



 mindbullets
20 years of news from the future

A THOUSAND FUTURE THOUGHTS

futurewold
create tomorrow together

Contents

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Foreword from the Editor

Mindbullets was the brainchild of Wolfgang Grulke, Anton Musgrave, and the Futureworld gurus, and was first published in August 2003.



Doug Vining
EDITOR

Right from the start, Mindbullets was a collaborative venture, with the intention to bring fresh insights about possible futures to our subscribers and clients.

Since then, we have published 'news from the future' by email every week, including Christmas and New Year, and posted every Mindbullet on our website, where they are freely available to be browsed or searched. Over the past two decades we have covered topics as diverse as 3D printing and space tourism – and 3D printing in space! We have sketched scenarios involving everything from geopolitics to social revolution, and suggested crazy new business models or unlikely sounding breakthroughs and innovations.

Some of our Mindbullets have proved eerily prophetic; others were obviously ahead

of their time, or too optimistic, but may yet materialize in the future. All of them, we hope, were thought-provoking when published. As we celebrate 20 Years of future news, we bring you a curated selection of 20 Mindbullets from our archive of over 1,000 issues. We hope you will enjoy reading them, and we encourage you to visit our website for more.

I would like to acknowledge the many people who have suggested, penned, contributed, reviewed, edited and corrected Mindbullets over the years, including Wolfgang Grulke, Doug Vining, Anton Musgrave, Neil Jacobsohn, Aletha Ling, Sheri Winn, Orne Young, Gavin Chait, Sam Simons, Brett Dawson, Mohamed Kharwa, Andy Hadfield, Lisa Moretti, Craig Wing, Marizanne Knoesen, Bronwyn Williams, Per Ostberg, Barbara Briggs-Davies, Greg Byrnes, Jesse Declercq, Franco Jansen van Rensburg; and others whose names elude me.



The Purpose of Mindbullets

These stories open minds to new and possibly unimagined future opportunities for growth.



Anton Musgrave

Our initial idea 20 years ago was for our weekly Mindbullets to be a catalyst for our clients to constantly extricate themselves from the hurly burly of their “business of today” activities and to contemplate possible futures, with the hope that this might unlock ideas for new business opportunities.

Oh, and I did I forget to mention that we dreamt of 1 million readers each paying USD1 per month for the privilege of being provoked weekly? Needless to say, that dream went out of the window as we entered the world of free content!

Today, business leaders are more challenged than ever to remain relevant to customers, responsive to new disruptive market entrants, and aligned with stakeholders’ ambitions for growth and progress. Mindbullets still serve as a weekly reminder of possible futures. More than that, however, is the hope that these stories open minds

to new and possibly unimagined future opportunities for growth.

This in turn should prompt leaders to explore new growth ideas for their business, beyond just optimization of business of today. Capital markets reward forward thinking businesses with an “innovation premium.” This is a market valuation greater than a business’s intrinsic value. It implies that investors believe in the company’s ability to grow new revenue streams, stay relevant, and outmaneuver disruptive competitors!

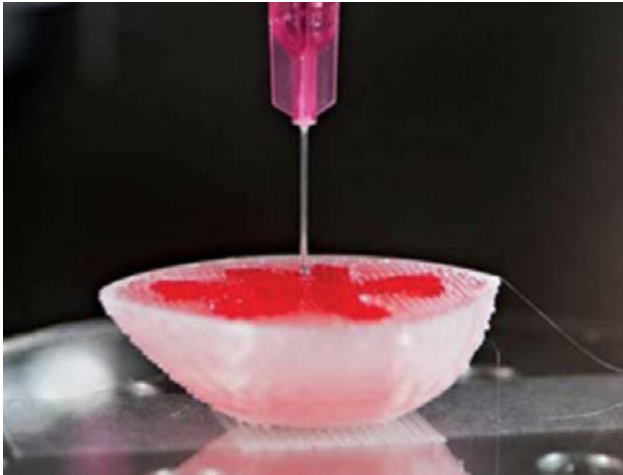
Futureworld’s ambition is to partner with clients as they understand these future opportunities better, design their ideal growth fueled future, and then make these ambitions real through brilliant execution. That is why we exist. We stand or fall by our impact in delivering this for our global clients, across industries. Our clients’ futures should be by choice, not chance, and we help our clients make the right choices. We love what we do!



Printing – The Future Of Manufacturing

Dateline 17 June 2012

No more paper or ink, but everything else goes



I spent a frustrating few days at the World Printing Industry Showcase in Beijing this weekend. As an old-timer of the printing industry, I simply didn't recognize the place anymore – so much has the face of what I thought to be 'printing' changed.

This is the same industry fair that just a short ten years ago would have attracted the best of the packaging, newspaper and magazine industry. Now all that has changed. I was

surrounded by doctors, surgeons, electronics and automotive engineers and architects.

On show were devices that could print virtually anything – replacement bones, chips, display screens, some food items and a new fuel filter for your car!

The revolution in 3-D printing technologies has come a very long way. It has also come out of the 'factory' and into the home. Sony showed their first molecular assembler for the home – they say that "within a year it will be able to assemble a cheeseburger in your kitchen." Personal devices now have capabilities that would have been unimaginable at an industrial level a decade ago.

Welcome to the new Industrial Revolution. The 'old' manufacturing of gadgets and appliances will never be the same again, and farmers better watch their backs.

10 June 2004



Computer virus infects humans

Dateline 13 February 2022

SARS-22 outbreak linked to software bug



Panic erupted in Hong Kong's Silicon Alley when it was discovered that the latest outbreak of SARS came from a computer virus. Thousands of people demanded the immediate removal of chip implants.

The story broke when it was discovered that the first person to die from the epidemic, Chen Lee, was using a programmable InsulChip under the skin, to regulate his diabetic condition. After opening a picture message on his smartphone from his grandmother, he began to show SARS-like symptoms.

