

# TRANSFORM

**Jerry Kaplan**

Author, serial entrepreneur, and AI expert

**Nnedi Okorafor**

Award-winning science fiction writer

## ARTIFICIAL INTELLIGENCE

HUMANITY'S GREATEST INVENTION,  
OR FRANKENSTEIN'S MONSTER?

DECEMBER  
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#ArtificialIntelligence





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EDITOR'S NOTE:

# WHAT CONNECTS FRANKENSTEIN'S MONSTER, A FISH FIGHT IN NORWAY, AND IRON MAN'S SUIT?



**Gavin Allen**

Editor-in-Chief  
Huawei Technologies



Oh, and the future existence of humanity. Maybe I should have mentioned that one earlier...

The answer – as with most questions being posed right now – is artificial intelligence.

More specifically, how do we protect against AI's risks while capitalizing on the many opportunities it creates?

That's the focus of this edition of Transform magazine, and fear not: we'll explain how AI relates to all the elements highlighted in that opening sentence.

For instance, the MEP and rapporteur of the European Parliament on the "Ethical Aspects of Artificial Intelligence," Iban Garcia del Blanco, is keen to reassure everyone that EU legislation on AI will strike the right balance.

"We see regulation more as an opportunity for innovators than a risk... Sometimes this AI transition is seen like Frankenstein's monster being released into the village. But we'll see not just a big leap in productivity, but also a more balanced society."

The award-winning sci-fi author Nnedi Okorafor remains unconvinced. She wonders why AI's first use appears to be an attempt to replace creative roles.

"By definition, technology is neutral. It's really how we use it that decides everything," she told me. "We should be using AI to do things that humans are not intelligent enough to do. Isn't that the point?"

And it's not just doing the things we cannot do but doing them for positive purposes. That goal is central to Frederic Werner's daily role as Chief of Strategy and Operations at the International Telecommunication Union's "AI for Good" organization.

"Even the experts would say that AI is too important to leave to the experts," Werner says. "Our thinking is that we need to bring many different voices to the table so that we can have a proper, inclusive dialogue on how AI might benefit humanity."

But even this underplays AI's potential in the eyes of Silicon Valley inventor, author, and entrepreneur Jerry Kaplan.

He says Generative AI is a tool that can use tools – an invention that can invent. And that makes it potentially "the most important invention in human history."

"In the future, when you want the most objective, reliable, and accurate information, you won't go to a human being. You're going to ask a machine. These systems will discover new drugs, address problems like climate change, and provide all kinds of advice."

Also in this edition:



We'll hear how Dr. Omar Richardson is using AI to distinguish an invasive salmon species from its native Norwegian cousin.



Professor Patrick Glauner urges execs to pause before adopting AI and warns against seeing it as a silver bullet.



A senior weather forecaster explains why even AI will be stumped when it comes to mastering our chaotic climate conditions.



And, just like Tony Stark and his Iron Man suit, we'll explain why automation technology has no value without human input and understanding.

Throughout this edition of Transform, we hope to reassure you that superheroes aren't required to set the guardrails for future AI development. Just calm expertise, collaboration, and innovation.

So, the end of the world is not yet nigh. We think. Or, as Nnedi Okorafor might put it, fingers crossed...

# WILL SOCIETY MAKE THE BEST USE OF AI?

## “FINGERS CROSSED,” SAYS THIS SCI-FI AUTHOR

Nnedi Okorafor has won two Hugo Awards and many other accolades for her best-selling science fiction novels. At the 81st World Science Fiction Convention (Worldcon) in Chengdu, China, she spoke with Huawei Editor-in-Chief Gavin Allen about harnessing the power of AI to solve problems that humans cannot.

**Gavin Allen:** You describe yourself as an African futurist. Can you briefly explain that term?

**Nnedi Okorafor:** It's a term I coined to describe a sub-category of science fiction specifically rooted in African culture, history, mythology, and point of view.

It does not privilege or center the West. It's concerned with visions of the future. It's interested in technology, skews optimistic, and is predominantly written by people of African descent.

**Nnedi Okorafor**

Award-winning science fiction writer

**Gavin Allen:** Science fiction tends to skew optimistic, in a way, because it looks to the future.

**Nnedi Okorafor:** Well, you can skew optimistic but still be a cautionary tale. Technology can be used as a solution to those issues that have plagued Africa for so long. But technology can also be a monster. It can be a beast, a source of destruction.

Technology isn't positive or negative. By definition, technology is neutral. It's really how we use it that decides everything. As a writer, the stories I'm most interested in are the ones that emphasize the positives of technology, especially when it comes to African futures.

**Gavin Allen:** Let's talk about AI. Do you think it's overhyped?

**Nnedi Okorafor:** Currently, yes, but the potential is there. Before AI was unleashed on the world, I was very optimistic. But then I saw that, almost immediately, people started using AI to potentially replace writers, illustrators, musicians, and other creative people.

**Gavin Allen:** Do you feel threatened by the prospect of AI churning out science fiction books?

**Nnedi Okorafor:** I don't feel threatened at all. AI can't create those things that are from the human heart. They can only create what's already out there. I know the way I write, the reason that I write, and where it comes from. That's not something that AI can imitate. It's not possible.

But we are gonna see a novel written by AI that's gonna be massively popular. That's going to happen.

**Gavin Allen:** What would excite you about AI?

**Nnedi Okorafor:** When AI starts doing things that human beings can't do! Isn't that the point? That's what excites me: true artificial intelligence, not these programs that are just aggregating materials and spitting something out.

We should be using AI to do things that humans are not intelligent enough to do — in terms of healthcare, climate change, people with disabilities, and so on.

“Technology is neutral. It's really how we use it that decides everything.”

**Gavin Allen**

Editor-in-Chief  
Huawei Technologies

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**We should be using AI to do things that humans are not intelligent enough to do.**

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**Gavin Allen:** There's talk about putting guardrails around AI, or appointing some sort of referee to oversee its development. Do you think that would be worthwhile?

**Nnedi Okorafor:** Guardrails will apply to the average person. They will not exist for those with power and money. So I don't buy any of that.

**Gavin Allen:** So you'd just let it develop and hope it goes in the right direction?

**Nnedi Okorafor:** Certainly, if we use AI in a positive way. Will that happen? Fingers crossed!

**Gavin Allen:** As a child, you had health issues. Did that in some way drive you into sci-fi?

**Nnedi Okorafor:** Both of my parents are Nigerian, and they've taken my siblings and me back to Nigeria since we were little kids. I started seeing cell phones in very rural parts of Nigeria. The phones were supercomputers that were chargeable. That got me thinking, "This village that doesn't have running water or electricity — what's this place gonna be like in the future?"

On top of that, there were my medical issues. As a teenager, I had been a top-ranked athlete, then got surgery for scoliosis and woke up paralyzed from the waist down. The surgeons didn't know why or whether I'd ever walk again. It was the darkest time in my life, and for a while, I lost my confidence in science.

Then I started thinking about technology — our lack of control over it, but also its possibilities. My whole experience with paralysis got me thinking about the body and technology. Over time, the more writing I did, the more I saw technological advances in terms of the body. That's really what led me to where I am now.

**Gavin Allen:** Enthusiasm for sci-fi in China has taken off. How does that make you feel, to see a whole different culture embrace, and shape, the sci-fi and fantasy worlds?

**Nnedi Okorafor:** There's this idea that science fiction only comes from the West, and that's wrong. Science fiction has many points of origin. Every society on earth thinks about the future. Every society has wants and needs for the future. We all have a stake in it.



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**The idea that science fiction only comes from the West is wrong. Every society on earth thinks about the future.**

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**Nnedi Okorafor**  
Award-winning science fiction writer

# THIS IS GONNA CHANGE EVERYTHING A VERY SHORT HISTORY OF GENERATIVE AI



**Jerry Kaplan**  
Author, serial entrepreneur,  
and AI expert

Silicon Valley inventor Jerry Kaplan talks with *Transform's* Gavin Allen about the rise of generative AI. Jerry Kaplan, Ph.D., is a serial entrepreneur and author of the new book, *Generative Artificial Intelligence: What Everyone Needs to Know*.

