

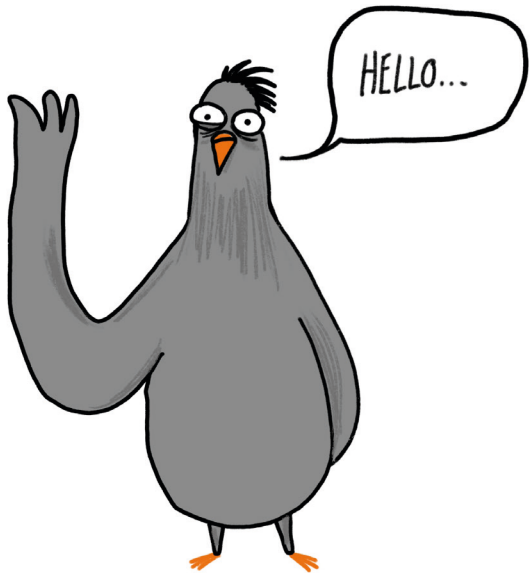
# A Pigeon's Tale

A Comic Essay on Artificial Intelligence  
and Sustainability

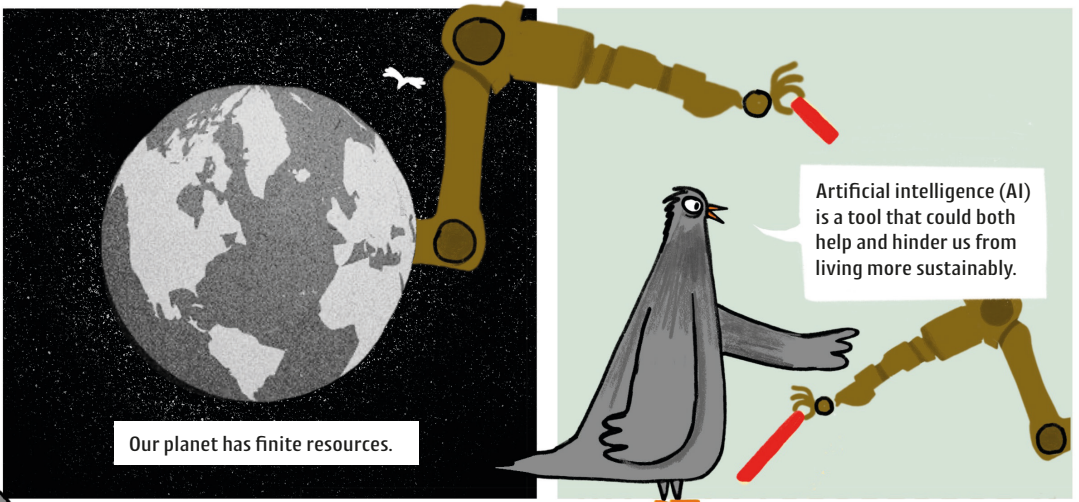


written by **Dr. Julia Schneider**  
illustrated by **Pauline Cremer**  
with **Birds on Mars**



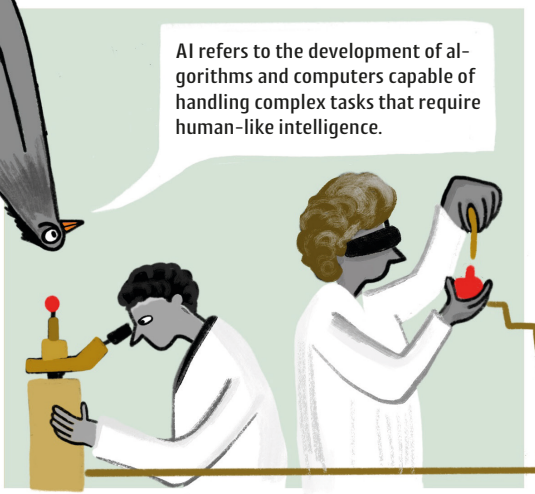




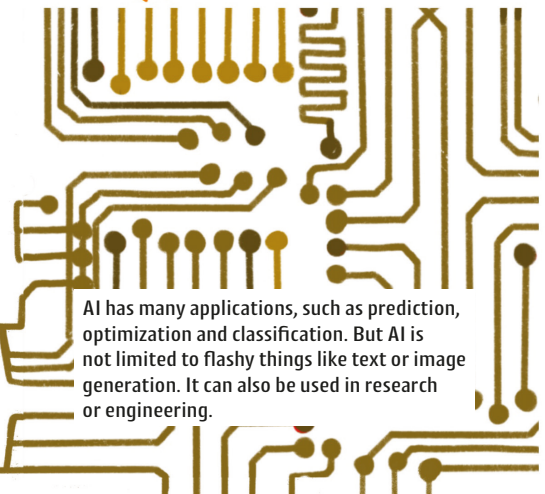


Our planet has finite resources.

