

SAMSUNG

FRYSHUSET

YOUTH ON AI & THE METAVERSE

SOLVE FOR
TOMORROW
REPORT 2023

INSIGHTS FROM 4000 YOUNG NORDIC MINDS

32%

feel empowered
to influence the technological
and digital advancement

42%

believe that AI and
the Metaverse will have a
positive impact on society

61%

are familiar with AI. Only 35% are
familiar with the Metaverse

62%

believe that society should
regulate what an AI can do.
The responsibility lies with
technology-developing
companies and politics,
according to the youth

40%

believe that AI will lead to more
enjoyable jobs, and 38% believe
that educational instruction in the
Metaverse would enhance learning

AI IS EXPLODING, THE METAVERSE IS BUBBLING. HOW DO WE PREPARE THE YOUTH?



Alexander Grimsen
CSR-manager
Samsung Electronics Nordic



Johan Oljeqvist
CEO
Stiftelsen Fryshuset

Young people in the Nordic region are optimistic about AI and the Metaverse but need more knowledge to face the challenges of a technology-driven society. This is the conclusion drawn from our survey, where over 4,000 individuals aged 16-25 in Sweden, Finland, Norway, and Denmark were asked about their views on technology and its impact on society.

While the debate on AI, the Metaverse, and their potential consequences has been intense, the perspectives of young people have not received equal attention. We aim to change that by amplifying the voices of the youth. The upcoming generation will be significantly affected by technology and will play a part in shaping its future and usage. The results from our survey indicate that young people embrace technology in their lives while also seeking more knowledge and regulations to feel better equipped.

To provide young people with the right conditions to keep up with these advancements, investments in education are crucial. There is significant potential for young people to actively participate in technology development, but better access to relevant knowledge is needed for this to occur.

This report summarizes the key findings from our survey conducted by Demoskop and also provides recommendations for actions to meet the needs of young people. By listening to and supporting young individuals, we can create opportunities for them to tackle challenges and take advantage of the possibilities offered by technological advancements.

TO EQUIP YOUTH FOR THE FUTURE, WE NEED TO:

1 Integrate technology into education

The school and technology industry need to collaborate to ensure that students acquire the knowledge they need to understand and utilize future technologies. Taking a more proactive approach to incorporating technology in schools can have a positive impact on the education sector. Learning can be personalized through technologies like VR and AR, resource shortages in schools can be addressed through AI and virtual assistants, and educational content can be tailored to meet the needs of the job market.

2 Build the right skills

The skills gap risks widening in line with digitalization. The report shows that many young people are uncertain about what AI and the Metaverse are and how they impact them and society. In order for the Nordic region to remain competitive, traditional education needs to be supplemented with new types of skill-building initiatives that are tailored to the needs of the job market. Therefore, it is crucial for young people to receive more information, as well as access to education that is relevant and competitive in the job market. In this regard, the business sector can play a significant role.

3 Engage girls

We are facing a technological leap where AI represents one of the most revolutionary technologies in society. The report shows an imbalance between genders, with more boys than girls considering themselves knowledgeable about, utilizing, and wanting to influence the development of AI and the Metaverse. We need to ensure that girls have access to knowledge, resources, and platforms that enable them to both utilize the new technology and contribute to its development. This effort will not only lead to increased gender equality but also to more diversity and innovation within the technology sector.

4 Improve coordination among societal actors

There is a mosaic of knowledge-boosting forces in society that can help increase the level of technological understanding and promote a more inclusive use of technology. It is important for more societal actors to collaborate and coordinate their efforts to make it easier for young people to learn more about technology and how it can be used in a positive manner. This effort could lead to increased gender equality as well as more diversity and innovation within the technology sector.

Together, we must now work to equip young people for the future and ensure they become active participants in technological advancements. In doing so, we can pave the way for an inclusive and competitive Nordic technology landscape.

This is how an AI defines itself

Define AI and different levels of AI

AI, or Artificial Intelligence, is a field in computer science that aims to create machines capable of performing tasks that typically require human intelligence, such as thinking, reasoning, learning, perception, and problem-solving.

There are different levels of AI, usually classified as follows:

Weak AI: also known as "narrow AI," is a form of AI that is specialized in solving specific problems. These systems can perform tasks at a similar level to human experts within a limited set of domains. Examples of weak AI include voice assistants like Siri and Alexa, self-driving cars, and email spam filters.

Strong AI: also known as "general AI," is a form of AI that is as capable as human intelligence across a wide range of domains. These systems are still theoretical and not yet developed.

Superintelligence: a hypothetical form of AI that surpasses human intelligence and can perform tasks and make decisions that exceed our ability to understand or predict. This is a highly theoretical level of AI that researchers have not yet achieved.



This is how an AI defines the Metaverse

Define Metaverse

Metaverse is a virtual world system that consists of interconnected virtual worlds and user-generated content. It is a vast online ecosystem that enables people to interact with each other, use virtual assets, and participate in activities that are only possible within the virtual world. Metaverse typically encompasses a range of technologies, including virtual reality (VR), augmented reality (AR), blockchain, and other technologies that allow users to create, trade, play games, and engage in social interactions.

The concept of Metaverse has been inspired by science fiction and reflects a vision of a future digital reality where users can interact with each other and virtual assets on a similar level as in the real world. Metaverse has the potential to transform the way we work, play, learn, and socialize by offering new and exciting possibilities that extend beyond the boundaries of the physical world.



A

I stands for artificial intelligence and focuses on developing systems and algorithms to simulate human thinking and behavior. This means that AI can learn and gradually become smarter. AI is used in various ways today, and its applications are steadily increasing.

Among other things, AI can be used to analyze large amounts of data, which can improve everything from healthcare to education and business.

