Can AI make you happy?

How to be optimistic at the time of global turbulence?

Tony Czarnecki, Managing Partner of Sustensis
London, 1 January 2024

Image generated by Dall-E

Meandering the path towards a better future

As we enter the New Year, I want to share a dose of optimism with you since optimism breeds success while pessimism generally increases the chance of failure. But pessimism is more common than optimism since it triggers either the fighting or escape mode in any living creature, including of course humans, increasing the chances of survival. Therefore, depending slightly on culture, good news is not that often on the agenda, while pessimism is well embedded. However, a pessimistic attitude at the time of serious, near existential threats, which we now face as a civilisation, is destructive and demotivating to take an urgent remedying action.

One way in which we can become more optimistic is to learn how to spot the budding seeds of a new positive long-term trend leading to achieving the desired result. You need to imagine an invisible thread leading from a positive trend towards the intended result, which may take several years or even more to materialize. That positive trend may start at the time, where your actual personal situation is pretty dire, and like a cloud covers the optimistic horizon, as in the above metaphorical image, which I have generated using DALL-E.

However, at a global level that requires scenario planning – an analysis of a broad spectrum of possibilities in politics, science, technology, psychology, medicine, culture etc. Since it is quite difficult to do, that is why there are so few 'reliable' futurists, such as Ray Kurzweil, perhaps the best known, Peter Diamandis or Elon Musk.

Looking at the current global situation, there are hardly any reasons for being optimistic. We live at a very difficult, and perhaps the most turbulent time ever. Humans have experienced various threats like wars or pandemics throughout millennia. What has been happened in the last few decades is that those threats have been overlayed by human-made hazards, which did not exist before 1945, such as nuclear wars, nano technology, AI, bio-engineered pandemics etc. That is why we are facing an unprecedented challenge in the human history, since what has just started is a civilisational transition – a pathway to the future which is hardly imaginable. It could be incredibly benevolent, or so dangerous that it may even lead to humans' extinction.

In the first Part, I have identified the key dangers that we face, as **Civilisational Threats,** over which we have some control because we have created them ourselves. We will be seriously tested, especially in this decade, for our capability to survive. For each Civilisational Threat I have identified a **Key Solution**, with the objective to **implement it on time, even if imperfect**, rather than arriving too late. For reasons of brevity, I do not identify particular solutions, enough to write a whole book, but rather **Positive Trends,** which may circumvent those threats. To help you see it, I have indicated the buds of those optimistic trends, buried in the maze of the current pessimistic events. They are the foundation stones for the future we want, provided that they are reinforced by the required action. That is necessary for the optimism to be well supported rather than just being wishful thinking. (This part may be difficult to go through but be patient – there is a lot of good news further on).

In the second Part, I have listed **New Opportunities**, which are the noticeable seeds of new, positive developments. It is an outline of the world of unimaginable possibilities, which will change our life beyond the wildest dreams. If we survive the next 10 years relatively unscathed, then **a wonderful world may emerge from today's extraordinary chaos**.

Civilisational Threats

If civilisational threats described in this part of the article make you pessimistic, then I would suggest being patient to read very good news further on.

Artificial Intelligence

What is the AI Threat about?

Since AI will have an overwhelming impact on our future, I start with this area. There are many examples of how AI can behave or be used in the way which negatively affects our life such as unauthorized face recognition or generating fake news or video. At a societal level, it may restrict freedom of movement or choice, undermine democratic elections or launch autonomous weapons. At a country level, it can erroneously or intentionally launch nuclear weapons, or open the laboratories with deadly viruses. We can expect a lot of these types of attacks in the near future. Apart from AI becoming a threat itself, by wrongly specified goals or simply erroneous behaviour, there is another type of danger resulting from the rivalry between the major AI powers such as the USA and China.

However, the main threat coming from AI is that when it becomes **Artificial *General* Intelligence (AGI),** far exceeding human intelligence in all areas, it may then start controlling us. This can happen for example by AGI setting its own goals, refusing to follow human instructions, or competing with humans for resources. Although it is impossible to predict the exact date when AGI will emerge, it is quite likely to happen by **2030**. If the current trend of developing tens of such advanced AI systems persists, each potentially becoming an AGI in the next few years, then the chances of controlling AI will be minimal indeed. But a self-improving AGI will ultimately become **Superintelligence**, a mesh-like intelligence encircling the whole planet. The most likely date of its emergence is by about **2050**. These two dates: 2030 and 2050 are very important since they are the tipping points when humans may lose partial or total control over their own future.