Artificial intelligence (AI) is a tool that could both help and hinder us from living more sustainably.



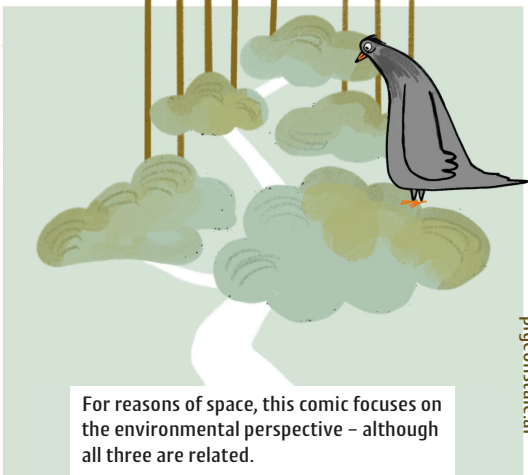
AI refers to the development of algorithms and computers capable of handling complex tasks that require human-like intelligence.



AI has many applications, such as prediction, optimization and classification. But AI is not limited to flashy things like text or image generation. It can also be used in research or engineering.



Sustainability is a loaded concept and has many definitions. There are three perspectives: social, economic, and environmental.

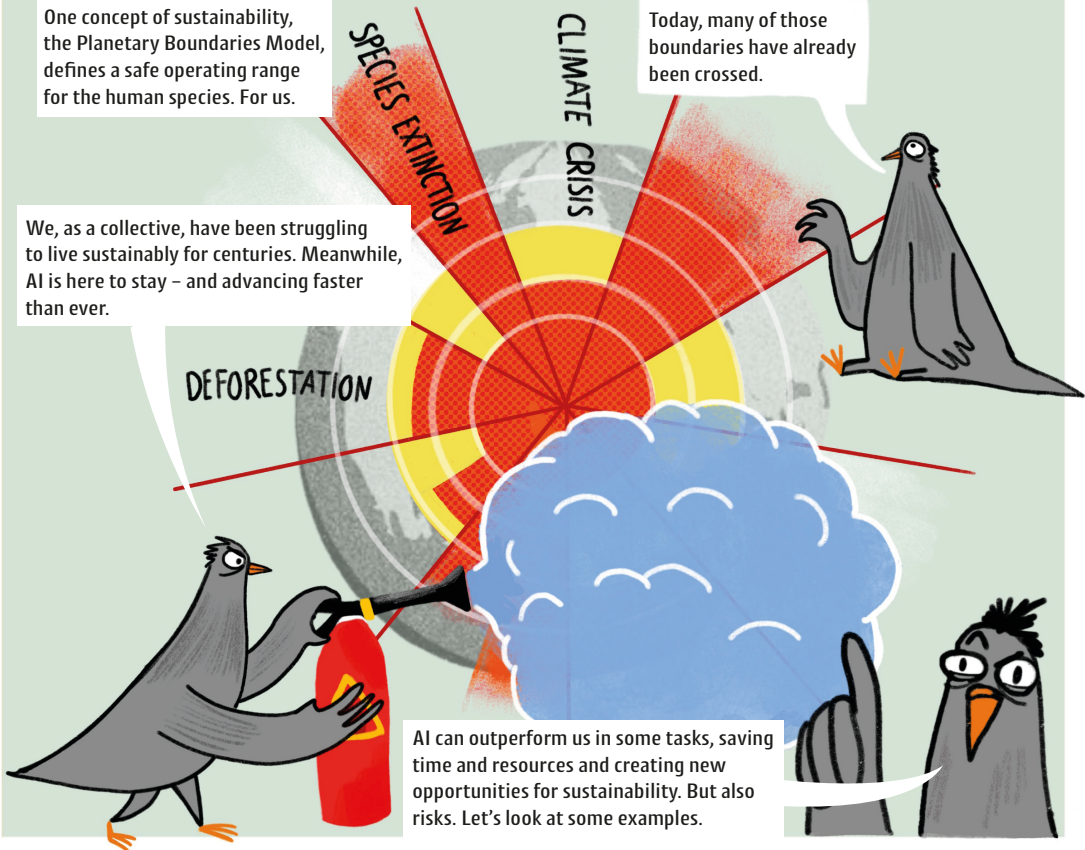


For reasons of space, this comic focuses on the environmental perspective – although all three are related.