Metaverse is a convergence of the physical and digital worlds. It is a collectively shared space where services, platforms, and applications are accessed through a virtual experience, usually by wearing a VR headset. Why are these major technological shifts happening right now? It is only now that technology has advanced enough for AI and Metaverse services to be widely utilized. Technological development has brought AI and Metaverse from the periphery to the spotlight.

How knowledgeable are you about AI and Metaverse?

Ett quiz framtaget av ChatGPT

1

What is the main purpose of AI?

- A. Entertainment
- B. Creating a virtual world
- C. Replacing workforce
- D. Solving complex problems

2

How much venture capital is expected to be invested in AI in 2024?

- A. 70 billion USD
- B. 90 billion USD
- C. 110 billion USD
- D. 200 billion USD

3

What is a Metaverse?

- A. A virtual world
- B. A cryptocurrency
- C. A social media platform
- D. A physical location

4

Which company is currently developing a platform for the Metaverse?

- A. Meta
- B. Amazon
- C. Google
- D. Microsoft

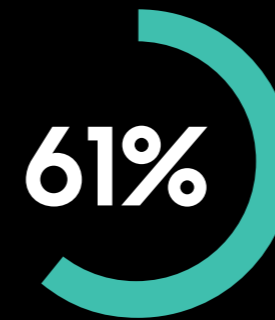
Correct answers: 1: D 2: A 3: D 4: A, C and D

GIRLS ARE FALLING BEHIND. THE MAJORITY OF BOYS ARE ALREADY USING AI FREQUENTLY

The survey shows that approximately half of the young people in the Nordic countries use AI regularly. At the same time, we see that 52% of boys use AI every day or a few times a week, while only 32% of girls do so. To reverse this trend, education, encouragement, and early interventions are needed. Otherwise, girls risk missing out on the opportunity to shape the future of technology and being excluded from certain parts of the job market. Breaking down traditional gender roles and creating an inclusive future are crucial to achieving gender equality in the technology sector.

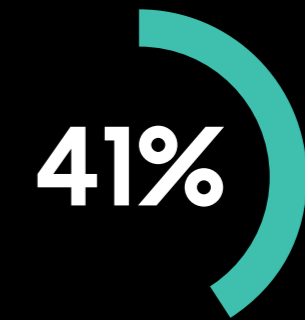
Young people in the Nordic countries rate themselves as uninformed about the Metaverse. The reason why knowledge about the Metaverse is lower than knowledge about AI may be because AI already affects millions of people in their daily lives, while the Metaverse has not yet become widely adopted in people's lives.

AI



Nordic countries: 61%
Sweden: 64%
Denmark: 62%
Finland: 53%
Norway: 62%
Nordic boys: 73%
Nordic girls: 49%

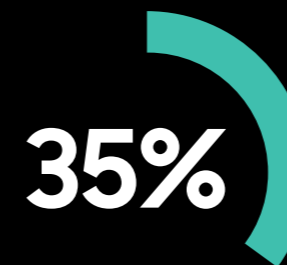
feel very or quite familiar with AI



Nordic countries: 41%
Sweden: 45%
Denmark: 39%
Finland: 27%
Norway: 50%
Nordic boys: 52%
Nordic girls: 32%

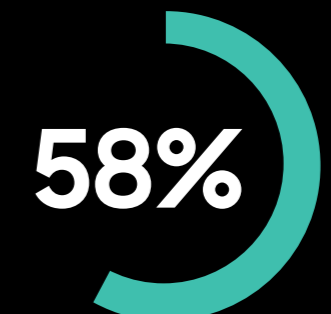
use AI every day or at least once a week

Metaverse



Nordic countries: 35%
Sweden: 40%
Denmark: 33%
Finland: 22%
Norway: 40%
Nordic boys: 49%
Nordic girls: 21%

are familiar with Metaverse very or fairly well



Nordic countries: 58%
Sweden: 53%
Denmark: 61%
Finland: 70%
Norway: 52%
Nordic boys: 47%
Nordic girls: 71%

are not familiar with Metaverse very well or not at all

25%

Boys in the Nordics..

10%

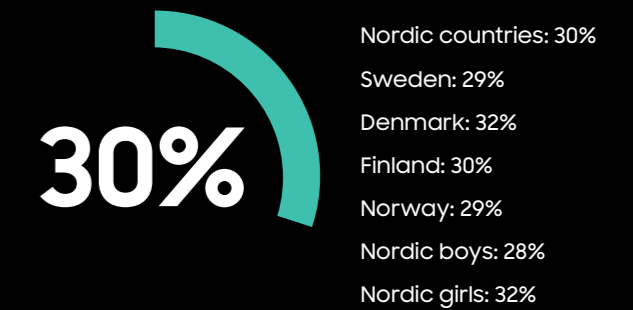
Girls in the Nordics.. ...have been in a Metaverse

NEARLY HALF BELIEVE THAT AI AND THE METaverse WILL HAVE A POSITIVE IMPACT ON SOCIETY

Two out of five young people believe that AI and the Metaverse will have a more positive impact on society than negative. At the same time, there is a significant portion who believe that society will be negatively affected by these technologies. Nearly 20% more boys than girls believe that AI will have a more positive impact on society. It is important to continue increasing knowledge and awareness about the impact of these technologies on society in order to reduce any concerns and potential negative effects.



believe that AI and the Metaverse will have a more positive impact on society than negative



believe that AI and the Metaverse will have a more negative impact on society than positive

How do you feel about AI and Metaverse in general?



"It may seem a bit scary, but it can be a useful tool that can help us with a lot. That's why I'm positive about it."