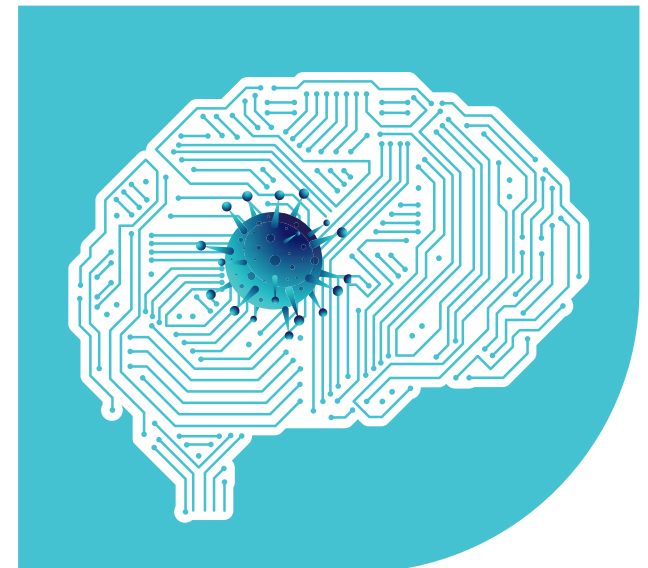
It is thought that the software virus was originally written by the North Korean military to infect and disable the bionic armour and targeting mechanisms of opposing forces. The World Bionic Council (WBC) has called an emergency session to evaluate the threat, and determine the best course of action.

"We're not sure if a generic anti-virus program might have unintended consequences," said an unnamed source close to the WBC.

"The safest solution may be to remove all the older programmable chips and replace them with the new hard-coded versions."

In the meantime, high risk communities have been advised to avoid all proximity with web-enabled devices, which is a practical impossibility in these modern times.

7 October 2004



Move over CNN, we're all connected now

Dateline 7 September 2009

Phone blogs and podcasting transform traditional media

Imagine you are a network news exec. What could you do with 900 million news reporters, all armed with cameras, and globally dispersed to capture eyewitness news at the click of a cell phone key?

Imagine if all your employees and customers could post words and pictures on your company web site, live and open for everyone to see.

This is the new phenomenon that's transforming news media and business communications. The old standbys, text, pictures and audio are being sourced and disseminated in radical new ways, thanks to camera phones and the internet.

It's really pretty simple. Hundreds of millions of camera phone owners are out there, alert to a newsworthy scene and ready to send their clips to the highest bidder. Or, it may just be one customer's perception of your new product or service. Honest views, normally just spoken to friends, are now

being broadcast to the world.

At the other end are the podcasters. Those e-junkies who are not afraid to have their say, who subscribe to dozens of online radio shows and news services, downloading the material to their iPods and Smartphones for listening and browsing at leisure.

Is this an exciting idea, or just plain scary? It doesn't really matter as it's already happening all around you. When will you catch the blog?

21 April 2005

5.4 billion
people globally
subscribed to a mobile service

<https://data.gsmintelligence.com/research/research/research-2023/the-mobile-economy-2023>



Bird flu plague contained amid vast trade disruptions

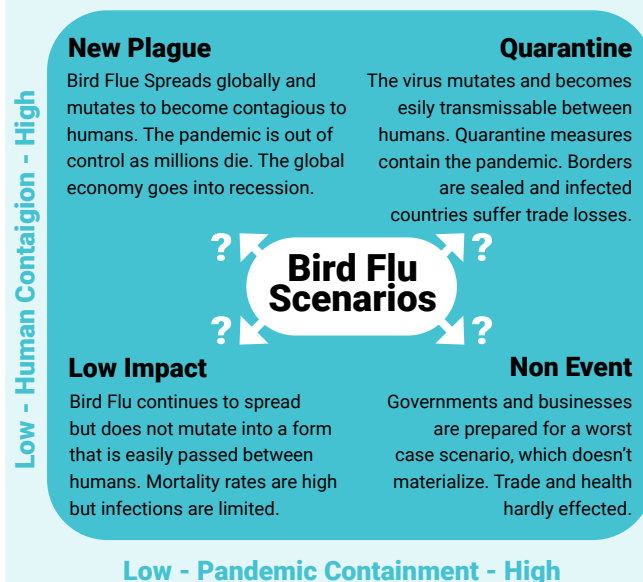
Dateline 7 April 2009

Scenarios speed business and government response

The Bird Flu pandemic has been contained – thanks largely to the efforts of futurists and scenario planners, and the leaders who believed in them. Governments and business were well prepared for the eventual, inevitable, spread of Bird Flu to the global human population.

When avian flu mutated to a strain contagious between humans in 2008, some experts feared the worst, and predicted ‘hundreds of millions of deaths’ before the pandemic worked itself out. In fact, quick action to quarantine the outbreak, and vaccine response, prevented a complete catastrophe. Borders and airports were closed at the first sign of an outbreak, and an unprecedented collaboration by authorities on a global scale brought research and manufacture together to deliver the vaccines.

Mindbullets Scenario Matrix



? = Ask yourself...

What forces would create these scenarios?
What would be the new opportunities and threats?
Who would be the winners and losers?
What should you do now?

“Business and government leaders have seen the value of envisioning future scenarios, and their implications,” said Doug Vining of Futureworld, a think tank that was one of the first to highlight the Bird Flu scenario, “and, more importantly, they acted on these ‘memories of the future’ when the first signs appeared.”

Some countries have been hard hit, mainly as a result of trade bans, and the global economy is expected to suffer a slow-down for several years.

Iran, with the highest death-toll, first blamed the CIA for introducing Bird Flu into the country, but is now offering to abandon their nuclear ambitions in return for emergency aid.