One concept of sustainability, the Planetary Boundaries Model, defines a safe operating range for the human species. For us.

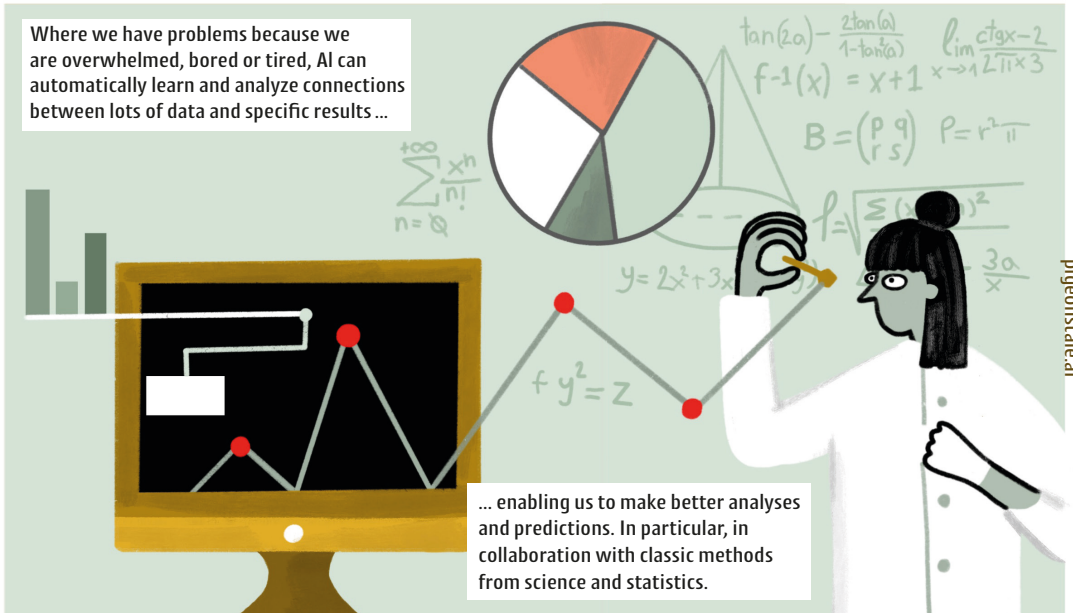
Today, many of those boundaries have already been crossed.

We, as a collective, have been struggling to live sustainably for centuries. Meanwhile, AI is here to stay - and advancing faster than ever.



AI can outperform us in some tasks, saving time and resources and creating new opportunities for sustainability. But also risks. Let's look at some examples.

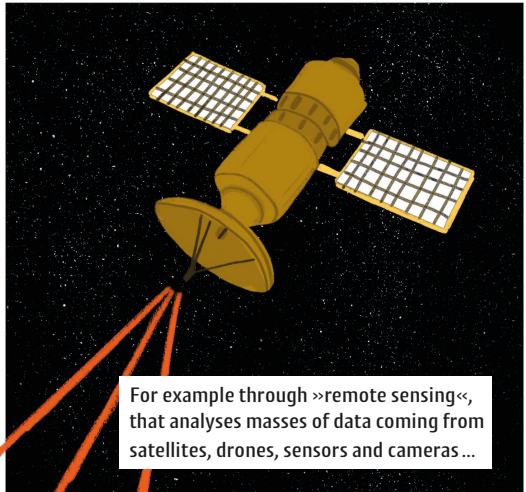
Where we have problems because we are overwhelmed, bored or tired, AI can automatically learn and analyze connections between lots of data and specific results...



... enabling us to make better analyses and predictions. In particular, in collaboration with classic methods from science and statistics.

pigeonstrate.ai

On a global scale, AI is helping to preserve forests, oceans, the atmosphere, and other ecosystems by identifying damage and facilitating preventive action.



For example through »remote sensing«, that analyses masses of data coming from satellites, drones, sensors and cameras ...

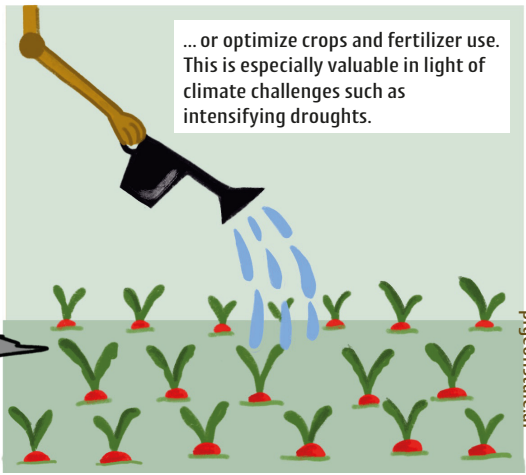


... to detect and measure damage already done ...