Although at some point AI will anyway directly or indirectly control humans, we should delay that moment as much as possible and increase the likelihood that instead of AI controlling humans, it will coexist with us becoming our best partner, fulfilling almost all our needs and expectations.

Key Solution: maintain control over AI development till we start coexisting with Superintelligence

Positive trends towards extending humans control over AI

2023 will be remembered as the year, when politicians fin1ally realised that AI Safety does not cover just AI regulations, i.e., how AI is being used as a tool, but predominantly AI development control, i.e. the process of developing AI, which will be aligned with our values and preferences even when it becomes much more intelligent than any human. To achieve that, we need to retain human control for as long as possible. We have recently seen some significant progress in that area. In spring 2023, the Hiroshima Process was signed, and in November - the Bletchley Protocol, signed among others by China.

The 2023 RAND report highlights the importance of public-private partnerships in AI development, involving governments, industry, academia, and civil society organizations. This consortium-type approach is crucial for developing trustworthy, reliable, and robust AI systems. We already have an excellent example. W3C consortium has managed to control the global Internet with about 400 scientists and technologists representing major IT companies with miniscule budget and incredible reliability without the presence and even oversight of any government. Therefore, it is encouraging that in the autumn 2023 four top AI companies developing the most advanced AI models: Google, Microsoft, Open AI and Antropic, setup the US-based Frontier Model Forum, which companies from other countries will soon be joining. All these developments point towards increasing regulatory control, which could lead to the development of a much safer AGI, so that it becomes our friend rather than foe. That is of course only one element of such a control.

In the next few years, it will become apparent that developing of multiple advanced AI systems (currently about 40) is very dangerous. It will be difficult to control just one AGI. How then it will be possible to control 100 or more? Therefore, there must be one global development centre for developing a single Superintelligence programme. However, realistically, this is likely to happen when a serious AI accident triggers global chaos in finance, defence, food supply or energy production.

But AI is not just a technological phenomenon. It is also reshaping social and cultural norms. Understanding how AI influences the areas such as media, communication, education, and ethics can provide a more holistic view of its impact on society. Therefore, the EU Parliament's agreement to ratify the Artificial Intelligence Act (AIA) as

a legal framework for the international control of the potentially unethical or hazardous use of AI as a tool or service is such a significant positive step.

Overall, 2023 will be remembered not just as the year when astonishingly human-like AI assistants emerged but also as the year when politicians finally realized that the civilisational threat stemming from the uncontrolled AI development is far serious and more imminent than the global warming.

Global war

How likely is a new global war?

The threat of a big global war is unfortunately very real. With countries so connected, it is now easier, for political tensions to blow up into local wars, like in Ukraine. If it gets out of control, then a global war with catastrophic consequences for all humans may begin. Introducing AI into such a conflict will significantly change the character, the speed, and the disastrous effect of such a war. It is possible that out of control AI may make its own choices in wars. Countries like the US and China are already working on using AI for their security. Just by watching what is happening in Ukraine, it is clear to even those who aren't military experts that in a big war, AI might matter more than traditional weapons like tanks or planes.

There is also a big competition going on between the US and China over technology like computer chips and AI. This competition could shape how AI is developed and controlled all over the world. So, as a variant of such a hot global war, we might end up seeing a huge cyber war between the big AI powers, like the US and China, sometime in this decade. That is a possibility we cannot ignore.

Key solution: World Federalization

Positive trends towards eliminating the threat of a global war for ever

In the next few years, we are likely to see a trend towards a kind of world federation. However, this won't be a formal federation with strict rules. It's more likely to be a voluntary alliance of countries, agreeing to collaborate closely, although not every country may wish to participate. But such a Federation could have enough influence that most of the world would follow the laws and policies, which it might have enacted. This move towards such a Federation is mainly driven by the European Union after its adoption of a double majority voting system for most of its decisions. The G7, along with the EU, possibly also including some nations from the G20 Group, could be forced to create such a Federation by chaotic political developments.