**Gavin Allen:** Can I start with just the most basic of questions: what is generative AI?

**Jerry Kaplan:** Most people are familiar with artificial intelligence in the applications of things like facial recognition, self-driving cars, or language translation.

But some recent technical advances have made a whole new class of systems, which are much more capable than these earlier systems.

They take this system and basically feed in everything that's ever been written, trillions of words, and the system trains itself and learns the connections between those words. It becomes, in a way, generally intelligent. You can talk to these systems in ways that seem utterly, astonishingly natural in the way that they respond; and the breadth of knowledge they have is encyclopedic.

**Gavin Allen:** But it's not just words, it's images as well.

**Jerry Kaplan:** Right, there's also another form of generative AI that is visual. There are new systems where you say, please paint me a picture in the style of Degas, of two children playing on a swing, on the moon. These systems will generate all kinds of beautiful images of that sort.

We're going to encounter AI in a very different way in the future, in a much more natural way, in a way that makes it possible for anybody to get all kinds of information and have things explained to them in their own language. That's gonna change the way we work and live.

**Gavin Allen:** What has surprised you about generative AI?

**Jerry Kaplan:** One of the most surprising things is that these systems not only know a lot but are, for lack of a better word, creative. They are also predictive, in the sense that they can fill in the blanks at a very deep level. They take in what you say. Internally, it is translated into a representation of the meaning of what you say, in the context of all of the knowledge of humanity.

Then the AI figures out what to say next, and what's appropriate to say next as a response. The results are astonishing. These are polymaths, experts in almost every subject. They can give you advice, draft documents, write poetry. Just say, write me a poem for my birthday, and it will go ahead and do that.

**Gavin Allen:** So you don't think AI has been over-hyped?

**Jerry Kaplan:** No. This is just like the internet. We went through the same thing: a period when everybody was throwing money

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**Generative AI is a tool that can use tools. It's an invention that can invent.**

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at it. But that's not really an accurate description of what's going on, because this is going to change everything.

It is quite possible that generative AI will prove to be the single most important invention in human history. These systems will discover new drugs and help us address major problems like climate change. They will provide advice of every conceivable nature. In the future, when you want the most objective, reliable, accurate information, you're not going to go to a human being; you're going to ask a machine.

**Gavin Allen:** So why do you think so many people, including the media, default to a sort of anxiety? Why are we not galvanized by AI's possibilities?

**Jerry Kaplan:** Most people don't realize that this is just the tip of the iceberg. They're thinking that it's like teaching a bear to ride a bicycle. But these systems will be managing our institutions and our organizations. They'll create business plans for you.

You can't just look at what's available today. This is the leading wave of an incredible sequence of improvements that are going to take place over the next five to 10 years.

**Jerry Kaplan**

Author, serial entrepreneur,  
and AI expert

But when you have a new tool of this power, it is scary because you don't know how it's really going to affect things. Obviously, it has tremendous potential to make our lives better: to eliminate poverty, to increase our standard of living, to improve our communications, to streamline all kinds of business processes. But it also has a number of negative effects, including an ability to generate disinformation.

Still, I think this technology is going to be very important. When you query these systems, you're not asking a thing; you're asking a question to the accumulated knowledge of mankind. It's a new kind of tool for querying, all the knowledge and information that's out there. Even though it looks like it's talking to you, that's just the interface.

It's a tool that can use tools. It's an invention that can invent.

**Gavin Allen:** Do you have ethical concerns about misinformation or other issues?

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**In the future, when you want the most objective, reliable, accurate information, you're not going to go to a human being. You're going to ask a machine.**

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**Jerry Kaplan:** There's a whole raft of problems that are going to be made worse by this technology, and we're going to have to find the best ways to mitigate those risks while not cutting out the opportunities that we also need.

A new problem that I think is going to be very serious: when you have children, or adults for that matter, who have been brought up being tutored by these infinitely patient, infinitely attentive systems, you're naturally going to have in an instinctual desire to have some kind of relationship with them, to trust them, to get emotional support from them.

**Gavin Allen**

Editor-in-Chief  
Huawei Technologies



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These systems will discover new drugs, address problems like climate change, and provide all kinds of advice.



I imagine people coming home from work who are lonely or old, people who don't have enough interaction with other human beings. You'll come home at the end of the day, sit down, and tell a machine all about your problems. Instead of getting the kind of comfort you want to be getting through direct human interaction, you're getting that from a machine. It may disconnect people because instead of getting your connection from other human beings, you're going to get that emotional need for comfort and friendship from a machine.

And I think that's gonna be a very big issue.

**Gavin Allen:** One of the other big issues that's been talked about a lot recently is governance and regulation. What's your view on there being an "AI referee"?

**Jerry Kaplan:** The problem is, we don't know what the game is yet or what the rules are.

But when you get to be an old guy like me, you've seen this movie before.

Now, I'm not that old, but the automobile is an interesting example. Streets used to be like public parks, and there were horse-drawn carriages. The big problem in places like New York was that there was so much horse dung, to put it politely, that it was unsanitary. Also, there were accidents.

In response, we modified the infrastructure. We got lane markings, streetlights and stop signs. In the end, we banned horses and people from walking in the street the way they used to. That was a transition in which there was a great deal of conflict and some violence, believe it or not. That's just one example.

**Gavin Allen:** Since we're still not clear on who the referee is and what the rules of the game are, it's inevitable that the big technological companies will drive the rules for now. Is that a concern?

**Jerry Kaplan:** Obviously, we have to look to the companies because they're the ones who understand the technology.

But this took all those companies by surprise. You might think they've been planning this and working on it for years; it was all by design. No.



It is possible that generative AI will be the most important invention in human history.



There were a couple of technical things that happened, and when these technical things were combined, and these systems were scaled up in terms of computing power, they suddenly started to make sense.

The companies are still coming to terms with what that means. In my view, it raises some fascinating philosophical questions like, 'What is intelligence?' 'Could a system like this ever be conscious?' I think over the next 30, 40, 50 years, we're going to live in a very different world and have a very different view of what a computer is and what it can do.

**Gavin Allen:** What do you make of this call for a pause in AI development to make sure we're not going too fast? What if it inadvertently slows down progress on lifesaving drugs?

**Jerry Kaplan:** That's a good question. I'll give you an unusually direct answer: It's a big mistake. There's no sense in pausing this. First of all, you can't do it. The rollout of new technologies happens at its own pace based on the value that people who are adopting them see.

This call came from a group of people who were worried that AI was somehow going to come alive and take over or wipe out humanity. That's silly. There's no fundamental basis for it.

That's not to say that we may not build dangerous tools, and we do need to have control over those tools. But the pause is not going to happen.

**Gavin Allen:** So, don't stop and don't panic.

**Jerry Kaplan:** Exactly. This has happened over and over in the past.

This is a major new wave. It's almost like the domestication of electricity. That's the scale of the change that we're talking about here. The world runs on electricity today. I think that the world will run on some future version of generative AI in the future.



# AI WILL INSPIRE SCI-FI WRITERS, NOT REPLACE THEM

An expert on artificial intelligence and science fiction shares his thoughts on how AI can be used for innovation and what generative AI means for authors.

## Hiroataka Osawa

Associate professor in the Faculty of Science and Technology at Keio University, President of the Science Fiction and Fantasy Writers of Japan

**Gavin Allen:** What attracted you to science fiction?

**Hiroataka Osawa:** Science fiction (sci-fi) is a very appealing genre because it explores diverse ideas – sometimes scary and big ideas. But it involves unique thinking. So for writers, sci-fi is like an experiment.

**Gavin Allen:** How do you use sci-fi as a means to explore aspects of humanity and society in your research?

**Hiroataka Osawa:** Sci-fi is not a source of ideas for me; it empowers me to challenge certain things. So, a seemingly impossible idea can become a reality.

**Gavin Allen:** Do you think that science fiction is now almost being outpaced by scientific fact?

**Hiroataka Osawa:** AI is like science facts at a higher speed. Sci-fi fiction might still be ahead, but nowadays, writers are trying to write more science-fact-based ideas.