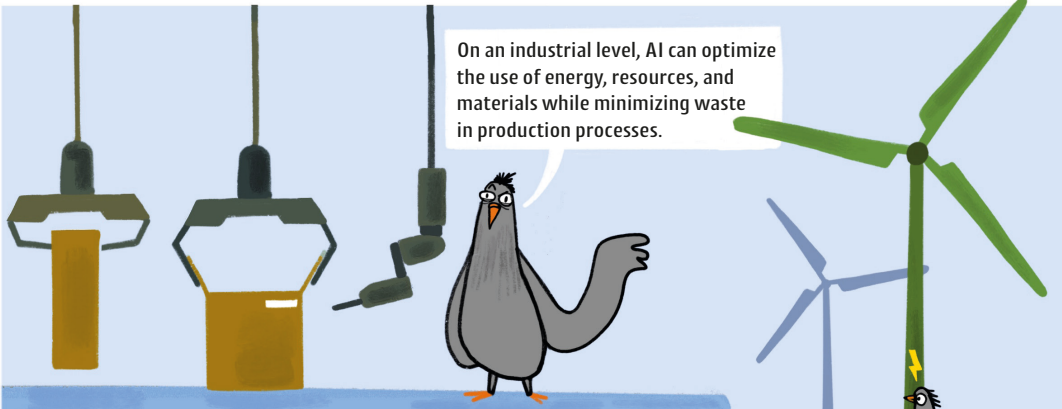
... and support decisions for quick and accurate responses.




With AI, we can more accurately simulate really complex phenomena like – no, it's not trivial – weather and climate ...




... or optimize crops and fertilizer use. This is especially valuable in light of climate challenges such as intensifying droughts.



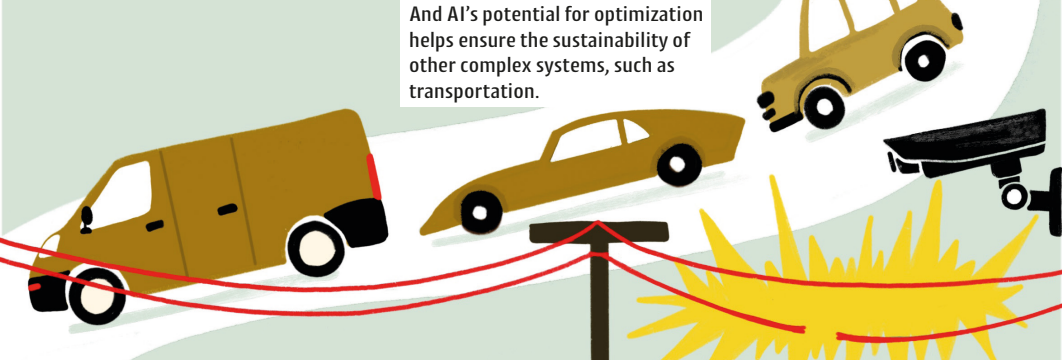
On an industrial level, AI can optimize the use of energy, resources, and materials while minimizing waste in production processes.




It can help us reduce emissions and support effective waste management practices.



Or improve supply chain visibility to track sustainability efforts.



And AI's potential for optimization helps ensure the sustainability of other complex systems, such as transportation.

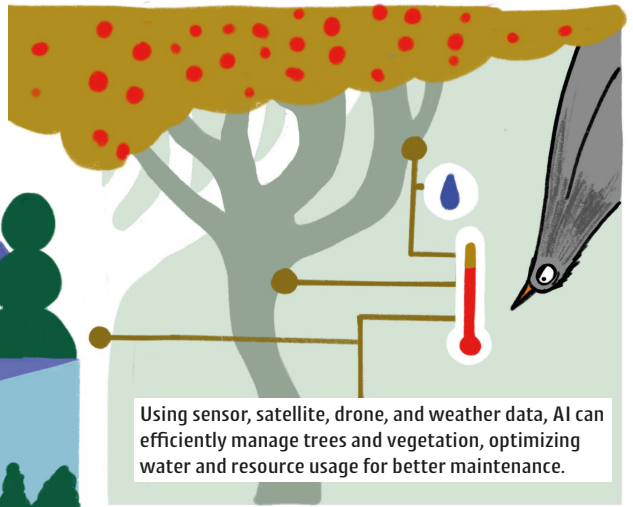


Here, AI can increase the use of renewable energy, improve traffic flow, and provide more sustainable transportation options.