We could start seeing this kind of global cooperation taking shape later in this decade. It's a scenario where major international decisions, covering everything from economic policies to environmental concerns, could be decided by this group. The idea is to forge a united front on major global challenges, balancing the need for collective action. Such a Federation would take over full control over the member countries' foreign affairs and defence but would respect each nation's sovereignty in most areas. It will enable the members of such a body to work more effectively and have a decisive impact on the global stage.

In 2023, there have been positive trends towards global cooperation and diplomacy. The Bletchley Summit held in November 2023 in the UK is a good example, as is the Hiroshima Process set up in the Spring by the G7 Group. Additionally, AI technologies are being employed to enhance international security by monitoring potential conflicts and promoting dialogue between nations

However, it is the AI itself, which may be the biggest contributor to ending a global war for ever. By the end of this decade, Artificial General Intelligence (AGI) is quite likely to emerge. Since it will be smarter than any human, AGI itself may be a much more dangerous threat for any country than other states. This should lead to the increased co-operation rather than warmongering between the AI superpowers to turn a potential common enemy (AGI) into our friend. That is why I think the probability of a global war, including a nuclear war after 2030 is negligible.

Spread of populism and the near collapse of democracy

What is the threat stemming from populism?

The growth of populism around the world is worrying a lot of people because it undermines the whole democratic system. Populist groups often stir up trouble in society, spread messages that divide people, and make voters lose faith in the current political systems. Populists such as Donald Trump or Marie Le Pen usually think about quick wins for them and their party rather than about what's good for everyone, especially in the long run. This can lead to decisions, which serve only a particular section of a society. As a result, the core values and systems of democracy start to crumble, shaking the foundations which support a significant part of our civilization.

We see it when access to free press is limited, the balance of power gets thrown off, and too much power ends up in the hands of a few. When democracy gets compromised, the rule of law can break down, and people may lose their basic rights. The upcoming 2024 US elections, which will affect the whole world, are a prime example. What is new this time is that AI will play a bigger role in the election than ever, since it can be used for the creation of fake news, videos, and images. For an average American who follows tabloids and online news, filtering out what is real and what is fake news is going to be very difficult.

Key solution: deep reform of democracy based on strong citizens' participation

Positive trends towards repairing the current state of democracy

To fight back against populism, we need support strongly our democratic systems. We also need politicians for whom politics is a vocation rather than a springboard to fast personal gains. Teaching people how to understand and think about what they hear in the media can make a big difference. Bringing people together and making sure everyone feels included can also make populism less attractive because it removes the reasons why people are unhappy in the first place.

Getting people involved in a significantly different form of democracy such as Citizens' Assemblies is key to democratic revival. The best example was the biggest ever political engagement of citizens. In 2022, 108 randomly selected citizens from 27 EU countries debated for over a year within an EU-wide Citizens' Assembly, the Future of the European Union. That has now triggered the process of the EU Treaty changes.

In 2023, there were several other positive developments in the fight against populism and the restoration of democracy. Notable advancements were made in various countries, reflecting a growing pro-democracy movement. For example, in the United States, there was a significant movement toward expanding access to voting. Between January 1 and October 10, at least 23 states enacted 47 laws that broadened voting access. In December 2023, the Supreme Court of the States of Colorado and Maine disqualified Donald Trump from the ballot in the presidential elections in 2024.

In 2023 there was also a noticeable decline in the support for populist politics in several countries. For example, in Brazil's the former right-wing populist president Bolsonaro was replaced by a left-leaning President Lula. But the real impact on the fight of right-wing populism may have the results of the parliamentary elections in Poland. On December 13, Poland underwent a historic change, when Donald Tusk, the former President of the European Council, formed a new government. It has replaced the former far right populist government of the PIS party, which had ruled Poland for 8 years. It is composed of a coalition of six political parties (10 groups).

This has shown how to achieve such a deep compromise even amidst significant political differences. It required a two-year campaign at a village level not so much to win the votes for one party, but for the opposition politicians to explain in plain language what democracy is really about and why a deep transformation in the Polish society, similar to what happened after 1989 was urgently needed. That's why this current change in the Polish society, like in the Solidarity times, can potentially make a great impact globally, especially in the context of the political situation in Hungary, the UK, or the USA.