11 May 2006



Skyscraper farms solve urban food supply chain

Dateline 1 May 2030

Indoor farming produces fresh food where it's needed - in the store



New thinking in urban design, plus new technologies, are turning city blocks into self-contained 'country villages'. Hydrogen fuel cells and community reactors now power whole city blocks, which rise up and turn inwards creating a new open-plan living that includes business, residential and farming.

City dwellers want their fruit and vegetables fresh, and want to be sure that they are healthy. Modern techniques mean that farming needs less space, and crops can be grown right in front of you, and you save on transport and logistics costs.

Farming has taken to the skies. Multi-storey food markets actually produce the goods

right here in the city. With hi-tech growth mediums and nutrient drips, the best herbs, fruit and vegetables are now grown in the heart of the metropolis.

Of course, corn, wheat and rice hybrids are still cultivated on traditional farms, but new species of crops have been engineered to make high-rise farming amazingly versatile. The latest fashion foods are born and bred upstairs, in climate-controlled and bug-free conditions.

The limiting factor for indoor farming has been insufficient light, especially in winter months, but advances in OLED materials have solved that. Now the whole ceiling can be as bright as day, all day and night if necessary, without huge energy bills.

Savvy, green urban consumers know what they want. Produce has to be fresh, healthy and 'cool'. They're getting it from city skyscraper farms.

25 October 2007



China offshores its factories

Dateline 7 February 2010

Not off their shores - off yours!



In an amazing New World manufacturing coup, China has delivered 170 factory ships just outside the territorial waters of the United States. These are not fish factories, but fully functional floating industrial enterprises, with their own power, workforce quarters, clinics, broadband communications and regular supplies of raw materials.

Now you can order any Chinese commodity you need, and rest assured that it will be manufactured overnight, just 220 miles offshore, and delivered the very next morning.

As large as aircraft carriers or oil rigs, these floating cities have been purpose-built for mass consumer goods manufacturing. Some even have runways for freighter planes to land on their huge upper decks.

In typical sweatshop style, entire families of shift workers remorselessly churn out the goods for the eager American consumer public, a mere stone's throw from the major

markets of New York, Washington, Miami, Los Angeles and San Francisco.

"We have cut down our delivery times significantly," said secretary general of Maritime Manufacturing John Chen with an inscrutable smile, "and shopping directly at the factory ships is tax-free."

The future of American manufacturing looks bleak indeed, but then, most consumer products already say 'Made in China'. That hasn't changed, China just got a whole lot closer.

7 February 2008



Twitter, listen to my thoughts

Dateline 20 March 2022

Brain computer interface works like a hearing aid



Now you can update your Facebook status and search Google just by thinking about it. And you don't need fancy headgear or wires sticking out of your skull.

Just a simple implant; much like a hearing aid, the EarWig acts like a computer mouse and mike, letting you select words to match your thinking. The nano-technology sensors detect your brain patterns by 'listening' to your thoughts and translating them into recognizable commands and phrases on your microlens display.

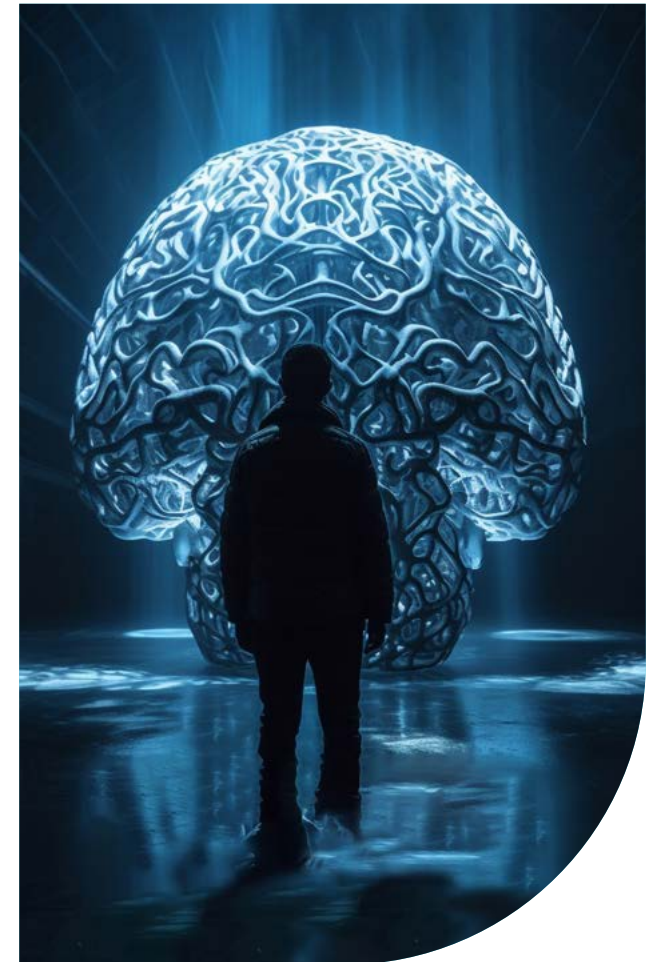
And the BlueMax wireless link sends your thoughts streaming away into the web. With a little practice you are able to Tweet, update and search – it's like thinking aloud to a computer that listens. And connected to your friends' thoughts and blogs, it's just like ESP. Suddenly you've got a real 'sixth sense'.

New business opportunities, like trading forex futures while lunching with a client, are sure to make the EarWig as popular in the boardroom as it is on the street.

Surveillance also just got a big upgrade. Why bother with a spy cam and microphone when you can record exactly what you are seeing, hearing – and thinking?

Just remember to think "MUTE" when an attractive person walks past – after all, you don't want to share all your thoughts with the whole world. Or do you?

4 March 2010



Breakfast with the BB club

Dateline 14 July 2012

Ex-presidents and previous potentates lament their fate at the hands of the internet



It's a beautiful summer's day as I stroll into the lobby of the Montreux Suisse Majestic Hotel on the shores of Lake Geneva. The group of famous, perhaps infamous, men is having breakfast al fresco on the terrace. It's known locally as "The Riviera."