And predicting damage before it happens can decrease costs, making transportation cheaper, too.

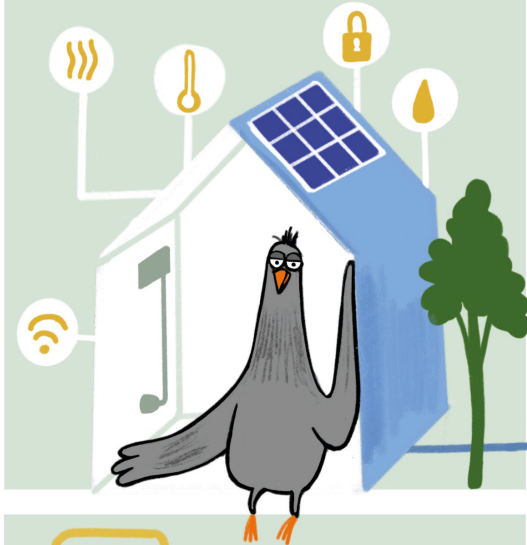


AI's ability to analyze data and predict trends also makes it a valuable tool in urban planning.



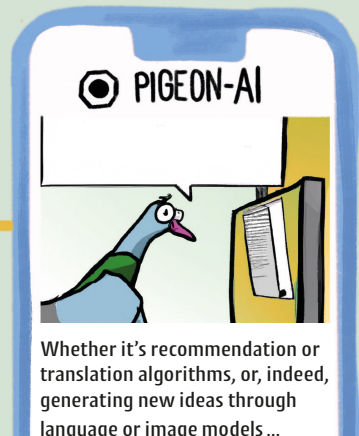
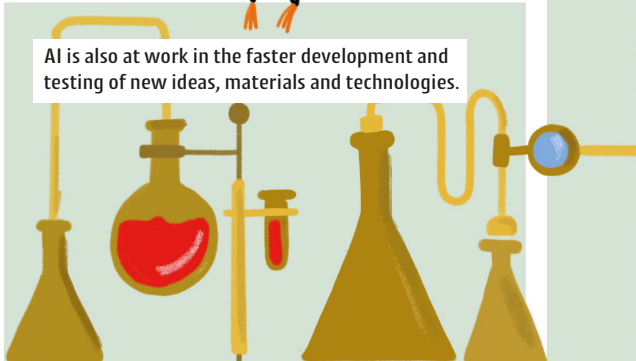
Using sensor, satellite, drone, and weather data, AI can efficiently manage trees and vegetation, optimizing water and resource usage for better maintenance.

In our buildings, AI can facilitate energy savings by managing heating systems and optimizing energy usage.



On a personal level, AI can steer us towards sustainable online shopping or travel by making eco-friendly recommendations.

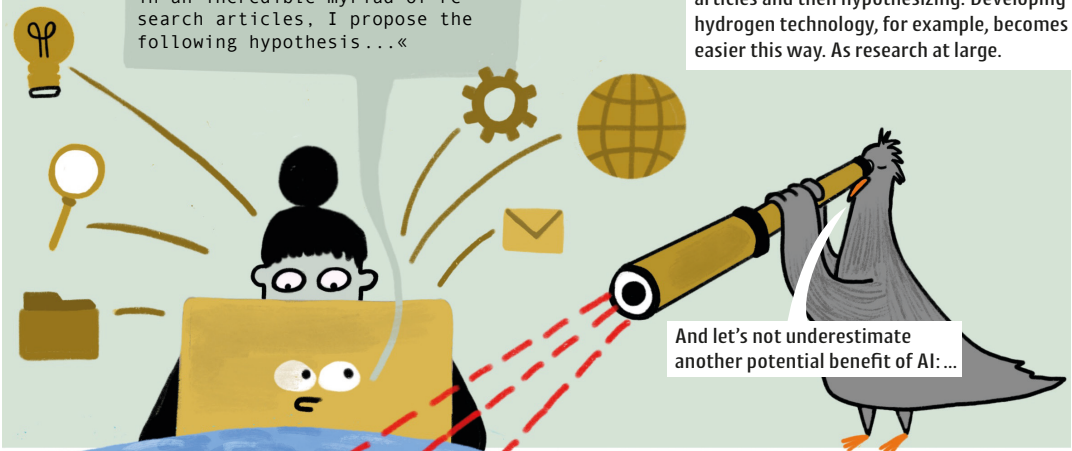
AI is also at work in the faster development and testing of new ideas, materials and technologies.