Many sci-fi writers have very different backgrounds in professions such as science and technology, the humanities, medicine, or academia. So they have an abundance of knowledge, but now they are trying to explore more unique ideas.

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Sci-fi should motivate the future – both people and ideas.

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**Gavin Allen:** How does sci-fi feed off science, fact, and innovation?

**Hiroataka Osawa:** Sci-fi should motivate the future – both people and ideas. So now, we are trying to study sci-fi prototyping. That's the challenge of creating a future vision for sci-fi writers and other individuals. Since sci-fi is not only about the future, it is more innovative.

**Gavin Allen:** How does it flow into the current state of innovation?

**Hiroataka Osawa:** Sci-fi is empowering research. Despite questioning their existence, sci-fi writers are making us lean towards them because these strange ideas may be very important for society.

**Gavin Allen:** Does sci-fi help us test certain developments by looking further ahead to imagine them?

**Hiroataka Osawa:** Simulations are important in sci-fi because researchers sometimes think that technology is very good for everyone, but this writing genre finds problems with certain technologies.

This point is very important for leading sci-fi, and that's why several Japanese companies are now focusing on it.

**Gavin Allen:** When it comes to AI, do you think that we feel more comfortable talking to somebody or engaging with someone that we think has human characteristics? Why can't we trust a robot?

**Hiroataka Osawa:** Human-like agents are very useful and might be more attractive to people.

This doesn't mean that AI needs to mimic humans; but it needs to interact better. For example, some kind of human-like AI means you are helping people communicate better with society. I think it's very important that our society

can accept more “non-human-like” ideas. This means we make more allowances for diversity.

**Gavin Allen:** What about the demand and concern for AI to be contained and have careful safeguards around its future development? Would you like to see strict controls?

**Hiroataka Osawa:** Actually, I think it's impossible to strictly control AI. For cases such as nuclear power or bio-tech, we need controls. However, if AI just runs on computers, such as for graphics or on personal computers, we cannot control it. But we can educate ourselves on how to use it better. For example, AI is very good at persuading people, which means it can deceive people. But if we are smarter and more aware, we can realize that this is just a machine trying to attract us.

**Gavin Allen:** So you're saying that regulation is sort of pointless? We need to educate, rather than regulate to try and control it.

**Hiroataka Osawa:** We need to control AI ourselves, but not through rules or strict regulations. All humans need to be responsible so that we create a precedent and shape the future.

**Gavin Allen:** What's the responsibility and role of a technology company such as Huawei when we're developing these new technologies? Are you saying that we shouldn't have any regulations?

**Hiroataka Osawa:** I think that we need regulation of companies to give warnings

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We sometimes think that technology is very good for everyone, but sci-fi writing can identify problems with certain technologies.

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to people. While some technology might deceive people for dark purposes, at the same time, some people have a “right” to be deceived.

The important point is that we need to make a statement about the risks of AI – not just physical risks, but also psychological ones. You might be deceived by AI, so if you're using it or might be relying on it too much, this is important to recognize. Therefore, every industry and company should be required to be transparent and open about the technology they are using.

**Gavin Allen:** With AI becoming more and more skilled at replicating human writing, will AI be writing sci-fi in the future? Will we even need human authors?

**Hiroataka Osawa:** I think it might be possible to generate sci-fi by AI. But in general, we want literature that is written by humans, because sci-fi writing is a form of human-to-human communication.

The fundamentals of what an author is thinking and what kind of story they are imagining cannot be replaced by generative AI. AI can help, but it doesn't replace authors.

**Gavin Allen:** Einstein said that imagination is more important than knowledge. Do you agree with that?

**Hiroataka Osawa:** I totally agree with Einstein. It is even more important than before because we can share knowledge on the internet and AI even can answer its own small queries.

But imagination is the motivation for humans to thrive in a new direction. What kind of direction will be possible and where do we want to go? That question is more important to research and for the development of society.

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Our imagination motivates humans to thrive in a new direction.

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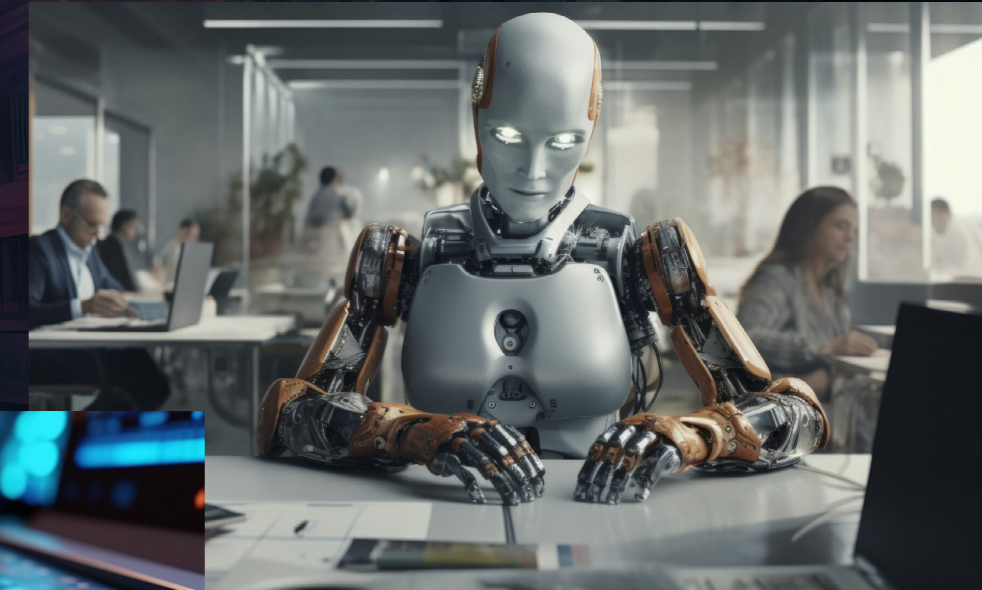
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We want literature that is written by humans because sci-fi writing is a form of human-to-human communication.

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# TO MAKE AI TRULY INCLUSIVE, DON'T LEAVE IT TO THE EXPERTS

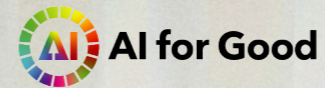
(SAYS THIS EXPERT)

Frederic Werner is Chief of Strategy and Operations at the ITU. In an interview with *Transform* Editor-in-Chief Gavin Allen, he talks about the ITU's AI for Good initiative, and what "inclusive AI" really means.

## Frederic Werner

Chief of Strategy and Operations, AI for Good International Telecommunication Union

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**Gavin Allen:** What is AI for Good? How did it first come about?

**Frederic Werner:** AI for Good was built on the premise that AI can advance many of the UN Sustainable Development Goals, from health care to climate change, education to gender equity, or more high-tech solutions like autonomous driving and smart cities.

We have to be mindful of the unintended consequences of AI, so top of mind is job loss due to automation, but other things like bias and unfairness. There are also issues of privacy, transparency, accountability, and the digital divide.

We must figure out how to scale solutions for global impact. We have virtually the entire system of 40 UN agencies as partners of AI for Good. And actually, it's organized by ITU, where I work.

But even the experts would say that "AI is too important to leave to the experts." So, we bring in industry, academia, civil society, member states, and different NGOs, artists, athletes, and creatives.

Our thinking is that we need to bring as many different voices to the table so that we can have a proper, inclusive dialogue on how AI might benefit humanity.

**Gavin Allen:** What are some of the positive outcomes that "AI for Good" has already achieved?

**Frederic Werner:** Use cases come across my desk every day. For example, using a mobile phone to detect skin cancer, where even in developed countries, you sometimes need to wait a year to see a dermatologist.

Likewise, in education, you can do customized e-learning. You're making learning accessible available in settings where

there's one teacher to a hundred students. Tech can be used to create customized learning plans for students.

Another example is combining satellite imagery with big data analytics and machine learning to help predict weather patterns or natural disasters, or to optimize crop yields.