That impact was almost immediately felt on the same day when Donald Tusk was sworn as the prime minister. After his face to face talk with Victor Orban at the European Council, in which he added his arguments to those of France, and Germany, Hungary's opposition was defeated, starting the EU's accession talks with Ukraine and Moldova. The beginning of the process of admitting Ukraine to the European Union, shows that the world may after all be heading towards some reasonable reconciliation of national interests with the requirements of protecting our civilization.

Global Warming

Key solution: lower global temperature to the 1950' level

What is the threat originating from the Global Warming?

Global warming, driven primarily by human activities, is a crisis of unprecedented proportions that threatens all life on Earth. It is driven by the increase in greenhouse gas emissions, which poses an imminent and severe threat to our planet. The rise in average temperatures, changing weather patterns, and the resulting impacts on ecosystems, communities, and economies demand urgent action. To avoid catastrophic consequences, we must take steps to halt the temperature rise above 1.5°C after 2030. Yes, this date 2030 appears again as a tipping point.

The consequences of the accelerating rise of global temperatures are severe and far-reaching. This is a significant threat, which if allowed to continue at the current pace will become an existential threat for humans in the next century. But extreme weather events will have a devastating impact on all of us everywhere much sooner.

Positive trends to solving the Global Warming problem

Until 2015 barely any worth mentioning countermeasures were agreed globally. The COP20 Conference in Paris changed that by specifying concrete threshold that cannot be crossed if humans are to avoid an existential threat. It established that from 2030 the global temperature must start falling from the maximum of 1.5C. After COP26 in London, further concrete measures were agreed, like the EU's 750B Euro Climate Change Fund. In December 2023 at COP28 in Dubai, it was agreed for the first time that the fossil fuels must be removed as the source of energy. In some countries such as Britain, the green energy generated by wind farms or from solar panels, exceeds the electricity generated from fossil fuels. So, overall, we finally begin to address this significant threat.

Mass Migration

What is the threat coming from Mass Migration?

Mass migration happens for many reasons. Some refugees are running away from unsafe situations like wars or dictatorship governments. Others leave because their home countries are really poor compared to other countries, or because of massive floods or never-ending droughts caused by global warming. On the other hand, when refugees arrive in a new country, they reduce the resources available for the local people. Additionally, the new arrivals and the locals might not always get along. They could speak different languages, have different culture, and compete for jobs and places to live. This can lead to arguments and misunderstandings.

All this can make some people in the host country disliking immigrants. In some countries, this may lead to a large scale antimigrant sentiments with people expressing extreme views. No wonder then, that anti-migration populist party leaders like Alice Elisabeth Weidel of Germany's AFD's or the Dutch Freedom's Party leader – Geert Wilders gain such a support in their societies, which can lead to the creation of neo-fascists states.

Key solutions: Create a Global Wealth Redistribution Fund linked to democratic reform

Positive trends to solving the migration problem

Dealing with mass migration, where a lot of people move from one country to another, requires international co-operation. It should start with a deep understanding of the reasons why the migrants had to leave a particular country. That is why a global co-ordinated action carried out by an international organization, such as the EU is needed. It must involve long-term strategies for integration of migrants into host communities. A comprehensive agreement on migration reached by the EU in December 2023 is an important step in the right direction.

However, this agreement may not stabilize the situation of the migrants already in the EU and may not significantly reduce the inflow of migrants. To tackle this problem a different approach is needed. I believe the solution could be the creation of a special global fund, which will not only stop migration but also help boost the recipient countries' economy. In 2018, I proposed in my book *'Who could save humanity from Superintelligence'* the setting up of Global Wealth Redistribution Fund (GWRF), to which every country would donate 2% of its GDP. Such a fund, which would incorporate, the 0.7% from the UN's Official Development Assistance, would be distributed in the same way as the EU's European Regional Development Fund (Cohesion Fund) helping less developed EU countries. Similarly, each project requested by the recipient country, and financed from the fund, would be linked to democratic reforms. Most money, like in the EU, would finance large infrastructure, education, and health sector project, enabling not only very fast growth but also intensive vocational skills development. In a decade, the conditions in the recipient countries could improve so much, that a mass economic migration might no longer be a problem. Some Nordic countries have a similar proposal although at a smaller scale.