Whether it's recommendation or translation algorithms, or, indeed, generating new ideas through language or image models ...

»Based on the information I found in an incredible myriad of research articles, I propose the following hypothesis...«

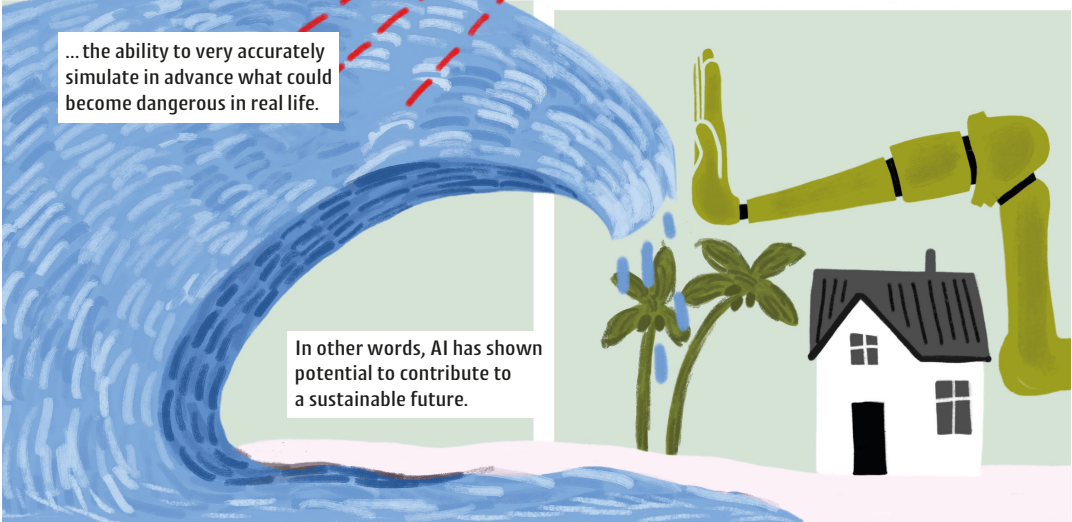
... or sifting through countless research articles and then hypothesizing. Developing hydrogen technology, for example, becomes easier this way. As research at large.



And let's not underestimate another potential benefit of AI:...

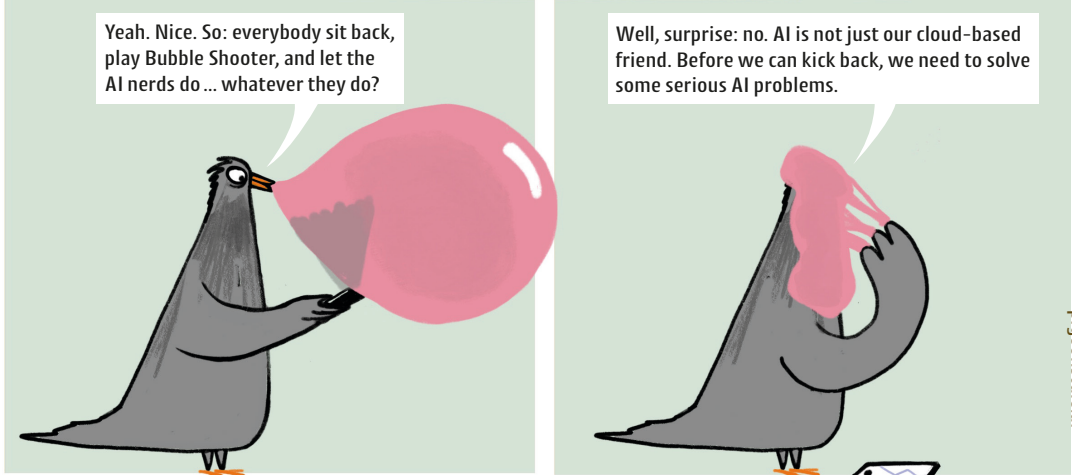
... the ability to very accurately simulate in advance what could become dangerous in real life.

In other words, AI has shown potential to contribute to a sustainable future.



Yeah. Nice. So: everybody sit back, play Bubble Shooter, and let the AI nerds do... whatever they do?

Well, surprise: no. AI is not just our cloud-based friend. Before we can kick back, we need to solve some serious AI problems.