But I think the biggest challenge is ensuring that these high potential use cases work equally well for men, women, children, the elderly, people with different skin colors, or disabilities, especially in low-resource settings where basic things like electricity and connectivity are still issues.

These are things that don't occur naturally in the fast-moving tech industry and startups. I think the approach up until now has been "Build it, and we'll figure all of that out later."

But these are things at AI for Good. And that's really important if you're gonna scale AI for Good globally.

**Gavin Allen:** How do we ensure that when we talk about AI, it is good for all? That it is, as you say, inclusive, rather than good only for a select few?

**Frederic Werner:** It's a very good question. You and I could spend all day arguing that what's good for me might not be good for you, or for different cultures or countries.

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We need to bring different voices to the table to discuss how AI might benefit humanity.

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But luckily, we don't have to start from scratch because we have the same Sustainable Development goals to guide us. There are 17 goals and 169 targets acting as a framework for decision-making on where we put our efforts. Without that framework, we'd be starting from scratch every time we discussed what is good. But the SDG framework guides our strategy and gives us something that's implementable and measurable.

AI for Good is presented as an annual summit in Geneva, but it's also an all-year online platform where we have about 150 online events per year, reaching thousands of people from 183 countries. I like to think we're more of just a talking shop. Through these activities and talks, there's a lot of knowledge sharing, best practices, discourse, sharing of opinions, expertise, and so on. From these collaborative efforts, we obtain what would call the building blocks of AI for Good.

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If we want AI to be inclusive, we can't just leave it to a handful of people.  
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For example, we have what we call focus groups. These are pre-standardization efforts. For example, we have AI and Health with WHO, AI and Natural Disaster Management with the World Meteorological Organization (WMO), and AI and digital agriculture

with the Food and Agriculture Organization (FAO). We also have focus groups on autonomous driving and 5G.

Even though these topics are different, we have the ITU, whose mandate is telecommunications and ICT, working with member states, private companies, academia, and basically working on the building blocks of AI for Good.

**Gavin Allen: So you're trying to lay the groundwork for common AI standards?**

**Frederic Werner:** Yes, these groups are working on gap analysis: what standards exist, and which ones don't? Is there any overlap between existing standards? That's a good starting point for figuring out what to work on. But more than that, they're identifying high-potential use cases. So one challenge is, developing a framework for the testing and evaluation of AI for Health applications. Imagine if you're a mayor or running a hospital and you're evaluating these high-potential applications. And there are hundreds, if not thousands. How do you know which ones are any good?

In the past, there was no one way to measure apples with apples. So they've created a system where you can actually test the performance of these algorithms, and then use the information to make informed decisions.

These are the bottlenecks that are really preventing AI-for-Good solutions. But, the ITU acts as a funnel, collecting all these requirements and problems from a wide range of stakeholders. It then goes into this pre-standardization mechanism called focus groups, and eventually finds its way into the international standardization process.

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The ITU acts as a funnel that collects requirements from a wide range of stakeholders.  
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**Gavin Allen: What are the challenges with respect to AI governance?**

**Frederic Werner:** I think no one could have anticipated the advent of generative AI and what it would do to the world. ITU company leads, UNESCO, and the UN Inter-agency Working Group on Artificial Intelligence, coordinates all AI efforts in the UN. UNESCO has ethical guidelines on AI, and different partners bring different pieces to the table.

When it comes to governance, we know what the problems are. How do we handle bias? How do we make AI ethical, safe, transparent, accountable, sustainable, and inclusive?

We also know that we want agile regulation and governance. I think it's quite similar to standardization, where you have that sweet spot: standardize too early and you stifle innovation. Do it too late, and you might get negative consequences.

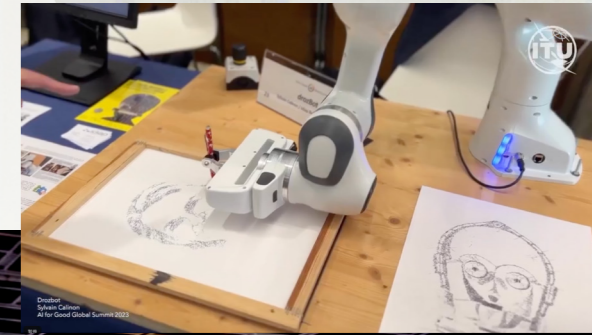
So, we want AI to be inclusive. Great efforts have been made to bring developing countries to the table and involve multiple stakeholders, including industry, academia, NGOs, civil society, and our governments. Again, we can't just leave it to a handful of people.

**Gavin Allen: How important is global coordination in AI governance?**

**Frederic Werner:** There are more than 700 guidelines on AI policy governance and measuring different indicators. In Europe, they lean towards consumer protection, while the US takes more of a free-market approach, so you have differences in philosophy.

But there are more commonalities than differences. No one wants unethical AI, no one wants to make bad decisions based on flawed data sets. No one wants autonomous cars that are unsafe. So a lot of consensus exists.

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We must figure out how to scale AI solutions for global impact.  
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# DON'T TURN AI INTO A FRANKENSTEIN MONSTER, SAYS THIS EU LAWMAKER

Instead, ensure that people  
become "better humans"

**Iban Garcia del Blanco**

Member of the European Parliament

**Gavin Allen:** In the European Parliament, you're on the Legal Affairs Committee, which advises EU policymakers on the legislative implications of AI and other issues. Will stricter regulation of AI help address some of the fears around this technology?

**Iban Garcia del Blanco:** Regulation is always behind reality. It's impossible for it to keep pace with the AI revolution.

But we have principles. We try to create regulation that can adapt to new realities. We will certainly need to update our regulation in some key respects. The European Union's Artificial Intelligence Act was never intended to fix all the problems. But it tries to establish a general framework that could be useful in the future.

One of the challenges we face is ensuring digital literacy. Everyone needs to know what the digital transition entails because it's going to change everything in our daily lives. As a society, we need to make important decisions about the speed of the changes and the limits of the changes we will allow. You don't have to be an expert, but you should at least understand generally what this transition will involve.

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Everyone needs to know what the digital transition entails because it's going to change everything in our daily lives.

”

**Gavin Allen:** And how do we strike a balance to ensure that we regulate properly – guarding against problems that could arise without crushing the innovative spirit that lies at the heart of AI?

**Iban Garcia del Blanco:** We are quite aware that we need to encourage innovation. Our hope is that regulations will create legal certainty for industry players. We actually see regulation more as an opportunity for innovators than as a risk. I think the problem of Europe lagging behind in the digital transition is a problem of investment and making common efforts inside the European Union. It's not a problem of regulation.

**Gavin Allen:** So what's the role of companies like Huawei or other big tech companies within this regulatory or standard-setting environment?

**Iban Garcia del Blanco:** I think it is important that we have an exchange of views with these big companies. In order to avoid overregulation, we must make companies aware that they need to take certain important principles into account. This exchange of views gives them the opportunity to argue that some regulations could be worse than the

reality itself. We need to establish some kind of balance between private and public actors.

**Gavin Allen:** And presumably also a contribution to education and digital literacy?

**Iban Garcia del Blanco:** We are trying to encourage big companies to be part of this digital literacy. Doing that requires that big companies get on board. Trying to do it through public institutions alone will not be enough.

**Gavin Allen:** I've heard it said that managing AI will require us to be better humans. What do you think of that?

**Iban Garcia del Blanco:** I think we have an opportunity to be better. For instance, we talk about the need to avoid bias in algorithms. Bias has existed in society for centuries. It's a real problem.

Now, we are going to take the opportunity to expunge this kind of bias from our tech platforms. To do that, yes, we as human beings will try to be better.

It's important to give this message to common people because sometimes this artificial intelligence transition is seen like the Frankenstein monster being chased by the villagers. But yes, we'll see not just a big leap in productivity, but also a more balanced society. I'm quite convinced.

**Gavin Allen:** That's very optimistic. But if we do get it wrong, what is at stake? Are we releasing Frankenstein into the village?

**Iban Garcia del Blanco:** We are trying to be cautious and to have regulation because sometimes people don't understand that we have to regulate this field. I don't understand why we haven't already regulated certain aspects of AI. Some of the key players at the big tech companies are making us aware that we need it.