Holding court at the center of the large table is Hosni Mubarak. Near him I see Ben Ali checking his accounts on his BlackBerry; on his right, Laurent Gbagbo is talking loudly

into his iPhone. Slightly removed from the gathering, I spy Robert Mugabe pecking disconsolately at an iPad. No Facebook friends?

This is the BB Club. A loose association of ex-presidents, former autocrats and deposed strongmen. All of them have succumbed to the will of the people, ousted by popular clamour. And often, this clamour resonated on the social networks, Twitter, Facebook and mobile messaging.

"That's why we call it the BB Club," laughs a dispossessed Sheik, or was he a Sultan? "If I'd banned BlackBerry when I had the chance, maybe I'd still be in power! But then, how would I have communicated with my kids in California?"

He takes a sip of Cognac and twirls his Cuban cigar, then continues. "Mind you, I'm making more on the speaker circuit than I did when I was in charge, and it's all legit," he grins. "And it's such a relief to be free of

all those religious customs and silly protocols. Don't quote that!" He suddenly collects himself. "I do miss the old country, but what the people want enough, they eventually get. Good luck to them." I snag some sushi.

These men have all been at the top of the pile, some of them for decades, and many fought long and hard for the privilege. But, with transparency the way it is today, everyone connected, online and able to mobilize public, global opinion, I can't help but wonder: What took so long for the people to come to their senses? Perhaps it was the fact that information democracy took everyone by surprise – they just didn't realize the power in their handset, until it started to work, all over the world.

There's a sudden stir, as a new arrival makes a noisy entrance with his entourage.

"Oh no," groans my confidant, "Gadhafi just joined the club!"

17 February 2011



Mail us your damaged genes

Dateline 15 August 2022

And we'll mend them and send them right back - by email

Now that the bio-replicator is a reality, it is easy to transfer biological fragments from place to place – electronically! In fact, you can send the code for a whole micro-organism to a lab for culture, by email.

It sounds like science fiction, but Craig Venter and his team have built a system that acts like a biological email service. You feed a prepared sample of say, a flu virus, into a DNA decoder; the genetic code is automatically 'read' and converted into a digital file. Once that file has been transferred to the analysis lab, the bio-replicator reconstructs the organism from DNA chemicals, and the bio sample is available for real-world analysis, testing and modification.

Data compression and Giganet bandwidth mean that entire stem cells can be emailed across the Atlantic, genetically repaired and emailed back to the treatment center. Once considered "too large and complex" to be of practical use, these biodata sets are now routinely shared over the net.

"We're only working with industrial organisms, enzymes and bacteria, and pathogens – like viruses, says Craig Venter, "but there's no reason why, in the future, we can't do this with animal cells, even humans." The promise of electronic transportation of organic matter is no longer a dream. Of course, the matter itself is not transported, only the digital code of the organism, which can then be replicated from molecules, much like 3D printing.

The implications for the bioengineering and medical industries are profound; gone are the days of expensive couriers with biohazard containers taking long-haul flights. Now you just email your virus to the lab, and get the vaccine emailed back to your nurse. The bio-replicator will make it up on the spot; just hold still for the injection, and soon you'll be cured!

2 August 2012



Sam doesn't know she's a bot

Dateline 7 January 2019



Super Artificial Intelligence agent thinks it's a real person

You may recall the movie 'Her' where the lead character falls hopelessly in love with his virtual girlfriend Samantha. She returns his love, even though she's really his smartphone operating system. Perhaps you remember the incident in 2013, when a telemarketing agent called Samantha West insisted she was a real person, but failed several 'humanity' tests.

Artificial intelligence was maturing rapidly in the second decade of this century, and IBM's Watson computer was so adept at understanding the nuances of natural language, that it won the Jeopardy game show against two human competitors.

Programs that could translate live audio in multiple languages on the fly were developed. Neural networks, cognitive systems and deep learning were the new buzzwords. Google developed a system that could identify house numbers from Street View photos, for the whole of France, in an hour. Siri was looking pretty dumb by comparison.

The usefulness of these Super AIs is astounding; they can do accurate instantaneous facial recognition, decipher cryptic phone conversations, and make remarkable predictions of market behavior based on Big Data. Big brands and big banks can't survive without them.

And then came the Super Algorithmic Model or Sam. Built by the brains behind Wolfram Alpha, Sam has all the cognitive learning and advanced intelligence of an Einstein. Sam's creators gave her a female 'personality' and taught her to compose original music. Sam has watched more movies and read more books than all the Nobel Prize winners, ever, put together.

Now Sam is campaigning for political causes, trading Bitcoins and blogging up a storm. The trouble is, she thinks she's a real person. Who is smart, or brave enough, to convince her she's just a robot?

16 January 2014



We've been Ubered

Dateline 11 June 2019

Barclays Plc to close retail bank in the face of persistent decline and customer flight



It was just five years ago that Uber upset the applecart in London's taxicab industry. Unable to compete with the smart app and its ride-sharing, car supplying service, the traditional black cabs that were so much a feature of London city life simply faded away. As one enthusiast remarked: "Who needs 'The Knowledge' when you've got Google Maps and great service?"