However, here again, AI starts to be very useful in many ways. For example, it helps keep borders safe and secure by using smart systems to watch over borders and manage the flow of refugees moving from one safe country to another. It also helps in organizing the aid that goes to refugees optimizing food and medicine distribution. This can make the whole process of helping people a lot smoother and more effective right now.

Technological Unemployment (TU)

What is the threat of Technological Unemployment?

Today's AI can generate images, text, or videos on their own. In 2023, it really attracted millions of users and started being used in production and services . AI is changing the way how works is done in schools, hospitals, or

new products are created such as medicine or new materials. In summer 2023, we saw the consequences of such fast adoption of relatively low level AI. Within a few weeks of trying the 'skills' of the ChatGPT-type Assistants it was obvious to the Hollywood film producers that they really do not need screenwriters or even actors. That has led to the first strike in the new era of Technological Unemployment (TU). According to some estimates, such as by Thomas Frey, a well-known futurist, about 100 professions may be gone by 2030. Similar estimates are made by McKinsey and PWC. TU will be in full swing in the second part of the decade, for which no country is prepared.

Key solution: Massive reskilling and augmenting production and services with AI

Positive trends to mitigate the Technological Unemployment

Although there is a lot to worry about the approaching TU resulting from AI taking over jobs, in some way this cloud has a silver lining. It will actually be a great chance to make the manufacturing, services, and distribution processes far more effective and adapted to the green revolution. Imagine AI robots not only doing tasks quicker but also creating new types of jobs we haven't seen before. Thomas Frey, mentioned earlier, says that about 160 completely new professions will be created. The problem is, there will be fewer jobs available than those that they will be replacing. There will be other challenges too. People will suddenly need to learn new professions.

That is why the governments need to step in with some smart strategies to minimize the negative impact of TU. This should start with investment in reskilling and upskilling programs to help the unemployed make a transition into the roles that require creativity and critical thinking, the areas where humans currently excel over AI. That will open large scale opportunities for augmenting human capabilities with AI, leading to a symbiotic relationship between upskilled employees and AIs. Furthermore, policymakers should consider implementing Universal Basic Income or other social safety nets to provide financial support during transitions.

The good news is that the new technology and automation, may double the world's economy growth rate. This boost in the economy could help soften the blow from any job losses due to technology and AI.

New Opportunities

If we get through the threats described above without some cataclysmic incidents, then most of the problems we may have after 2030 will be sorted out by AGI, which should by then be helping us in every aspect of our lives. This is of course provided that we manage to teach AI our values and preferences before it becomes AGI. The world will be transformed very quickly into the land of new opportunities rather than new threats. Among the areas which will be transformed most is the politics and democracy.

Education Transformation

The education system is already on the brink of a big transformation, thanks to the fast expanding adoption of AI Assistants. They are set to become a hit in classrooms, as both teachers and students are bound to embrace them once they get a feel for how they work. The impact of AI in education is so significant that in 2023, the U.S. Department of Education issued a detailed report exploring both the potential benefits and challenges of integrating AI into teaching and learning practices.

A standout example of AI's educational applications is the Khan Academy's introduction of Khanmigo, an AI-powered tutor. This innovative tool has already been implemented in several school districts and is receiving very positive reviews from educators. It is particularly praised for its ability to tailor teaching to individual student's learning styles and needs, revolutionizing the concept of personalized education.

This shift towards AI in education is gaining international momentum too. UNESCO, recognizing the importance of this trend, brought together 40 education ministers from around the globe to develop a strategy on incorporating generative AI tools into educational systems. Moreover, the increasing presence of AI in educational technology conferences and professional development sessions for educators underscores a growing inclusion of AI tools in the education sector. This trend suggests a future where AI not only enhances the learning experience but also plays a pivotal role in shaping educational methodologies and outcomes. The journey of integrating AI into education is just beginning, and it promises to make learning more adaptive, engaging, and effective for students across various educational segments.