So I think that there's some kind of consensus between the tech sector and public institutions that we need tools that will make better societies.

**Gavin Allen:** So it's a bit slow but not too late. The village is safe from Frankenstein.

**Iban Garcia del Blanco:** For sure.

**“**  
**As a society, we must decide on the speed and limits of the changes we will allow.**  
**”**

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**We need to establish a balance between private and public actors.**

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# WHY WE MAY BE LIVING IN “AN EMPIRE OF ALGORITHMS”

While *Transform* magazine dedicates an entire issue to a single topic, Transform Talks is an occasional series of video interviews with thought leaders that examine a broad range of trending topics.

At the fourth session of the Schools for Female Leadership in the Digital Age, Huawei spoke with two experts on artificial intelligence.

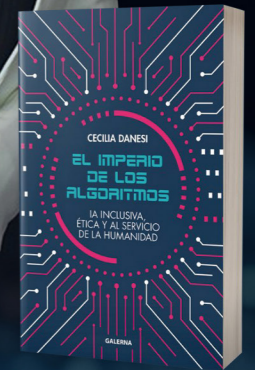
Professor Aleksandra Przegalinska of Kozminski University in Warsaw, Poland, who is also a Senior Research Associate at Harvard University.

Professor Cecilia Danesi, a researcher in AI and Civil Law at the University of Buenos Aires and the University of Salamanca, and author of *The Empire of Algorithms: Ethics and Inclusive AI at the Service of Humanity*. She told Transform Talks that “most of the decisions we make are influenced by AI.”



**Prof. Aleksandra Przegalinska**

**Prof. Cecilia Danesi**

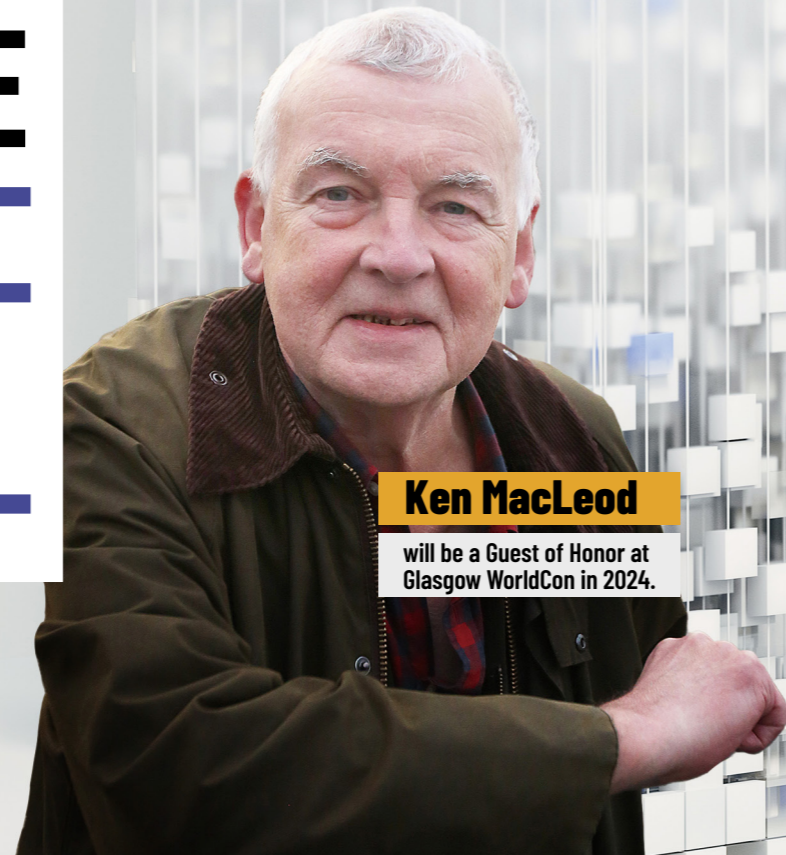


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# HYPE CYCLE OVERDRIVE

## AI WILL BE SPECTACULAR — BUT TREAD CAREFULLY

An award-winning science fiction writer talks about what excites him — or not — about artificial intelligence.



**Ken MacLeod**

will be a Guest of Honor at Glasgow WorldCon in 2024.

**A**re you excited by AI, or is it more “let’s wait and see”?

A bit of both. To tell you the truth, the science fiction writers of the 90s really bought into the hype about AI. We bought into the hype about nanotechnology and we oversold the near future possibilities of AI and nanotech. And that’s really the way that science and technology advance. Like in real life, there is a very recognizable “hype cycle” for any new technology where they promise the earth at the beginning, and lots of investors rush in, and you get funding, and so on. And then things eventually are somewhat less spectacular than originally hoped.

**I always thought it tended to be slower than people thought, but bigger than people thought. So, it will be massive, but just not as immediate?**

That’s a very good way of putting it. I had not expected Chat GPT, for instance. And the real advances have been slow but spectacular. To take a very simple example: Google Translate. I tried it once 10 years ago for a laugh. I had given a remote talk in Russia that was interpreted into Russian, and then I interpreted it back. And the result was very funny and very clunky. And nowadays, you go to a Chinese site, click on Google Translate, and you get almost seamless idiomatic English right in front of you in a second or two.

**So, is there going to be a Worldcon [The World Science Fiction Convention] in five or 10 years, or is AI going to be able to write the sci-fi that humans currently write?**

I don’t think AI can yet write believable fiction. It can write believable lies. That is one of the AI hazards that nobody had expected. If you do a search on a certain company’s search engine and use the little chatbot, you will find loads of very bad results very quickly. This is shocking because it’s filling the internet with rubbish.

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**AI developers keep telling us AI could threaten the human race, yet they keep developing it.**

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So, what do you make of Elon Musk's call for a referee for AI development — the need for it to be contained, to have guardrails?

It is really striking that the big AI developers keep telling us that AI could pose an existential threat to the human race, and yet they keep developing it. What's really going on here? I think we can only approach this with a degree of wariness.

**They would say you can't put the genie back in the bottle, and therefore we have to keep developing it. And it's not for us to do the guardrails. It's for regulators and governments.**

Yes, I think there needs to be regulation for sure, but again, you have to be wary of stepping on tender shoots there because the development of AI could be slowed down in open and liberal societies, and it could therefore be moved to less responsible actors. There's a balance to be struck, which probably requires a rather higher level of statesmanship than we currently enjoy.

**Also, the problem, of course, is that most regulators and statesmen don't have the skills, the technological know-how, to know how to regulate it properly.**

Indeed, they don't. And politicians often do a very bad job of even the simple thing of regulating the internet. And they come out with statements of terrifying ignorance — one British Member of Parliament was going around saying, "Why don't we just ban algorithms?"

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**I don't think AI can yet write believable fiction. It can write believable lies.**

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**I want AI to replace repetitive and stultifying work.**

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**How would you hope that AI does change society?**

What I want to be able to see is AI replacing an awful lot of routine and repetitive and stultifying work, and to a degree, it's already doing that. Though, as often with these things, it's not noticeable. You don't notice what isn't there. And what isn't there at the moment since the advent of desktop computers are typists and dispatch clerks. I was a dispatch clerk for a few years when I was still trying to be a scientist and doing it part-time. And it was a good, steady job, but it was intensely boring because it was basically typing the same invoices over and over again with different dates and all of that and putting them in. Nobody has to do that now.

**So what is the role, do you think, of technology companies such as Huawei in trying to sell the benefits of technology? The world — and the media — seems pretty skeptical about it and tend to go for the fear element before the enthusiasm.**

You can see so many things that would be so useful to have AI doing rather than people doing — or even not being done at all — monitoring the health of every tree in that park, keeping the lake clean, designing the structure behind us, and so on. The only thing — and the best thing — that companies that want to be responsible can do is be honest. I think trust is very hard to recover once lost.

# GREENING THE NETWORK WITH AI DIGITAL TWINS

“ 5G consumes more energy but it is more efficient ”



Last year, *Transform* spoke with Dr. Zheng Xi, a principal research engineer at Huawei.