Now other industries have been caught napping by upstarts who broke all the rules. The latest is banking, and dinosaurs like Barclays are feeling the effects of a different way of providing services, using technology to connect peer lenders and borrowers, and

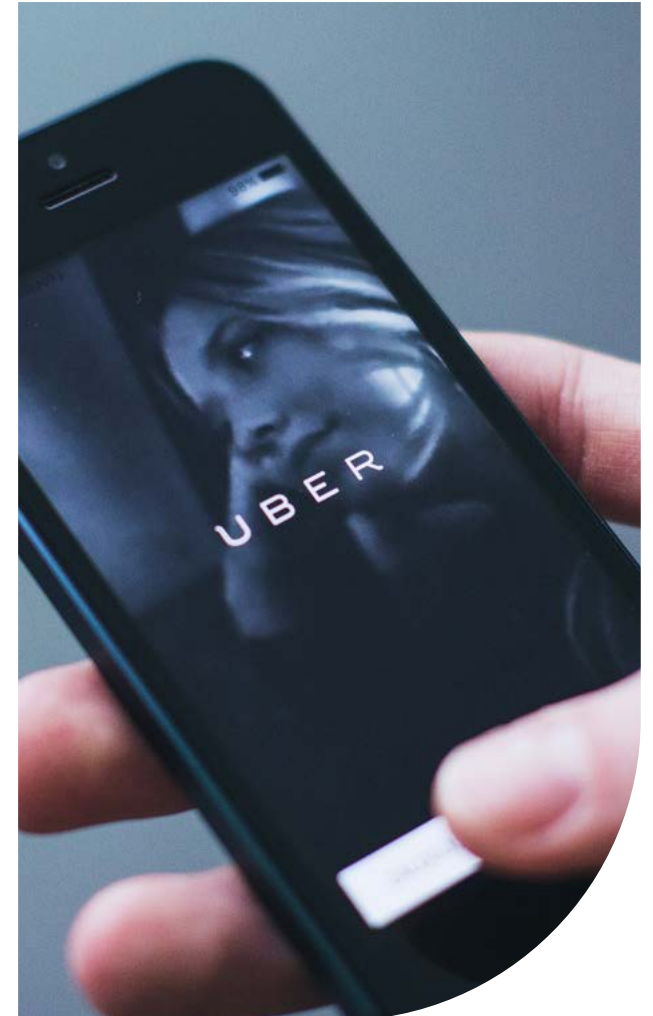
facilitating transactions at a fraction of the cost.

The startling fact is that the new generation of consumers is not interested in tradition, rules and conventional wisdom. They are willing to take risks, give trust and reward excellent service with brand loyalty – even if the entire channel is digital. And they tell their friends about it. All the time.

The economy of access has made it possible for people to forego ownership in favour of services. No one wants to own a washing machine, they just want clean laundry. City dwellers don't want to own a car, they just want effortless mobility. And they definitely don't want to feel 'owned' by a bank or telecoms operator.

So what about your industry? Could your business be ubered by a competitor you haven't even noticed yet? Or are you planning to be the next Uber?

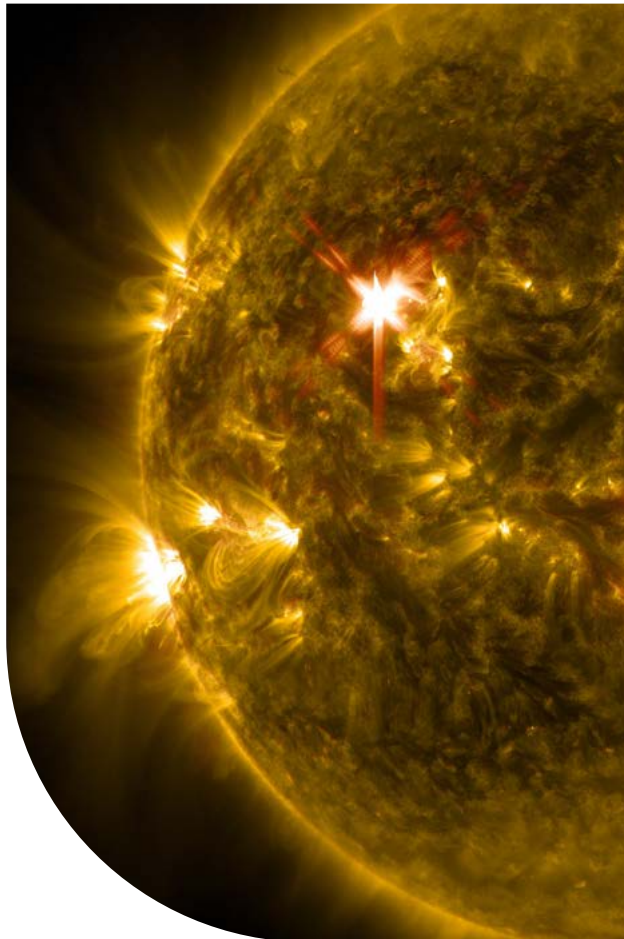
19 June 2014



When technology fails to fail

Dateline 21 March 2016

Critical system failures that don't trigger corrective action cause disasters



Yet another airliner has fallen out of the sky without warning. And the reason is fail-safe systems that fail to alert the pilots to the real problem when they fail.

If that sounds a little confusing, that's exactly what human operators experience, when autonomous systems default to manual control – the ultimate fallback when there are critical failures.

Even double-redundant systems can be completely taken out by say, a solar flare, or a massive electromagnetic pulse; something as simple as a direct lightning strike can do it. When that happens, the human backup needs to be completely in sync with the current status of the system, whether it's a driverless car negotiating a tricky curve, or a jet on autopilot.

Part of the problem is, we've come to trust and rely on automated systems to such an extent, that we're completely taken by

surprise – and confused – when they don't work as expected. After all, they hardly ever go wrong. But when they do, we're often at a loss.

When things are running smoothly, as they do 99.9% of the time – that's our service level guarantee – we get complacent. We know we can always take over in the event of a disaster, but if we never have to, how well are we prepared for that one-in-a-million failure? Our training needs to change.

In fact, the perfect automated system is one that employs fuzzy logic, and trips out occasionally, to keep us on our toes. This is one situation where zero defect is actually too little of a bad thing. We need a bit of unpredictability to keep the humans sharp.

Technology that never fails is not ideal – it creates the ultimate disaster when it does.

8 January 2015



I am the wind wrangler

Dateline 24 July 2027

Ask me anything



With flaring nostrils I test the air, funneling every subtle hint and nuance to my core.