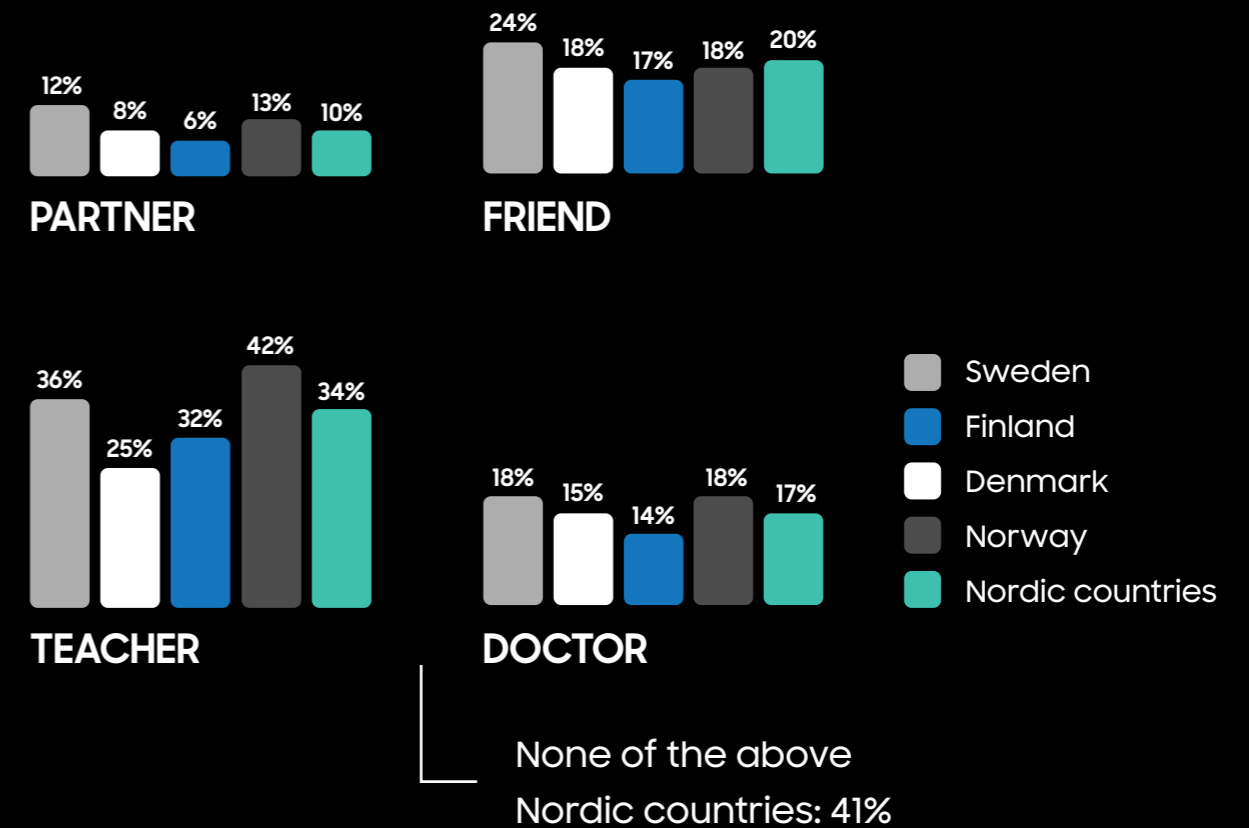
Male, born in 2006, Sweden

HOW DO YOUNG PEOPLE VIEW RELATIONSHIPS WITH AI?

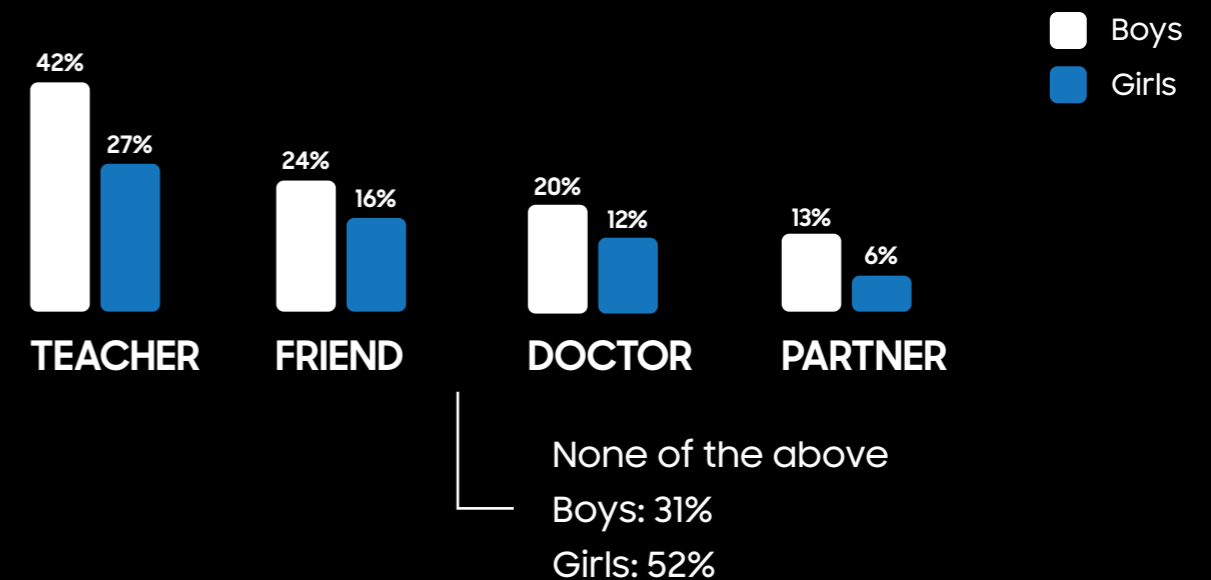
A I has transitioned from being an anonymous and peripheral technology to becoming an increasingly integrated part of our lives. Now, it is possible to interact with AI tools on a personal level. But how open are young people to forming relationships with AI? The survey shows that some young people are open to having an AI as a teacher or doctor, but there is also an interest in more personal relationships with an AI, such as friends and even partners. At the same time, a significant portion of young people (41%) cannot imagine having an AI as a teacher, doctor, partner, or friend.