She's one of the lead inventors of SRCON, a "digital twin" for mobile networks. Telecom operators use it to run simulations of things that might happen on a real-world network — without real-world risks.

SRCON also helps optimize network performance, minimizing energy consumption.

We speak with Dr. Zheng again in this edition of *Huawei Decoded*, a series of video interviews where Huawei employees answer random questions from the internet about the company and their areas of expertise.

**Dr. Zheng Xi**

a principal research engineer at Huawei



Scan QR code to watch the full interview

# THE AI RISKS WE TEND NOT TO THINK ABOUT

Poorly designed economic regulation could throttle AI's potential, says this expert.

**John Higgins**

Chair, Global Digital Foundation



**W**hat are the main risks we face with AI?

It's convenient and useful to divide the risks into business risk, societal risk, and then maybe individual risk.

For the business risk, it's the risk of not taking advantage of the benefits that AI can deliver to you and your customers. So, if you just miss out, you don't gain a competitive edge.

But probably the bigger risk as a business is that, if you get it wrong and use it unwisely, you can do all sorts of damage to your reputation. Most business executives understand what they're doing and can make judgments about it. But in AI, they're not very well equipped to make those judgments.

The risk for the consumer includes believing things that just aren't true because they've been generated in some sort of AI world. For society as a whole, there's the risk of opinions forming into silos because they're based on AI-powered social media.

Which of those do you feel is the most immediate or the most worrying?

It depends on which perspective. But I think the one that's less well thought about is the business risk. So yeah, we can all get captured by the things we see as individuals, as consumers, or think about from our children's perspective. When we read the papers or watch TV, we might also get caught up in the societal risk.

But I think the business and economic risks are the ones that most of us don't think about. And yet in some ways, they could have the biggest impact of all.

If we regulate too quickly, we potentially lose out on some of the many benefits AI could deliver, whether in healthcare, climate change, or some other area.

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**If we regulate too quickly, we potentially lose out on some of the many benefits AI could deliver, whether in healthcare, climate change, or some other area.**

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**So where do you stand on that spectrum of “not too fast, not too slow”?**

We should think in terms of regulating for societal protection, if you will. And businesses like a common regulatory environment. You don't want to make one for here and one for there.

Right now, in Europe, we take a policy approach based on the “precautionary principle,” meaning that, if it could do some harm, we'd better put a regulation in place. That differs from the Anglo-American approach, which is more, “Let the market have a go at it, and then we'll fill the gaps with regulation afterwards if we identify market failures.”

It would be great to have one approach. From a business perspective, the closer you could get to that, the better.

In the world of regulatory approaches to AI, there is this convergence of opinion about what we need to do. We know we want AI to be safe and reliable; we know we want it to be secure. If it's appropriate, we know we want human intervention to be enabled at the right point. We know we want to use data that we've acquired legally, and that doesn't have loads of dodgy biases in it.

So, I think we're beginning to get a common set of understandings about the sort of expectations we have for AI. This will help companies operate with the degree of business certainty that they want.

**You sound quite positive about it, but it sounds like there's the theoretical need to overcome the various challenges that arise.**

I am. There's still a long way to go, but I am encouraged. It's a funny thing, but the way people work together, a set of concrete things are emerging, I think, that will serve our needs – the beginnings of a framework.

I'm not saying it will answer all our problems. But I am quite confident that a common set of safeguards, the guardrails people refer to, are beginning to shape up and solidify.

**But there's no turning back there. You can't put the genie back in the bottle.**

Absolutely. And nor would we want to, if you think about the fantastic advances that technology has enabled us to achieve. What we've got to do is deal with it as best we can. I think we're making good progress.

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**There is this convergence of opinion about what we need to do.**

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**I am quite confident that a common set of AI safeguards is beginning to take shape.**

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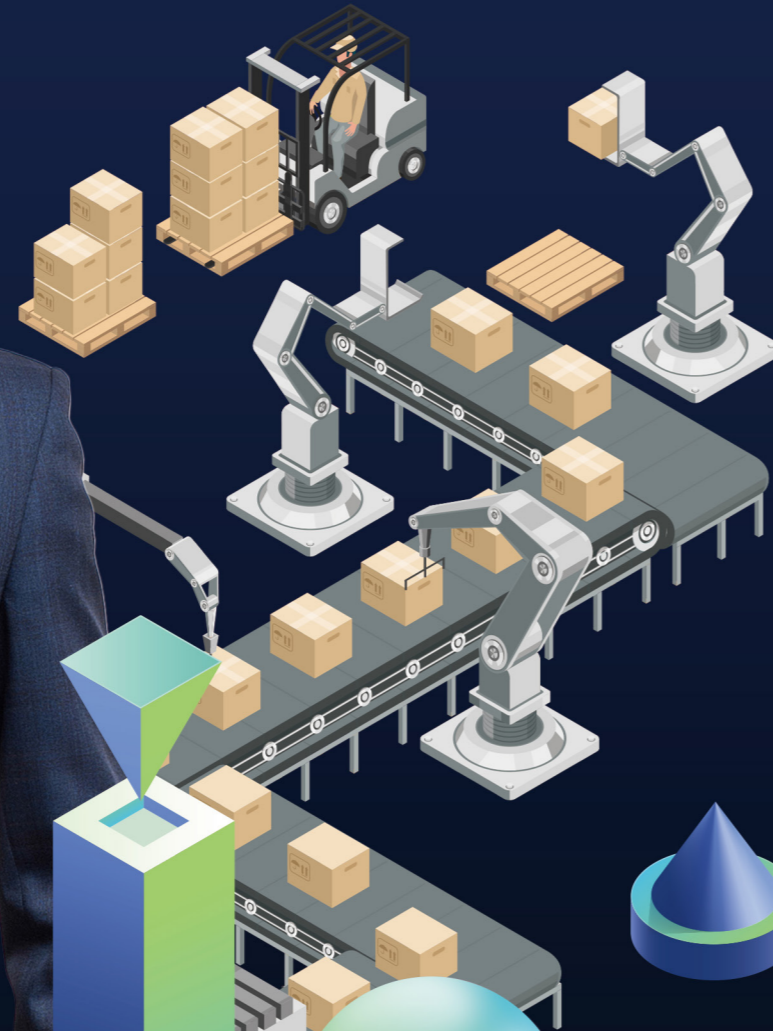


**Scan QR code to watch the full interview**



# INTELLIGENT AUTOMATION IS THE NEXT BIG THING

Combine automation with AI and you can get big results. But start slowly, this CEO cautions.



**Jamie Claret**

CEO, Automate

The speed with which ChatGPT has become an integral part of my life is astounding. These days, you'll see me wandering around my local park, lost in thought about its implications as a "human-like companion" for business and society.

ChatGPT is a large language model, meaning it has been trained on massive amounts of data from the internet and that you interact with it through natural language. Its ability to generate text on any subject is awe-inspiring and unnerving.

AI is advancing at a brisk clip. Automation, on the other hand, seems to have been more of a slow burn. Sure, you've probably seen automated warehouses and robot vacuum cleaners or lawnmowers, but they don't seem to have much to do with daily life.

But there's a type of automation that has been around for the past 10 years or so, called Robotic Process Automation. RPA uses software to perform tasks that historically, only humans at a computer could do. It can read emails, reply to requests, and open applications like Excel. It works 20 times faster than a human, doesn't take holidays, never gets sick, and almost certainly costs less than you do.

That may sound like a threat to your job, but there is a bright side to consider.

In a recent survey, 70% of workers said the biggest opportunity of automation was reducing time spent on repetitive work. About 60% of that same group estimat-

ed that they could save six or more hours per week — almost a full day of work — by using automation.

RPA excels at repetitive, mundane tasks that consume time and don't require much intelligence. This makes it particularly useful in compliance-heavy industries such as insurance, finance, and HR.

But RPA is just a tool. I tell clients that Iron Man's suit is just a suit; it has no magical powers of its own. But when Tony Stark puts it on, it boosts his human abilities.

Similarly, automation technology has no value without human input and understanding.

“Automation technology has no value without human input and understanding.”