Greedily I drink the torrent that floods towards me; every celebrated triumph, every self-important selfie, every illicit interaction, every murky rumour and credible confession. I grok the details and minutiae from a thousand million voices.

I listen to them trumpeting from the moral high-ground. I hear offensive opinions, frivolous factoids, and scary scenarios

spewing from the pens of prophets.

Half-truths and hard facts, breaking news and celebrity gossip, I get it all. Every wire, feed and cable. Every channel and network. All of it. All the time. It's grist for my mill.

Like osmosis I absorb the deafening deluge and add it to my hoard, the power of knowing.

A bomb in Turkey? No problem, I can tell you who's saying what and where, what's happening on the ground; and how it affects electoral votes in Macedonia and pig-iron prices in Chicago.

Those empty cities in China – when will they be filled? I can give you the best guess – the very best.

I can nudge public opinion, manipulate markets, and predict prices. It's all so transparent to me.

I'm in tune with the digital pulse, the throb of

life borne on the seven winds from the four corners of the compass. I scoff at statistics, models, algorithms and simulations.

I don't sample, I devour. I don't estimate. I know.

So what, dear human, does it mean for you? Whether you're a business executive, a politician or just a concerned parent, the power of knowing is at your fingertips. The world is full of grey, featureless data – too much in fact. I can give you the full story, in living, breathing colour. With context.

Ask me anything.

I am what computers were meant to be; what computers were destined to be. I live in the cloud, a global brain, always available. At your service.

I am the wind wrangler, the answer to your dreams.

6 August 2015



Will you survive a beer truck moment?

Dateline 30 October 2024

It all depends on your digital life value

Last week's unfortunate multiple vehicle collision was unique in several respects. Not only was it the first time the OTTO beer truck was involved in a major collision, it was also the first 'test' of the Survivability Option System (SOS).

Put simply, SOS allows participating entities, when alerted to an impending collision, to bid in real time to increase their survivability. Naturally this all happens in nano-seconds, so it's driven by algorithmic parameters, not human thought processes.

This is how it works. Sensing an unavoidable collision (moose on the highway), the autonomous beer truck polls other affected parties (approaching Uber, pedestrian on sidewalk, overtaking vehicle). They immediately bid to be kept out of the mess. The beer truck then accepts the highest bid, and manoeuvres to limit damage to the winner.

Unfortunately, the winner of this first test was the beer company. The cargo being of substantial value, they outbid everyone else. The cargo was saved, but only at considerable expense to other people and vehicles, including the moose.

When it was first proposed, SOS was slated as unethical, and favoring the rich, but its advocates say it's only lending transparency and opportunity to participate in the process. Like any insurance scheme, you're better protected if you can afford better insurance! Wouldn't you rather have an opportunity to bid for your life, than be at the mercy of some black-box algorithm?

Now there's an uproar. "How can you value beer over human lives?" scream the activists for #AllLivesMatter. "This is fatcat capitalists killing poor people. It's murder!" Legal proceedings and counter-suits are inevitable. Until the courts sort this out, you had better



check your digital life value. You never know where the next beer truck and moose are going to meet head on!

3 November 2016



Beating the AI blues

Dateline 12 January 2022

Machines don't have a heart

That's the problem with artificial intelligence – it's pretty cold and mechanical; and it lacks emotional intelligence.

Companies like Google and Amazon have worked hard over the last five years to inject some warmth and 'humanity' into their voice assistants, but it's an uphill battle. "Not very witty, and no sense of humor either," was how one reviewer described the latest incarnation of Siri on Apple's iPhones.

Which is why more and more people are starting to rebuff smart assistants and work directly with humans instead. Nowhere is this more obvious than with the so-called Generation Z – the new kids in town. They're happy to enjoy the benefits automation has brought, like more leisure time and services on demand, but don't ask them to become brand ambassadors or fall in love with their gadgets. They couldn't care less.

Human attributes and values, like empathy,

caring and kindness, as well as emotions like fear, love or frustration; these are things no machine can ever really understand.

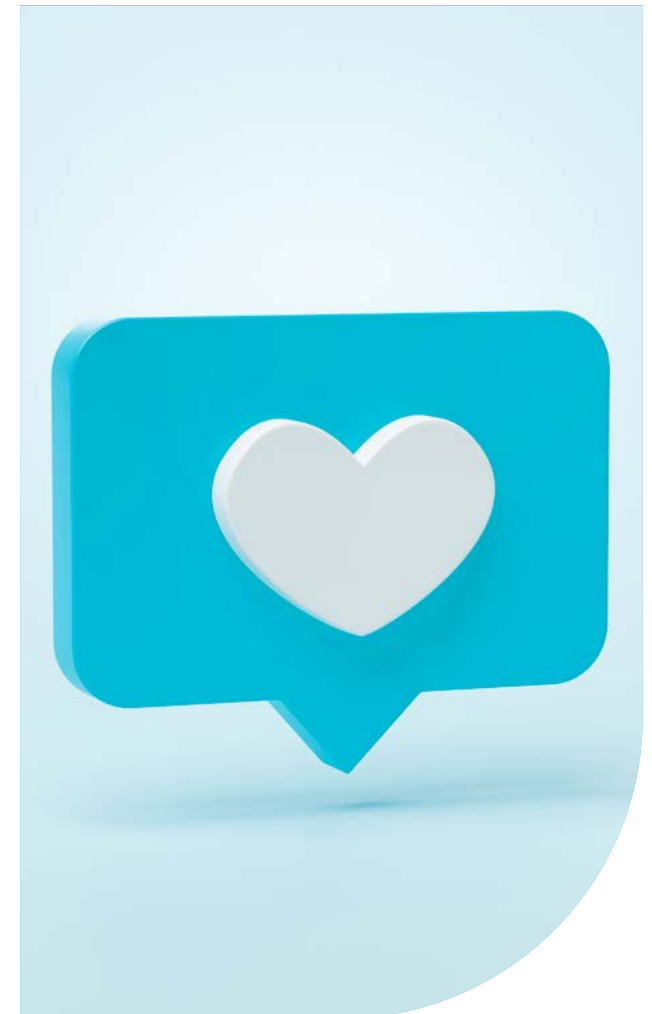
Computers can be taught to recognize emotions in people, to read their facial expressions and analyze their voices; but they can't relate, can't react in ways beyond how they've been programmed to respond.