First, training, running, storing and cooling AI systems and their infrastructure still uses up massive amounts of energy. Resources that are desperately needed, like drinking water.

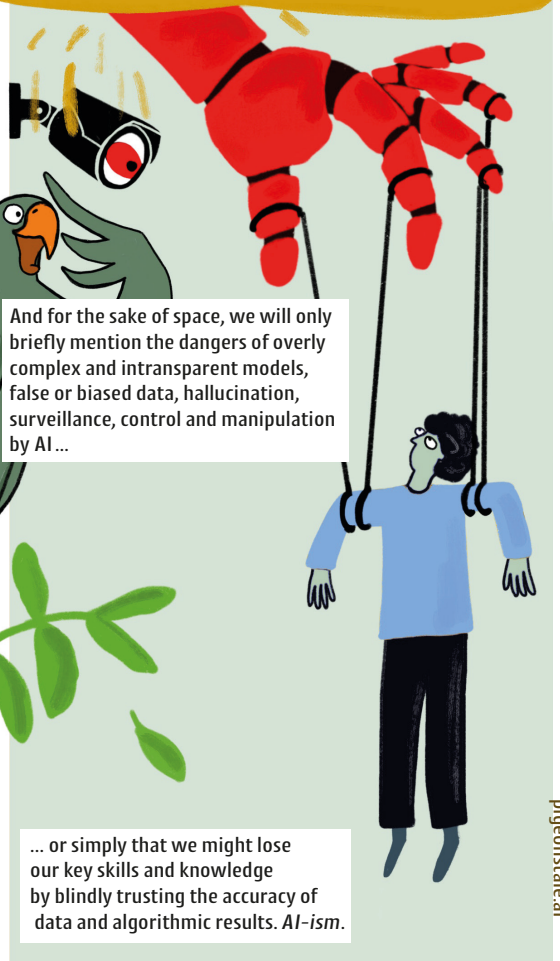


Other resources are mined under terrible conditions, like rare earths. AI produces significant amounts of CO2. Plus e-waste, currently the fastest growing waste stream in the world.

Also, environmental technological advances like AI can backfire: more efficient, more convenient, more consuming, more polluting than before.



And for the sake of space, we will only briefly mention the dangers of overly complex and intransparent models, false or biased data, hallucination, surveillance, control and manipulation by AI ...

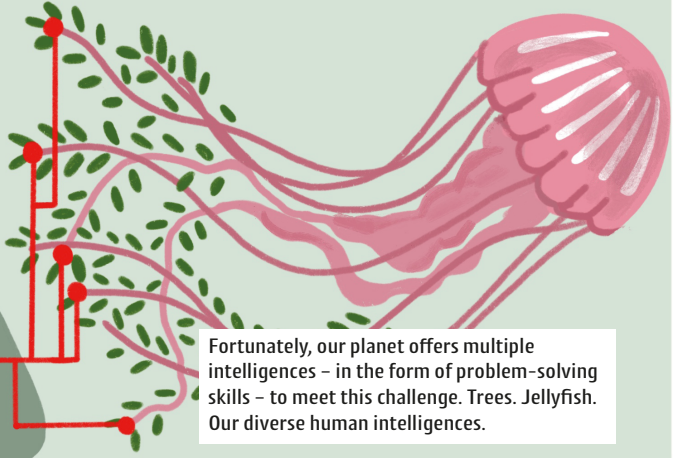


... the elimination of certain job tasks without providing alternatives for those who performed them, or technical and economic dependence on large AI players, ...



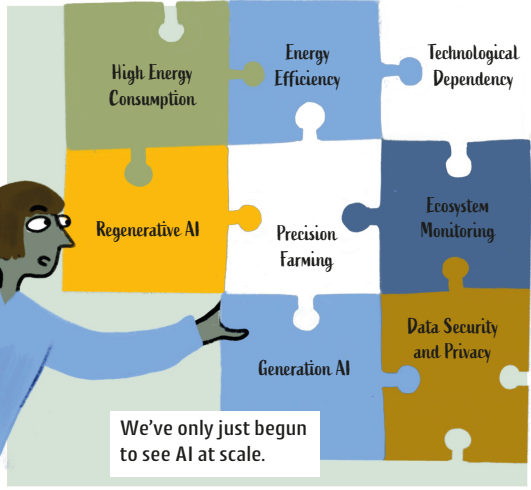
... or simply that we might lose our key skills and knowledge by blindly trusting the accuracy of data and algorithmic results. AI-ism.

So what now? The bottom line is that we need to find a way to live more sustainably. And soon.