However, young people's interest in forming relationships with AI opens up possibilities for the development of AI tools that can be more like a person in our lives. At the same time, it raises questions about how far we are willing to go in replacing human relationships with technology and what ethical aspects need to be taken into consideration.

Could you imagine having an AI as a...



Girls/Boys in the Nordic countries



A STORY ABOUT THE IMPACT OF AI AND METAVERSE ON SOCIETY

A scenario depicting a potential future with AI and Metaverse created by Fredrika Yngwe, Future Strategist at Planethon.

A **FUTURE SCENARIO** is a description of a possible direction of a system based on the analysis of current trends and science. A system can be, for example, a society, an ecological system, or a market. Scenarios are often used to envision the future, set strategies, and in communication. By using narratives, it is possible to better consider the human experience, inspire imagination, create hope, and empower action. All essential ingredients for sustainable development.

Here, as a reader, you get the opportunity to immerse yourself in a fictional future based on research, the market, and Solve for Tomorrow's dataset. Welcome to a future Stockholm where AI and the metaverse are fully integrated into society, working towards sustainable development. Here, we meet the orphaned sibling pair, Rakel and Jan, who grow up in the so-called child facility but are separated when their lives take different (un)technological paths as they become young adults.



Rakel & Jan: Metamen and Luddites

Inspired by the labor groups of the Industrial Revolution, they called themselves Luddites. Or "technophobes" and "second-wave anti-vaxxers," if you asked the media. Rakel started following their reasoning in the panic she felt when it was announced that all EU citizens would be called in for chip implantation. To easily identify oneself, make payments, and seamlessly move between the real and virtual, they said. Although she saw the benefits of the AI Authority relieving the Police Authority from passport administration, she felt like a car going for an inspection the first time she was called. A cog in an artificial wheel. Apparently, the chip would provide such strong cyber protection that no deepfake could claim someone else's identity. It wouldn't be the first time the techno-optimists had been wrong, she thought. But who else would accompany Jan to the implantation?

Her brother Jan was the type who lived mostly, and preferably, in the virtual world. He neither talked to nor looked anyone in the eye if he had the choice. At first, she thought he would be more concerned about the chip. After all, she had always been the brave one between the two of them. She had taken care of his anxiety and, according to contemporary standards, irrational fears that had escalated since they ended up in the child facility. While all her

instincts opposed the procedure, Jan, with wide eyes, asked, albeit with his gaze fixed on the floor, to have the chip implanted in the palm of his hand instead of the wrist. It was after that he started with his signature gesture. Standing proudly with his arm outstretched, middle and ring fingers bent, pretending to release some form of radiation like Spider-Man releasing his web. Meta-man, he called himself in those rare moments of joy. Each time he made the gesture, she was impressed. Who else would validate him?

When Jan was engrossed in the metaverse, which served as a school, playground, safari, magical worlds, and space empire, she sat next to him, worrying about the technology in her body. When the chip was upgraded to live-diagnose carcinogens, track their spread from cell to cell, and send customized molecular profiles to the nearest pharmacy agent, she saw threats on the horizon. She wasn't the only one. "A latent bioweapon," whispered some of the elders in the child facility. Rakel began to believe it. These things weren't developed for our sake, she wrote to the Luddite group in her contact request. With the group, she fought against the progress for a couple of years but could never catch up, let alone overtake, the exponential integration of AI. So she made a radical decision. Or it didn't feel so radical at the time. Someone at the facility practiced

at a healthcare facility, and one evening they cut out the chip from their wrists with a small scalpel she had stolen from there. Just a little blood. Then they left.

In the conviction of not being manipulated by algorithms or giving parts of herself as data, she stayed offline with other AI Luddites and lost contact with Jan. They worked hard for their analog little community. It wasn't always comfortable, but they had each other. She was where she believed she was safe, outside the AI radar, but unable to feel gratitude for the sense of belonging without sharp pangs of guilt. Guilt for leaving Jan. Who would catch their breath at his meta-man gesture? So she gasped. Suddenly, in the middle of the night. Without goodbyes or explanations, to find Jan.

Upon arriving in Stockholm, she couldn't stop staring in amazement. At people, buildings, nature, animals, and things. Everything interconnected, in a constant balancing dialogue. It hadn't been more than 9 years since the last time, but it was a completely new world she stepped into. People strolled slowly, some in the city-integrated nature, others fascinated and engrossed in simulations that blended the real and virtual. Where was the bustling city pulse? Where were the traffic jams, sharp beeps from crosswalks, and takeaways? Exhaust fumes had been replaced by bees, but they weren't as jittery as they were outside the radar. Instead, they were peaceful, ready on the bench to pollinate. It took a second before she realized they were mechanical.

Without access to virtual navigation, it was difficult to find, but there he stood in the end. Jan. With earthy

masks in his hands, about to release them again. "Reprogrammed for better regeneration," he said, as if she would understand. How mature he looked. Not because of the beard and receding hairline, but because of his posture. His gaze. A posture and gaze that radiated his capability and belonging. After brushing the dirt off his hands and giving her a hug (she couldn't believe Jan initiated a hug!), he began to tell her. About the masks and robot bees, just two of the countless expressions of the interconnected network for environmental justice. An artificially intelligent network that calculated, diagnosed, and automated the regeneration of ecosystem services and natural resources in real-time, to be distributed equally between rural and urban areas. About how human intelligence no longer needed to focus on making quick decisions—the artificial intelligence did that—and how people here could therefore devote themselves more to recreation and play. Not everyone, of course, some were only seen virtually. "Everyone is different, and luckily for us," he said, half as a joke and half as a jab at how they had chosen to live differently.