Healthcare

Healthcare is about to get a huge technological upgrade, thanks to AI technology. This big change is set to make medical services far more efficient and effective. Certain jobs in medicine, like radiologists or neurosurgeons, could be on their way to becoming pretty rare, with AI-robots doing their jobs. These robots are going to be much smarter and more capable than the robots we have now, like Da Vinci.

The 2023 AI Index Report makes it very clear. AI is speeding up how we make scientific breakthroughs, especially in healthcare. A good example is how it is helping to create new antibodies. As we move into this new era of AI-driven healthcare, it will become important to blend the best of technology with the warmth and care we expect from our doctors and nurses. Here is a set of examples applied in nursery homes by Hannah Liberman quoted from her article 'Technology in care today' published by SensiAI in April 2022.

1. **Fujitsu's Smart Home Tech**: This system is like a high-tech health monitor. It uses AI, fast internet (5G), and other smart tech to keep an eye on seniors' health from a distance. So, doctors can check in on their elderly patients without always having to be there in person.
2. **Alexa's Care Hub:** You know Alexa, the voice assistant from Amazon? Well, now there's a special version for older people. It lets family members and caregivers keep tabs on the elderly. If an elderly person needs help, the system sends an alert to their family or caregiver.
3. **Apple Watch Fall Detection**: This feature on the Apple Watch is super smart. It can tell if an elderly person falls and immediately send out an alarm. This is a big deal because falls can be really dangerous for older people, especially if they're alone.
4. **Vayyar's Sensor System**: This company has made a special sensor that doesn't need a camera. It is put up on the wall and can tell if someone falls. If that happens, it calls for help automatically, which is great for seniors living alone.
5. **Sensi.AI's Virtual Caregiver:** This is a really neat system that acts like a caregiver but through audio monitoring. It can pick up on things that might need attention and helps make sure that elderly folks get the care they need.

This technology was available in 2022. Here are some examples of how much it has improved over the last 20 months since the above article was published. In 2023, Grace, a humanoid robot from Hanson Robotics has been used in elderly care. Grace looks and acts like a nurse. It helps older people, especially those who feel lonely. She is packed with high-tech features, like a special camera in her chest that can check a person's temperature and heartbeat without touching them. This is really useful for healthcare workers who need to check on patients from a distance. Grace is a multilingual robot and patients love to talk with her because she never gets tired or irritated, is very kind and is thus great at keeping people company as well as helping with speech therapy if it is needed. Her main role is to assist healthcare professionals, not to take over their jobs.

All these AI tools mean that older people can stay safe and comfortable, and also keep their independence. It's like having a high-tech safety net that is always there, just in case.

Disease Cures

By the end of this decade, thanks to AI-driven technology, we're expecting big breakthroughs in curing major diseases like cancer, Alzheimer's, and arthritis. It's not just about new drugs and methods; AI is changing the whole healthcare sector where it is becoming a super-smart helper. It is customizing treatments for each person, predicting diseases before they happen, and even shaping new ways of delivering care that are faster and better.

In 2023, AI has been making an extraordinary progress in medicine. It is helping to analyse large amount of information like X-rays and medical records, or finding patterns and clues that humans might miss. This is very useful in the area of cancer research or understanding kidney problems. In December 2023, the U.S. Food and Drug Administration approved two new gene therapies for sickle cell disease. The genetically engineered stem cells replaced the sickle cells. It is the first kind of therapy made for individual patients, representing major advances not just in the treatment of sickle cell disease, but also in similar curative therapies for other sicknesses.

All this is already contributing to the increase of our healthy life extension, especially in the developed countries, although the absolute life extension increases fastest in Africa. With diseases getting knocked out and the availability of brand new drugs and early detection and prevention methods, people's biological clocks are slowing down. By the end of the decade, we might see people not really "aging" in the traditional sense. They could stay healthier, feel younger, and even look younger for longer.

Food production

The future of food production, particularly in urban areas, is rapidly evolving with the integration of technologies like vertical farming and cellular agriculture. It is an innovative approach of growing crops not in fields, but in tall buildings right in the middle of the city. It's like farming in a skyscraper! This isn't just a wild idea; it is already happening. Companies such as Plenty, Crop One, and Upward Farms are leading this fast expanding new industry. They grow vegetables in these tall towers using about 1% of water, 1% of energy and 1% of land comparing with traditional farming. Additionally, since the farms are closer to where the consumers live, the food doesn't have to travel far, which reduces the impact of such food production on global warming.