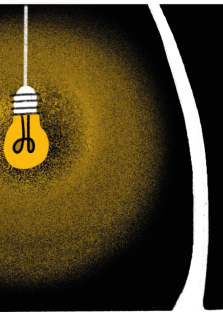
Fortunately, our planet offers multiple intelligences – in the form of problem-solving skills – to meet this challenge. Trees. Jellyfish. Our diverse human intelligences.

Let's combine them with artificial intelligence in ways that help our planet stay within its boundaries and even regenerate.

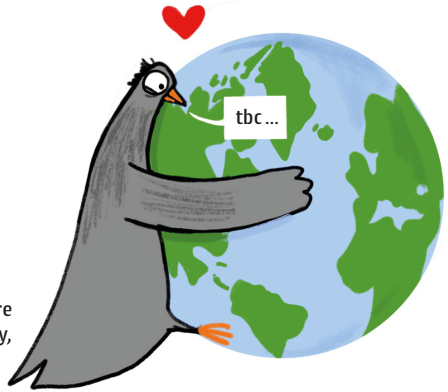


We've only just begun to see AI at scale.

Whether you believe in AI or not: now's a perfect moment to get involved in sustainability.



Debates about opportunities and risks are just now moving out of AI labs into policy, civil society, and companies.



Let's strive for AI that matters. In a good way.



# The Team

## Julia Schneider Author

Berlin-based comic essayist Julia Schneider, aka Doc J Snyder, is a former AI consultant and PhD economist. Her internationally acclaimed comic essays aim to be profound without being didactic, bridging the gap between intellect and intuition. Through her work, she explores complex yet vital topics at the convergence of technology, art, economics, and social utopias, such as AI, money, or work.

**Contact:** [docjsnyder.net](http://docjsnyder.net)

## Pauline Cremer Illustrator

Pauline Cremer is a freelance illustrator and graphic designer based in Berlin, Germany. Her work approaches complex topics in a humorous and playful way. In addition to digital illustration, she enjoys experimenting with various printmaking techniques, such as linocut. Her illustrations have been published in the »Berliner Zeitung«, magazines such as »Delayed Gratification« and in the daily newspaper »Der Tagesspiegel«.

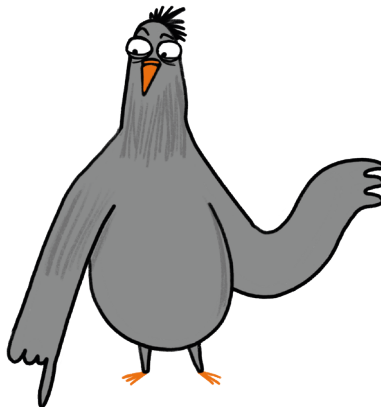
**Contact:** [paulinecremer.com](http://paulinecremer.com)

## together with

## Birds on Mars

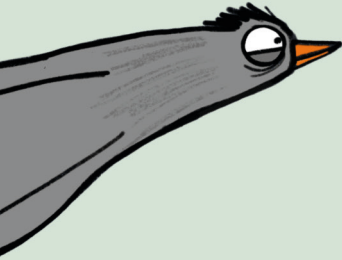
Birds on Mars, a new generation consultancy and AI agency, contributed to this comic with their expertise and passion for the connections of AI and sustainability. Through innovative enterprise solutions, BoM combines human creativity, machine intelligence, and organizational identity to meet the challenges of our time.

**Contact:** [birdsonmars.com](http://birdsonmars.com)





## Join the pigeon.



»No one I'd rather have explaining AI and sustainability than the quirky pigeon. Not afraid of AI anymore, I'm inspired!«  
Sheree Domingo, Comic Artist

»Elegantly distilled, this comic shows AI's potential for a sustainable world – if used for the common good.«  
Dr. Benjamin Seibel, Director CityLAB Berlin

»AI is not invisible, and it's not a cloud. This comic shows its real impact – a must read for a sustainable and just future!«  
Katrin Fritsch, Researcher & Consultant  
on Technology, Climate & Feminism

»Foresight, monitoring, optimization ... This comic gives insight into AI's opportunities and risks. Let's cultivate it!«  
Anna Bernegg, Urban Planner, Co-founder  
of forward Planung & Forschung

»An unpretentious bird guides us through AI's merits and evils. From Pigeon-AI to AI-ism. Love it.«  
Prof. Dr. Miriam Beblo, Professor of Economics,  
Universität Hamburg

Visit [pigeonstale.ai](https://pigeonstale.ai) to get this comic and more!