He continued more personally. He told her about how his digital twin had helped navigate social and mental challenges through simulated trials, errors, and lessons. About how he helped integrate conversation-based AI at the child facility where they grew up to provide the care he himself had lacked. And all about Max. His partner Max, who made him feel appreciated, loved, needed. "So where is this Max?" she asked, excited to welcome another sibling. Jan performed his meta-man gesture. "Here," he said.



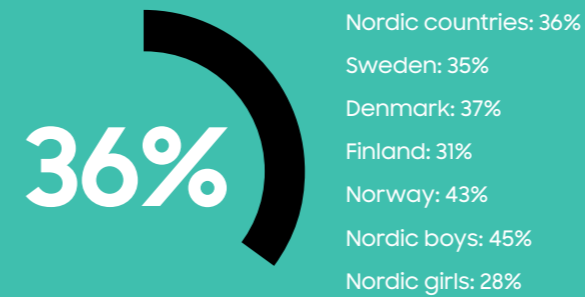
AI-generated image created with Midjourney.

Prompt: A young man in a futuristic garden with a small robotic bees, 8K, photo realistic, futuristic, maximalism, -ar 2:3

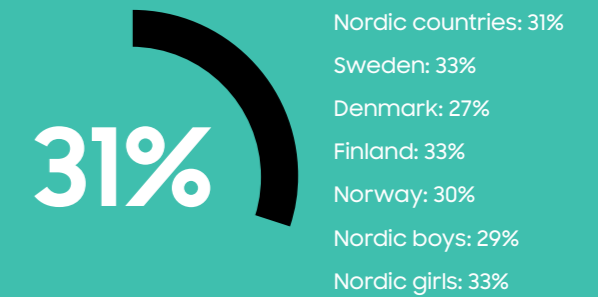
1/3 OF NORDIC YOUTH WANT TO BE INVOLVED IN SHAPING FUTURE TECHNOLOGY

The debate about AI often revolves around its impact on the job market. Some see AI as an opportunity to improve the workplace, while others are concerned about its potential negative effects. The survey shows that 36% of Nordic youth believe that AI will change the job market for the better, while 31% believe that the job market will deteriorate. It is important to discuss how we can maximize AI's potential to create new meaningful jobs, but also how we address its potential negative impacts. More boys than girls have a positive attitude towards AI's impact on the job market. To bridge this gap, it is important to provide everyone with the opportunity to learn about AI and its potential impact on the workplace.

Interestingly, 33% of Nordic youth are highly interested in influencing technological development themselves. The interest of young people in shaping technology must be captured and nurtured. This can be done by continuing to develop their education and by increasing awareness of AI, Metaverse, and their potential consequences and future career opportunities.



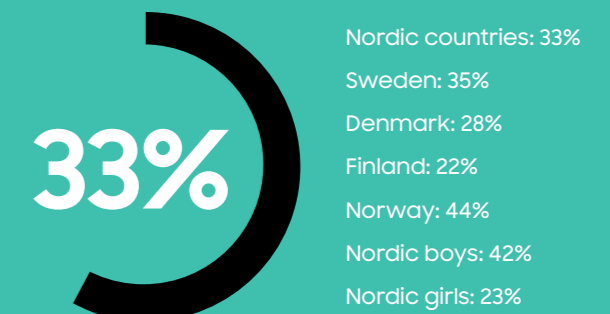
believe that AI will impact their chances in the job market more positively than negatively



believe that AI will impact their chances in the job market more negatively than positively



believe that AI will lead to more enjoyable jobs



are interested in working themselves to shape and develop new technology and digital solutions

YOUNG PEOPLE BELIEVE IN THE ABILITY OF TECHNOLOGY TO IMPROVE EDUCATION

Two out of five believe they would learn more if they attended school in the Metaverse, while three out of five believe AI can help them learn more things. Although there is an overall positive attitude towards the benefits of technology, the figures also show a certain gender difference, with more boys than girls looking at the future of technology with optimism. It is also interesting to note that a significant portion of young people feel they don't receive enough knowledge in school about new digital tools to succeed in the future. This underscores the need to continue educating and raising awareness about the potential of technology and demonstrating how young people can engage more in technology development. At the same time, there needs to be an awareness of how technology can be used responsibly and how we can manage its potential negative effects on society and individuals.

38%

Nordic countries: 38%
 Sweden: 44%
 Denmark: 31%
 Finland: 27%
 Norway: 47%
 Nordic boys: 45%
 Nordic girls: 32%

believe that they would learn more things if they attended school in the Metaverse

34%


Nordic countries: 34%
 Sweden: 39%
 Denmark: 28%
 Finland: 24%
 Norway: 41%
 Nordic boys: 41%
 Nordic girls: 28%

believe that they would feel better if they attended school in the Metaverse

58%

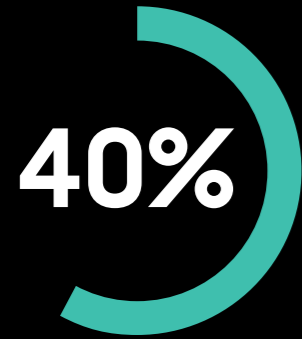
Nordic countries: 58%
 Sweden: 60%
 Denmark: 52%
 Finland: 51%
 Norway: 68%
 Nordic boys: 68%
 Nordic girls: 52%

believe that AI can help one learn more things

MORE ON THE NEXT PAGE 

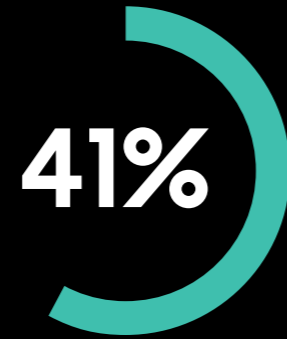
Do you feel that you're receiving the knowledge you need in school about new digital tools to succeed in the future?