But that's not all. Instead of producing meat at a farm, it is now being produced in autoclaves from a single muscle cell (stem cell) in a factory. It's like skipping the farm part and going straight to the meat-making. This lab-grown meat, also known as cultured meat, is healthier than regular meat. It doesn't need antibiotics, and there is less chance of getting diseases that usually come from farm animals. Producing cultured meat is no longer a small experiment. Companies like GOOD Meat produce such meat at a scale reaching 100,000 tons per year. Singapore, Israel and California are the main production areas so far.

How it will all impact you and why you should be generally optimistic?

For our civilisation this decade will be very difficult survival test. It may require some sacrifice, like reducing the scope of national sovereignty or personal freedoms. However, like the passengers on the sinking 'Titanic' we must get rid of some of our baggage to have a better chance of saving our lives. But we must also contribute personally to that rescue effort. Each of us needs to be much more involved at a community level and at a country level. That means participating as a citizen in local community, which will also keep loneliness at bay, the most common social 'disease. We must be much more aware about the politics of our country so that you may become a better informed voter. Participating in elections is the only way you can make difference, so do vote. Large scale citizens' engagement will make a significant impact on the chances of surviving this decade without a civilizational catastrophe. We can then expect at a personal level many unexpected gifts, mainly thanks to AI. It will be especially noticeable in medicine and economy. My optimism is based on what I write in my articles and books such as the most recent one 'Prevail or Fail – A Civilisational Shift to Coexistence with Superintelligence', supported by the latest scientific research, and drawing inspiration from current political developments. New possibilities enabled by AI in these areas are not a fairy tale anymore, as I have shown above. It's a new reality. So, let's see how it may make you happy and optimistic.

Many retired people are asking themselves 'how many years of life I have left yet and what to do with the rest of my life?' Well, if you are in a reasonably good health, exercise regularly, maintain good diet and remember that in health, prevention is better than cure, then there is a good chance your body will hardly change metabolically, in the next 10 years, even if you are 80 years old today! You will be able to do most things as you do today.

This means that, in 2030 your body will not age much biologically (excluding wrinkles, unfortunately). This will happen (it's already happening, but you think it's normal), thanks to the incredible progress in medicine, which will be personalized. Each of us will then have specific drugs produced for a given person. Today's astronomical price of the sickle cell disease drug, costing $2.1M, will drop to the level of today's drugs, just like decoding the first DNA, costing about $10B, fell to today's price of about $500. After 2030, thanks to the regenerative medicine, we can expect the first drugs, which will make our bodies younger, more efficient, and free from almost all diseases, including cancer, arthritis, Alzheimer's, etc.

The second element of this optimism is that in 10 year' time each of us will have a real income at least twice as high as today. Additionally, the price of most products and services (except food and energy) will fall several times. This is what demonetization is about. Therefore, each of us will be able to buy goods and services worth several times more than today. In another 10 years, around 2040, none of us, including 100-year-old youngsters, will have to worry about our income. Biologically young people aged 30 or 40 will not have to worry at all about their retirement. This will happen because the average world's GDP will not grow by 3% per year, but at least twice that fast, thanks to complete automation and robotization of the production process and services.

These are in a nutshell, the conclusions that emerge from what is currently happening. If these positive trends continue and get reinforced, then our future looks really great. So, if you are young, stay healthy and know that after 2030 most of your financial worries will be much smaller than today. Therefore, for example, buy an apartment. If you are retired, take care of your health, to be able to live in a reasonably good health until 2030 because afterwards you can expect to live in good health for many decades to come. **What it means is that if you, say, are biologically 40 today and your dad is 80, and if you survive the next decade, then both of you may be around 2040 metabolically about the same age and looking similarly young!**

And that's what I wish you most of all for the New Year 2024. Let's take care of ourselves, not only for ourselves but also for future generations. Together we can create the world we dream of. Together we can create a better tomorrow, full of hope and possibilities.

Tony Czarnecki is a futurists and the Managing Partner of Sustensis - a Think Tank on civilisational transition to coexistence with Superintelligence, see https://sustensis.co.uk.