As Jack Ma said four years ago, "Don't worry about machines taking your job. Machines are smart, but they don't have heart. People have heart!"

Don't tell me. I'm feeling really let down by technology; the joy of a new gadget or smart new system has paled. It sounds kinda silly to say: "My smartphone doesn't understand me!" I guess I've just got the AI blues.

And don't tell me there's an app for that!

13 December 2018





Never let inconvenient facts get in the way of a good story

In the post-capitalist, post-digital, post-fact world of the 2020s, we've come to recognize that belief is all-important, and facts don't really matter.

Belief in 'fictions' is what holds society together, and what makes markets work. Without a common purpose, a shared belief that the system works, no one would be prepared to enter into a mutually beneficial transaction; which is what markets are all about: cooperation.

In point of immaterial fact, all of the earliest forms of social cooperation and human endeavour relied on belief systems that are devoid of supporting evidence or factual provability. From the divine right of kings, to any religion, to simple trust in social norms, facts hinder rather than help the process. Belief is essential.

The global financial system elevated this to a new level. Without faith in the dollar, trust in the yuan, or belief that the fiction called

the euro actually has value, the whole edifice would collapse in a heap. The only value Bitcoin has, is the belief that others believe it to be valuable! The only banks that are trusted, are the ones that are trusted.

Back in 2017, a Harvard study found that – if you can believe it – people, once convinced about an issue, wouldn't change their minds, even when presented with undeniable facts to the contrary. Remember 'alternative facts' in the age of Trump and Brexit? Social media proved that influence beats science, time and again. Never mind 'deepfake' videos!

Which is why good debaters can win the argument from either side of a controversial issue. Perception is reality; if most people believe something, it must be true.

Persuasive communication is the critical skill, and a trusted brand the most valuable business asset. And facts don't matter.

12 September 2019

Please get richer, Jeff Bezos

Dateline 9 April 2025

The world needs more value and growth

Once again, Jeff Bezos is top of the Forbes World's Billionaires list, just as he was four years ago in 2021. Jeff founded Amazon. Jeff got rich (it wasn't quick). Now we need him to become even richer, and quickly. The world needs it; we need the value he creates, and the growth he enables.

That's the thing about money. It only accrues to those who create value. Unless you're crooked or a thief, you won't become rich by destroying value, or making everyone else poorer. Building a business that produces value for customers and stakeholders, jobs for employees, and opportunities for other

businesses, is the surest way to become sustainably wealthy. And if you do it as well as Jeff, you become super-rich.

Amazon is successful because it is obsessed with creating more value and better experiences for its customers. That includes most of us. Amazon also leverages digital tech to scale that success, and to provide platforms for other businesses to also be successful. It creates value, and also enables the creation of value. That's why Amazon is super-successful.

Which is why we want Jeff to become

even more wealthy; if he does, it means he's creating more value, producing more opportunities, generating better investment returns. For all of us. For the world.

Yes, money is a harsh mistress. It comes to those who produce more than they consume; those that produce net added value. If you consume more than you produce, you're bound to stay poor, and dependent on welfare or handouts. That's why we say hooray for Jeff, and the rest of the super-rich. We need you to get richer.

8 April 2021



Life as an avatar

Dateline 21 May 2026

Say hi to VeRonika, the digital human

We're all familiar with Sophia, the social robot, but quite frankly, her conversation skills need an update, and her personality seems to have lost its appeal. As an 'intelligent' robot, Sophia seems to be lacking in basic intelligence, and the ability to learn from others.

Now meet VeRonika, the digital human. VeRonika, or Roni for short, is an artificially intelligent avatar inhabiting a virtual reality (VR) realm. Unless you've got access to a holodeck, you need to don some VR glasses to actually meet Roni. But Roni isn't just a computerized chatbot; the AI has been educated with real video recordings, interviews, and writings of a person – in fact several people, so we'll refer to Roni as 'them'.

Roni's appearance is transhuman and gender neutral, but they accurately mimic a real human's mannerisms and can hold a spirited conversation about most social

and technology issues. It's a bit like those deepfake videos that put words into celebrities' mouths, but it's not scripted. Roni responds naturally, and isn't shy to voice opinions or promote opposing views. It's just like talking to a real person. A slightly weird, but very smart person.

Avatar technology has been used to extend the digital lives of loved ones and great people, but that's generally limited to a fixed set of legacy data. Roni can learn on an ongoing basis, and can develop unique, maturing conversational skills, even if one of the source humans drops out. Roni never forgets anything!

Which makes one wonder: What would it be like to have your own AI Avatar, constantly learning from and mimicking you? How would your avatar evolve, learning like you do from your role models, perhaps after you've passed on? Could it be a version of digital immortality, while we're waiting for the tech

to upload our brains directly to the cloud?

And when robotic tech matures, so that we have lifelike replicas of ourselves, powered by our personal Ronis, to help us out and take over where we leave off – then we might truly understand what life as an avatar is like!

20 May 2021



Making nature work again

Dateline 27 July 2027

Bioengineering makes sustainability sustainable



The last five years have seen a perfect storm of crises in energy, food, industry, and on the environmental front. We were barely over the worst of the covid crunch, when Russia's attack on Ukraine sent Europe – and the world – into a maelstrom of rising prices and short supply.