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### What's the rush?

The fusion of automation and AI is the next big thing. Where automation was once linear, intelligent automation introduces AI, making it dynamic. As RPA tools operate, exceptions they can't handle are delegated to human intervention. Over time, intelligent automation can observe these human-handled exceptions, learn from them, and eventually determine how to respond in similar situations in the future without human assistance.

When clients of Autonomate first talk about what they want to achieve, their first instinct is to go full AI and intelligent automation. They foresee an immediate switch to an all-powerful AI overlord that performs all functions of the business.

It's my job to bring them down to earth gently with the mantra that I believe applies to all technology projects: Start Slowly. I fully understand the excitement and vision, but this is still an IT project. The biggest difference, however, is that unlike "dumb" IT projects of the past, this re-

ally touches many areas that would have been considered human. A slower, more nuanced approach that educates and learns from all members of staff will lead to greater success.

Much like AI itself, intelligent automation requires careful oversight and regulation, while at the same time ensuring that innovation isn't stifled. Humans must remain in the loop — both in terms of processes being automated and in setting regulations and protections.

I have no doubt that AI and intelligent automation will rapidly emulate human ability and even human personality. During a recent video call I had with a friend, Chat GPT referred to me by name. In that moment, I forgot it wasn't human. I felt heard and seen.

That was quite remarkable — and we are only at the start of the revolution.

### The revolution is underway

I'm convinced that we have an unparalleled opportunity to harness technology to bolster businesses, improve work-life balance, and enhance productivity. The AI and automation revolution is in full swing, and it's imperative to ensure it brings positive change. My advice to clients is to prioritize education. The more informed, and engaged people are with these technologies, the better they will be able to use them for the collective benefit of society.

We are on the cusp of a revolution. As I continue to chat with AIs, I am constantly reminded of both the opportunity and human responsibility we hold. It's going to be an exhilarating and fascinating journey. I cannot wait to see where it takes us.

“  
**Iron Man's suit is just a suit; it has no magical powers of its own. But when Tony Stark puts it on, it boosts his human abilities.**  
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**We have an opportunity to bolster businesses, improve work-life balance, and enhance productivity.**  
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# COMPUTER VISION PROTECTS ENDANGERED FISH IN NORWAY

In Norway's rivers, an endangered species of salmon is pulled from the brink of extinction by AI.



**Omar Richardson**

Chief Technical Officer Simula Consulting



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**I**n some Norwegian rivers, an invasive species of salmon was crowding out a domestic variety. What role did your company play in solving this problem?

In the 1990s, humpback salmon were artificially introduced into Norwegian rivers. Over time, because of climate change, conditions became much more advantageous for the humpback salmon, allowing them to take over the rivers more and more. They compete for resources with the Atlantic salmon, which is the native variety.

We helped build an AI computer vision model that can distinguish between the two.

**How does it do that?**

It works as an image classifier. The ones you see on the internet can distinguish between, for instance, a cat and a dog, right? That's because they have been trained on lots of images of cats and dogs.

Essentially, this works exactly the same. It has seen tens of thousands of images of different species of fish: the Atlantic salmon and the humpback salmon – but also arctic char and smaller fish.

We worked with other partners in the project to build entire solutions, but our focus has been on the AI and the software backend. We trained the computer vision model and set up a data-processing pipeline, making sure that all the images made it from the camera to the server and could then be sent to the cloud.

**What happened to the humpback salmon as a result?**

The invasive humpback salmon gets separated from the Atlantic salmon. The native salmon are allowed to swim freely in the river, while the invasive species is shunted into an underwater cage, so it's no longer a threat.

All of the data that's collected is sent to river managers, enabling them to see not just how this fish trap is doing, but also, how many fish they have seen. Is that different from other years or from last week? In essence, we can use the data to evaluate the river's overall health.



**We helped build an AI computer vision model that can distinguish between two types of salmon.**



# WILL AI HELP WEATHER FORECASTERS SLEEP BETTER?

Forecasters fret about making accurate, timely predictions. Huawei's Pangu AI model can help.



**Professor Dr  
Florian Pappenberger**

Deputy Director-General  
European Center for Medium-Range Weather Forecasts

**Gavin Allen:** AI prediction tools like Huawei Cloud's Pangu weather model have turned out to be more accurate, precise, and quicker than traditional models. What's your reaction to this new development?

**Florian Pappenberger:** It's a sudden improvement in skill which we haven't seen for a very long time. It revolutionizes the business of weather forecasting itself.

**Gavin Allen:** And if it improves weather forecasting, what's the knock-on impact of that?

**Florian Pappenberger:** If you're planting crops, you may decide to do it today because tomorrow there's too much rain. If you walk out in the traffic, you may find there are snowplows in the city because it was ready for snow, thanks to the more accurate the weather forecast.

So weather forecasting impacts every single aspect of our lives. Better weather forecasts will automatically improve all types of activities.

**Gavin Allen:** What about preparing for natural disasters, such as extreme weather events?

**Florian Pappenberger:** Definitely. If you want to produce early warnings for everyone, you will need better forecasts everywhere.

Machine learning has a real advantage here. It's actually quite cheap to run compared to conventional weather forecasts, which are really expensive. You need super-

computers, you need loads of scientists. Nowadays, with machine learning models, you can run forecasts on a fairly simplified infrastructure, so you can produce this everywhere.

So, you will have warnings everywhere. That means you can save lives or can reduce the economic impact of an event.

**Gavin Allen:** I'm British, I'm obsessed with the weather. Can I look forward to a day where we get 100% accuracy of the weather thanks to AI?

**Florian Pappenberger:** You will never have 100% accuracy of the weather; that's simply impossible. Our atmosphere is chaotic, our Earth system is chaotic.

But there are degrees of accuracy. I can tell you that tomorrow, the weather will be between 1 degree and 20 degrees, or between 9.5 and 10.1 degrees. It's still an un-

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**Weather forecasting impacts every single aspect of our lives.**

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certain forecast – but far more accurate, better than in the past. That allows people to make better decisions, to plan better. I find this exciting.

**Gavin Allen:** Are there other areas where this could transform what forecasting is able to do?

**Florian Pappenberger:** Our mission is to produce the best weather forecasts in the world. That's what we're living for.

To do that, I need open science, open data, an exchange of ideas, and an entire community coming together and freely trying to advance that field.

So what I want to have is a really open atmosphere, an open discussion forum where we can really advance together. That's where private-sector companies can make a difference.

“

**To produce the best forecasts, I need open science, open data, an open exchange of ideas.**

”

**Gavin Allen:** And finally, when it comes to forecasting, what keeps you awake at night?

**Florian Pappenberger:** We produce a weather forecast every day, and it has to be reliable. It has to go out the door at the same time every day, at a high level of quality.

So for me, as a forecast producer who's trying to support member states of national weather services, that is the most important thing. It has to be on time and high-quality. If there's a tropical cyclone, I would like to predict that cyclone at exactly the time that my member-states, the people who make decisions based on the data I give them, can make the best use of it.

That's probably what keeps me awake the most.

“

**Machine learning is actually quite cheap compared to conventional weather forecasts. Our mission is to produce the best weather forecasts in the world. That's what we're living for.**

”

# NOW, ANYONE CAN AFFORD ARTIFICIAL INTELLIGENCE

Generative AI will help companies automate, innovate, and keep data secure.



**Courtney Munroe**

VP, Telecoms Research  
IDC

**T**ell us about your latest research on generative AI. What were the main findings?

Intelligence has been around for decades. What has changed recently is that Gen AI [generative AI] has become a lot more affordable. There have also been some tremendous advances in managing large data sets very efficiently.

So Gen AI, and other large language models like Huawei Pangu, allow all companies, not just the larger ones, to benefit from automation and efficiencies in their operations.

**What are some of those benefits?**

Gen AI brings tremendous benefits in allowing companies to more efficiently manage customer experience and customer engagement. It allows them to implement what we call “logical bots,” and either route customers to a bot that can answer questions more efficiently or send the customer to a human agent. For companies, this reduces the cost of having a large number of human agents on staff.