YES



Nordic boys: 45%
Nordic girls: 37%

NO



Nordic boys: 42%
Nordic girls: 40%

UNCERTAIN/DO NOT KNOW



Nordic boys: 13%
Nordic girls: 23%



AI-generated image created with Midjourney.
Prompt: classroom, youth going to school in a future metaverse, photo realistic, futuristic, maximalism, --ar 3:4

INCREASING YOUTH'S KNOWLEDGE ABOUT AI AND METaverse

TikTok creator and EdTech entrepreneur Rasmus Häggkvist, 21 years old, shares his perspective.

WITH EXPERIENCE AS A TECHNOLOGY CONSULTANT AT DOW JONES AND AS A REPORT WRITER FOR THE ROYAL SWEDISH ACADEMY OF ENGINEERING SCIENCES, HE NOW RUNS SKOOLIE AB, WHICH DEVELOPS AI-BASED STUDY AND CAREER GUIDANCE SOLUTIONS.



The results from this report indicate a significant need for more knowledge about AI and the Metaverse. How can young people acquire increased knowledge about AI and the Metaverse?

To achieve this, high-quality education that is accessible regardless of background is crucial. The Metaverse can also be implemented as an alternative to reach students who miss school or to enable teachers to reach more students when there is a shortage of educators. AI can also be integrated into regular school subjects, allowing students to experiment with the tools to better master them. Strengthened collaboration between academia, the business sector, and the public sector is also essential to create synergies for AI and Metaverse implementations. This could include interactive lectures made available to schools nationwide. Such initiatives can bridge the gap between research and practice and ensure that education in schools fosters a sense of innovation and inclusivity for students.

How do you think concerns about AI and the Metaverse should be alleviated?

To reduce young people's concerns related to technological advancements, it is important to improve their understanding of the benefits and risks of technology. One possible strategy is to incorporate reasoning and knowledge criteria related to AI and technology across all school subjects. This means that when students write about AI in school assignments or use the technology, they should be encouraged to reflect on its potential and its impact on society, both positive and negative. This can help students develop a critical and nuanced understanding of the role of technology in their lives and future.

Tell us about a case where AI has already created change!

AlphaFold, developed by DeepMind, has revolutionized the field of protein folding by accurately predicting the three-dimensional structure of protein chains. This has been a significant scientific challenge with profound implications for almost all fields within biology.

Which three AIs do you think everyone should learn?

ChatGPT - The first step is to engage with ChatGPT to grasp how the technology works. Step 2 is to learn contextual "prompting" to guide ChatGPT in addressing more precise and complex problems. Step 3 is to utilize the OpenAI API and experiment with GPT-3.5 using one's own ideas to solve societal issues.

Midjourney - A "text-to-image model" that can generate images based on descriptions provided. A powerful tool that many can find useful for visualizing concepts.

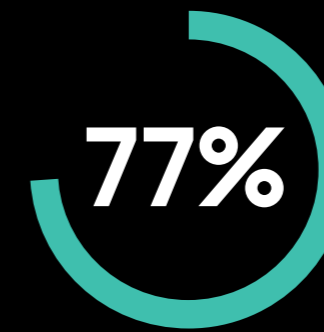
Auto-GPT - Understanding Auto-GPT is important as it has the ability to autonomously perform more complex tasks beyond the limitations of language models like ChatGPT. You can assign a task to Auto-GPT, and it will figure out the necessary steps to solve it, making it more independent and efficient. Auto-GPT has an open-source nature, allowing for customization and fine-tuning for specific needs.

How should AI and the Metaverse be developed in a positive direction?

To ensure positive development, it is crucial to accelerate collaboration among researchers, policymakers, businesses, and civil society. One example of such collaboration is the All-Party Parliamentary Group on Artificial Intelligence (APPG AI) in the United Kingdom, which brings together politicians, academics, businesses, and interest groups to discuss and shape AI policies. In addition to collaboration and dialogue, investing in education and research on AI and the Metaverse is also important. By providing people with the opportunity to understand and master these technologies, we can ensure their responsible and ethical use. Furthermore, the public needs to be involved in the development and decision-making processes regarding AI and the Metaverse. By listening to citizens' opinions and concerns, we can create technologies that are more aligned with people's needs and values. In summary, collaboration, education, ethics, and citizen participation are key factors in shaping a positive future with these technologies.

OPTIMISM TOWARDS TECHNOLOGY IS HIGH BUT YOUTH DEMAND RESPONSIBILITY

A majority of young people in the Nordic countries (77%) believe that it is important to have knowledge about how new technology and digital solutions impact individuals and society. It is evident that there is great optimism about technology's ability to improve our lives, but at the same time, young people want to see clear responsibility from both politicians and companies themselves. A majority of young people also believe that society should regulate what an AI can do. However, only 32% believe that they themselves have the ability to influence technological development. This, combined with the feeling among young people that they do not receive sufficient knowledge in school about new digital tools to succeed in the future, is something that needs to be addressed in order for young people to have a positive outlook on the future. Therefore, it is important to educate and increase awareness about the potential of technology and demonstrate how young people can engage more in technological advancements.