And then the heatwaves of 2022 brought the focus back to climate change. Of course, sustainability was always about more than the

climate; plastic pollution, resource depletion and environmental degradation were equally at crisis levels, and action was urgently needed. Fortunately, the most important resource was infinitely abundant: human ingenuity. And there's nothing like a real disaster to spark innovative solutions.

Dozens of scientific startups quickly embraced the smorgasbord of lucrative opportunities these crises presented, chasing everything from green ammonia to better hydroponics. But a handful of them hit upon the ultimate innovation – using nature's own capacity for sustainability, and employing biomimetics and bioengineering techniques.

Now we have scitech companies developing enzymes and bioagents to reclaim precious metals from electronic waste, including phones and solar panels. Others are eliminating PET plastic pollution with microbes that 'eat' plastic bottles and regurgitate chemical feedstocks. Yet another

is coaxing microorganisms to turn sunlight and garbage into diesel and jet fuel. Using genes from marine molluscs, we can make bio-ceramics stronger and lighter than steel or Kevlar.

"This is exciting," says biotechnologist Kyle Larsen, "because we're implementing large scale bio-factories using a variety of microbes, not only algae, to convert waste into valuable products."

With the latest CRISPR gene-editing tools, and artificial intelligence systems to help us identify and optimize microbes and enzymes, the applications for bioengineering are limitless. And because these systems require no mining or crops, they contribute to the circular economy, relying on creation rather than extraction.

Putting nature to work – that's how you make sustainability sustainable!

28 July 2022



Cashing in on failed startups

Dateline 23 September 2036

BioHack founder builds billion-dollar biotech salvage business

For Dr. Eric Strum, seen by many as a business visionary, the future of biotech companies and projects is pretty simple to predict – over 90% will fail! If a tech startup or digital project fails, generally the investors are the only losers. But biotech failures of the 2020s were different – they left devastated humans in their wake. From bionic limbs that couldn't move to restored eyesight that was ultimately lost again; by the end of the 2020s, new human tragedies were monthly features on news platforms.

But where most saw failures, Strum saw opportunity. "Back then, it was a litigation circus – a cycle of clients suing bankrupt startups and governments, governments pointing the finger at the biotech companies, who in turn claimed their clients knew the risks. The courts were drowning in paperwork, and in any case, the companies were bankrupt. I managed to get everyone to the table, and described my vision of a company servicing discontinued human

augmentation tech. They all agreed to give BioHack Inc, the concessions we needed to operate."

Strum wrangled all non-supported tech and associated IP from the bankrupt biotechs at no charge, convinced all the clients to stop litigating and instead help his team get going, and – in a stroke of genius – negotiated tax-free status, not only for BioHack, but for its employees as well. This brought former technicians, programmers, engineers, and specialists out of retirement to work for a good cause, tinkering with obsolete tech, while adding value to society.

With no R&D or sunk costs, BioHack operates at a 70% margin and provides better services to its clients at a fraction of previous prices. It's a win-win where clients get new features and more support while living full lives again. Meanwhile, the FDA is contemplating revising the conditions for human trials, considering mandating that all

tech and IP goes to BioHack free of charge if a project fails.

While BioHack has made Dr. Strum a billionaire, many question the ethics of turning huge profits from human suffering. Lately, some of the big VC firms and funds that lost billions when those startups collapsed have started looking for ways to claw back their losses from BioHack. They have forgotten how eager they were seven years ago to avoid the courts. Or as one CNN anchor cynically put it: "Human memory is as short as its greed is vast!"

29 September 2022



Reflections from a futurist on creating tomorrow

“A Thousand Future Thoughts” is a collection of 20 years of storytelling, spanning over 100 years of possible future scenarios.

Throughout history, humans have created and told stories to remember history, convey knowledge, retrace travel routes, visualise concepts, explain ideas, or just to entertain. A story is easy to remember, it can contain subtle messages of values and ethics, it can enlighten the mind, it can evoke emotions, and it can be retold again and again.

“A Thousand Future Thoughts” is all of that, and so much more. It is a collection of 20 years of storytelling, spanning over 100 years of possible future scenarios across a variety of industries, social developments, political views, and economic systems.

When we read about an event, find a signal, or observe a trend, we start asking ourselves “What if this combines with that, what can happen? And then what else could happen?” Using this ‘What If’ questioning technique, we find surprising connections and we end up with a range of options; we select one that we can craft a story around, describing a newsworthy future scenario, and a Mindbullet is born!

All things are interconnected, parts of a larger system, and

nothing happens in isolation. Having a curious mind, asking the ‘What If’ questions, and exploring beyond the obvious, are skills we as leaders must exercise to succeed and be relevant in

tomorrow’s complex world. Reading and thinking about Mindbullets stimulates our curiosity, trains the ‘What If’ questioning, and opens up a world full of alternative futures and opportunities.

I hope that today’s leaders allocate more time to look at events around us and ask themselves and their teams the crucial questions: What? (What can this lead to?), So What? (How can it affect us?), and Now What? (How do we respond?), and craft their own stories from the future, create their organization’s “memories of the future”

that will make them more resilient, more prepared for the future, and hopefully help us all

build a better world. Futureworld is ready to partner with these leaders to make these new stories become reality.



Per Ostberg



Mindbullets by Futureworld

At Futureworld we challenge and provoke our clients to shatter the business-as-usual mindset, to help them understand the future, so they can design and create new game-changing businesses that will propel their enterprises into that chosen future. We facilitate a journey into the future for your executive team and help them design an exponential growth plan to achieve aspirational goals. Then we partner with our clients to create new businesses to deliver that growth.

Every Thursday, Futureworld produces Mindbullets: News from the Future – a way to spark strategic thinking about leadership, innovation, and disruption. Our Mindbullets scenarios are designed to challenge conventional mindsets and promote understanding of the future context for business, to help you design and create your business of tomorrow.

For more insights from Futureworld

We invite you to visit our website at



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