who use fierce, intelligent optimism as a call to arms, and who use technology in service of humanity, not against it.

*If not us, who?
And if not now, when?*

- JOHN E. LEWIS

PEOPLE WHO UNDERSTAND THAT:

Leadership is the courage to ask difficult, inconvenient questions that have been silenced for too long.

Leadership is about bearing witness to the greatest of challenges and saying “*we can solve this.*”

Leadership is a state of perpetual learning, as a changing world invites us to adapt again and again.

Leadership is the stewardship of change.

It's time to gather together around the global campfire and weave a new narrative of how we change the world. To leave behind the narratives that no longer serve us and build bridges across industries, competition lines and countries so we can come back to each other again.

ABOUT

WE ARE FUTURE CRUNCH

AT THE BEGINNING OF EVERY EPIC TALE, THE HERO STANDS ON THE THRESHOLD OF ADVENTURE AND IS GREETED BY A GUIDE WHO GIVES THEM THE TOOLS AND KNOWLEDGE THEY NEED TO NAVIGATE UNCHARTED TERRITORY.

We help you navigate the frontiers of science and technology. We change the way you see the world by telling you stories of progress. Consider us your field guides to the Great Transformation.

We are a team of scientists, economists, artists, researchers and designers. Our expertise ranges from political economy, genetic science, urban planning and zoology, to music, design and philosophy.

We do not abide by predictions or hypotheses. There is no predetermined promised land.

We are translators of a future based on facts.

We believe that science and technology are the most powerful drivers of human progress. This is what forms the basis of the navigational tool kit we offer to you.



We advise a high profile list of businesses, government and non-profit organisations around the world, providing cutting edge research and gold-plated evidence about the impact of disruptive technologies.

Since 2014 our mission has been to foster **intelligent, optimistic thinking about the future**, and to play our part in creating a 21st century that works for everyone. We're here to make you think differently, to show you that there are more solutions than you ever imagined, and more than one possible ending to the global story we all find ourselves in right now.

OUR CLIENTS:



JOIN THE MOVEMENT



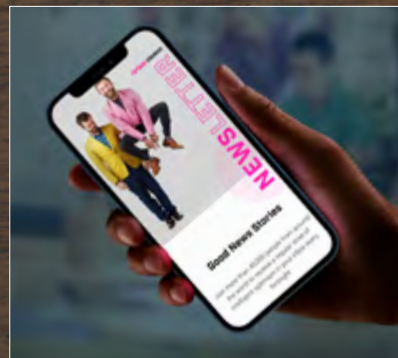
SPEAKING

Mind-blowing, visually spectacular keynotes combining cutting-edge analysis of future trends with inspiring stories of progress.



AMPLIFY

A monthly mastermind for business leaders looking to navigate the frontiers of technological disruption, amplify influence, and cultivate an attitude of intelligent optimism.



NEWSLETTER

Receive a regular dose of good news, amazing science, and the best bits of the internet in your inbox.