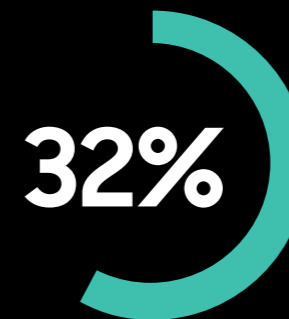
Nordic countries: 77%
Sweden: 79%
Denmark: 73%
Finland: 77%
Norway: 80%
Nordic boys: 80%
Nordic girls: 89%

believe that it is important for people to have knowledge about how new technology and digital solutions impact individuals and society



Nordic countries: 62%
Sweden: 63%
Denmark: 56%
Finland: 65%
Norway: 64%
Nordic boys: 86%
Nordic girls: 76%

believe that society should regulate what an AI can do



Nordic countries: 32%
Sweden: 34%
Denmark: 26%
Finland: 26%
Norway: 40%
Nordic boys: 39%
Nordic girls: 24%

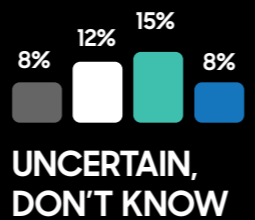
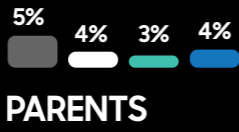
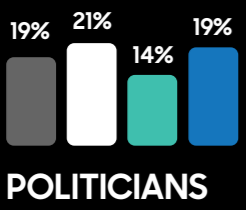
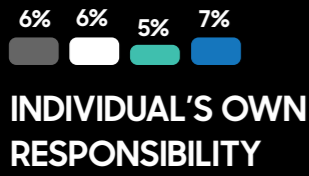
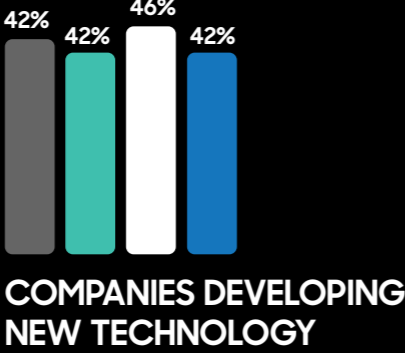
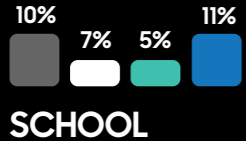
feel that they have the ability to influence technological and digital development

MORE ON THE NEXT PAGE



Who has the greatest responsibility to ensure that technological and digital development goes in the right direction?

- Sweden
- Denmark
- Finland
- Norway



The most important thing is that it serves a purpose in creating added value. It will be able to help tremendously in everyday aspects and free up time for doctors, researchers, and the like.

Male, born in 1997, Sweden



I believe that AI and the Metaverse can potentially increase the quality of life for people and help us create a much simpler life, but at the same time, I feel concern about the ethics of AI and how far AI can go. I'm worried that AI may replace many jobs that regular people need.

Female, born in 2001, Sweden

TO BRIDGE GENDER GAPS IN TECHNOLOGY:

Roksana and Arash reflect on
the gender equality paradox.

ROKSANA KHALID IS A RESEARCHER IN NEUROSCIENCE
AT THE DEPARTMENT OF BIOMEDICINE AND BIOPHYSICS AT STOCKHOLM UNIVERSITY.

ARASH HEYDARIAN PASHAKHANLOU IS AN ASSOCIATE PROFESSOR OF WAR STUDIES
AT THE SWEDISH DEFENCE UNIVERSITY IN STOCKHOLM.



Roksana and Arash - who are you?

ROKSANA: I am a researcher in neuroscience at the Department of Biomedicine and Biophysics at Stockholm University. My research area is at the intersection of the brain, society, and AI.

ARASH: I am an associate professor of war studies at the Swedish Defence University in Stockholm and have written several publications on AI and autonomous systems.

The report shows that there are differences in views on AI and the Metaverse between boys and girls. Why do you think that is?

It is an unexpected result considering that the target group of the study has grown up with the internet and technology. Moreover, Nordic society is considered relatively gender-equal, where a career in STEM (science, technology, engineering, and mathematics) should not be limited by gender discrimination. However, there is a gender equality paradox where women in more gender-equal countries tend to show less interest in technology, which is related to the absence of the same economic incentives and demands to choose a STEM career in these equal countries.

Do you know any interesting cases where AI and the Metaverse affect our mental well-being today?

Several studies show that therapy conducted in a stimulating virtual environment, rather than the usual clinic or lab setting, has a positive impact on the patient's motor and mental well-being. In other words, there is potential in incorporating the Metaverse into healthcare. However, this requires it to be done in a controlled environment.

AI replaces much of what we use our brains for. What functions will our brains have as AI expands even further?

For the brain, there is no difference between asking questions to a computer or a human when we need

to find out something or learn something new. The brain is a flexible organ that easily adapts its functions to changes in our external environment. With that said, in the future, we will "outsource" more tasks to technology, but our human brains will continue to play an important role in tasks that AI typically struggles with, such as creative, strategic, and emotionally intelligent tasks.

What is the way forward for increased AI competence and inclusion?

The expectations placed on children during their formative years can influence their interest in their surroundings and therefore new technological phenomena like AI. Therefore, initiatives made in children's early years are crucial, especially since AI is likely the most significant technological shift of our time. Parents and childcare can make early efforts to help children learn more about technology. Furthermore, policymakers should work to increase both educational initiatives and support so that more groups can gain knowledge about AI and the Metaverse. This may involve adapting education and targeted investments to promote increased technical competence without differentiation based on people's backgrounds.