**How can large language models improve the operations and maintenance efficiency of a telecoms network?**

Gen AI can help you manage a network more effectively by predicting and anticipating where there might be a problem and then offering some corrective measures much faster and more efficiently than a human can.

#### Do any particular AI technologies stand out in this area?

Of course, Chat GPT has gotten a tremendous amount of coverage over the last year or so. Other companies, including Huawei, along with Microsoft, Google, and others, also have large language models. I think the most important thing is the ability for a company to allow its customers to integrate various large language models, and not be tied to a specific one. They choose the benefits of various models.

#### What are some of the challenges you see for Gen AI?

One of the key challenges is that Chat GPT and these models are still works in progress. They devour huge amounts of information that is not always accurate. So sometimes they have what we call illusions, where they may provide the wrong information, or slightly inaccurate information.

But they're getting better every day. The more information they ingest, the more accurate they become.

#### What role can AI play in boosting energy efficiency?

Leveraging AI also poses challenges to the overall IT infrastructure because you're using so much computing power. It generates a huge demand in energy. What we're seeing is data centers having to be prepared to upgrade their cooling and heat dissipation.

Also, we're seeing a lot of companies focusing on using renewable energy sources to manage these huge computing requirements.

#### So, people and companies are meeting that requirement.

Absolutely. There's a tremendous response we're seeing across the IT industry to meet the new demands for Gen AI.

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Large language models, such as Huawei's Pangu, allow all companies to benefit from automation.

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You want your customers to be very confident that you're going to keep their data secure.

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#### What about the governance and guardrails to ensure AI goes in the right direction?

When they start leveraging Gen AI, one of the key things companies have to figure out is how to manage customer data sets. How do they get buy-in from customers as to what data the company can use? How do they anonymize the data so that it cannot be easily used to track specific customers?

So companies have to understand how to use the data and establish specific policies to ensure data security. You want your customer to be very confident that, when they give you their data, you're going to make sure it is absolutely secure.

#### And what will be Gen AI's role in helping companies innovate?

One of the key advantages of Gen AI is that it provides an easy method for companies to personalize their customer engagement and customer experience platforms. It also allows for rapid innovation and differentiation. And because it's improving so rapidly, we'll see the benefits much faster than with legacy technologies. Companies will be able to reduce the cost of implementing new customer experience applications, as well as the cost of managing and automating their infrastructure.

# NOT A SILVER BULLET: WHAT EXECUTIVES GET WRONG ABOUT AI

Managing AI is just as important as the technology itself. But many executives don't understand either well enough to execute successful AI projects.



**Patrick Glauner**

Full Professor of AI,  
Deggendorf Institute  
of Technology

**R**ecently, everything seems to be AI. What does it mean to you?

To me, it means automating human decision-making. We make about 30,000 decisions a day, both in private and at work. AI aims to automate that, so we can make decisions faster, better, and cheaper.

**When studying AI, your students work with companies, correct?**

It's a university of Applied Sciences, so we're very close to the industry. To be hired as a professor, you need to have real-world experience in addition to your academic background, usually at least three years outside of university.

I bring in companies for guest lectures. We do term projects and lab projects together with the industry. But our students also need to do a mandatory internship during their studies.

**How does that benefit them? Is it just about getting hands-on experience?**

There's obviously a huge gap between academia and the real world. We try to bridge that gap by working closely with the industry. So our students first get the theoretical framework, and then they see how it actually works in the real world.

They benefit a lot: employability goes up, as do entry-level salaries.

**You run a program on 'Innovation Management for AI.' What's unique about that?**

Most AI projects in the industry fail or don't add any value. Some reports say 80% of AI projects are, in the end, just prototypes and don't work out. That's a huge problem.

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AI has enormous potential for sustainability. We're just scratching the surface of what is possible.  
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I couldn't find any teaching material on how to bridge that gap. There were some AI introductions for business people, but most AI courses were extremely technical.

I came up with a unique course, "Innovation Management for AI," in which I show students real-world management problems in addition to technical ones. For example, how to manage AI experts, what roles you need in a company, how to handle budgets, as well as AI regulation, and how to transform a company into an AI-driven business.

#### Why is AI's corporate failure rate so high – 80%?

Executives think AI is a silver bullet. But often, they don't really know what to do with it. They say, "Let's do an AI project, but there is no business goal."

**Rather than a silver bullet, it's a bullet people use to shoot themselves in the foot.**

Sadly, that's often true. AI is very positive, but you need to know when to use it, when not to use it, and how to use it correctly.

#### What do you think the challenges are ahead for AI in terms of governance?

First of all, we need to take advantage of AI and be positive about it. However, the European Union is quite negative. It's driven by fear, not opportunity.

That's one of the main problems of the AI Act, proposed by the European Parliament two-and-a-half years ago. The current draft contains 140 pages with just requirements on how to manage AI's risks, but there's not a single page on how you

can actually take advantage of AI, and how to invest in it as a government. I think we should shift that. Obviously, we need some rules, but maybe we can narrow them down to two pages that people can actually understand.

#### What would you say are the biggest opportunities for using AI in industry or across society?

We have an aging population in both Europe and China. AI can be of tremendous benefit there. For example, in health care, we are not aiming to replace doctors, but maybe we can make health care more accessible and deliver it better.

AI also has enormous potential for sustainability. We can use resources more efficiently. I think we're just scratching the surface of what is actually possible.

#### When it comes to our future with AI, are you a glass-half-full optimist or a glass-half-empty worrier?

I'm very positive about AI, and I'm really excited about the coming AI innovations that will help us have a more sustainable, prosperous, healthier future.

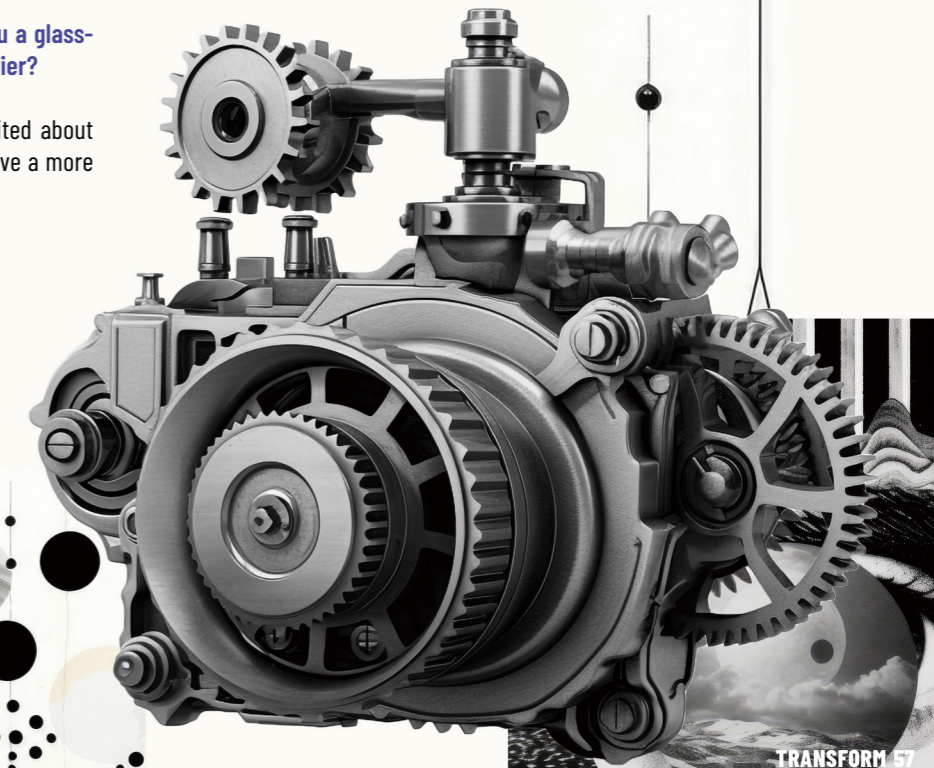


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**IN THE NEXT ISSUE,  
WE LOOK AT USING TECH TO ALLEVIATE GLOBAL POVERTY.**



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