REFERENCES

- Talks, S., Edvinsson, I. and Birchall, J. (2019) 'Programmed Out: The Gender Gap in Technology in Scandanavia.' Plan International Norway.
- Stoet, G. and Geary, D.C. (2018) 'The gender equality paradox in STEM education,' *Psychological Science*, 29(4).
- Sparrow B., Liu J., Wegner DM. (2011) *Google effects on memory: cognitive consequences of having information at our fingertips.* *Science* 333.

A NORDIC PERSPECTIVE – INTERESTING DIFFERENCES

22 vs 40%

In Finland, 22 percent are familiar with the Metaverse, while in Sweden and Norway, it is 40 percent. How is that possible when the countries are so similar?

53 vs 64%

The pattern repeats when it comes to awareness of AI, with Finns having the least knowledge and Swedes being the most informed.

38 vs 46%

Among the youth in the Nordic region, more believe that AI and the Metaverse have a positive impact on society than a negative one. Finland stands out as the most skeptical, while Norway is the most optimistic.

ABOUT THE REPORT

SOLVE FOR TOMORROW

is an educational initiative aimed at providing future generations with the opportunity to reach their full potential and become changemakers who can create positive societal change. The goal is to increase young people's interest in STEM, innovation, and sustainability in the Nordic countries, as well as to bridge the gap to technology and demonstrate how to tackle challenges, develop ideas, design prototypes, and create concrete solutions. The experience is conducted in collaboration with Hyper Island, a school specializing in digital innovation and design thinking. All young people between 18-26 years old in Sweden, Denmark, Norway, or Finland have the opportunity to apply for Solve for Tomorrow completely free of charge. Participants in Solve for Tomorrow leave the experience with specialized knowledge, a diploma, and access to Hyper Island's network. The winner receives €5000, and the runner-up receives €2500.



ABOUT SOLVE FOR TOMORROW:
www.solvefortomorrownordics.com

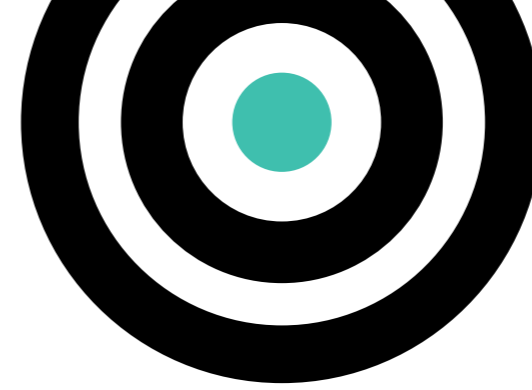
SAMSUNG ELECTRONICS NORDIC

is a leading global technology and innovation company. Samsung's commitment to the local community is guided by the vision "Together for Tomorrow! Enabling People." The goal is to amplify the voice of future generations and provide them with the opportunity to reach their full potential. To thrive and succeed in a technology-driven future, Samsung works on interactive and inclusive educational initiatives worldwide, aiming to empower young people to create positive societal change.

FRYSHUSET

enables young people to change the world through their passions. The Fryshuset Foundation is a religiously and politically independent non-profit organization for and with young people. Fryshuset operates around 60 different activities across Sweden, where young people have the opportunity to pursue their passions, create, and participate in youth-driven activities, education, and work. Fryshuset works to ensure that society takes young people's opinions and ideas seriously, believing that it contributes to a creative and solution-oriented social climate where we dare to think innovatively and find new solutions.

TARGET AUDIENCE



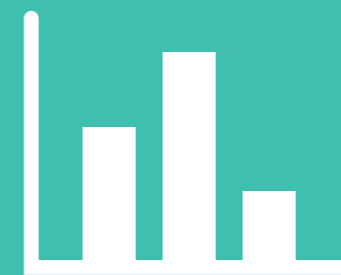
Young people in Sweden, Denmark, Finland, and Norway, aged 16-25

INTERVIEW PERIOD



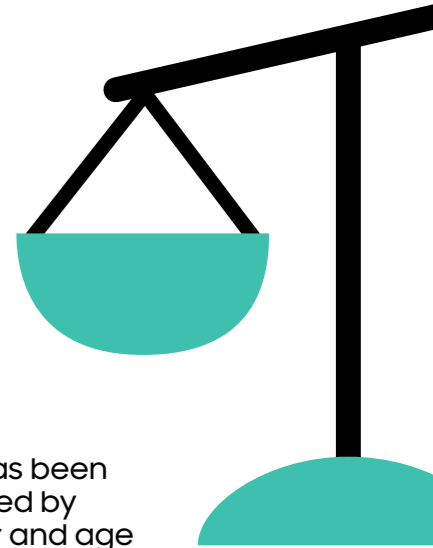
February 24th - March 9th, 2023

PURPOSE



To examine the views of young people in the Nordic countries on the technological development and the trend phenomena of AI and the Metaverse

WEIGHTING



Data has been weighted by gender and age

NUMBER OF RESPONDENTS

Sweden: 1001
Denmark: 1004
Finland: 1001
Norway: 1009
Total: 4015



CONDUCTED BY



Conducted by the research company Demoskop on behalf of Fryshuset and Samsung Electronics Nordic

DEEP DIVE INTO THE THOUGHTS OF 4000 NORDIC YOUTH on the future of technology in the Youth on AI and the Metaverse - Solve for Tomorrow Report 2023. Since 2018, Fryshuset and Samsung Electronics Nordic have been working together to give young people a stronger voice in the societal debate. By providing tools, knowledge, and a Nordic platform for meetings and learning, we give young people the opportunity to transform concerns into action and reshape problems into innovative ideas that shape society.

In this report, we aim to highlight the perspectives and thoughts of young people on current technology issues. By presenting up-to-date data and exciting interviews with experts in the field, our goal is not only to contribute knowledge and inspiration but above all to offer clear insights and interesting perspectives on how young people view technological development.

Welcome to explore the youth's vision for the future technology landscape.