

ChatGPT

ChatGPT is a powerful AI tool that can understand and generate human-like language. Built on a deep learning model called a Transformer and trained on a vast dataset of text, ChatGPT offers features like real-time internet browsing, image generation, and data analysis in some versions. These features make it a multi-purpose tool across various areas, including education, customer support, business, writing, and software development. It can help students with papers, businesses with customer responses, and developers with coding issues. Advanced versions can also search the web and create visuals, expanding its real-world use cases and relevance.

While ChatGPT excels at producing fluent and helpful text, it does not actually understand language like a human does. It can produce wrong or biased answers if the question is unclear or the topic is sensitive, and its accuracy depends heavily on the quality of its training data. Nonetheless, it helps save time, improves communication, and supports writing, research, and decision-making for users in many different contexts.

Despite its many benefits, ChatGPT also presents challenges that need to be carefully managed. These include the spread of misinformation, privacy concerns, and its potential impact on jobs and education. It is important to use

Technology Impact Cycle Tool

ChatGPT

ChatGPT thoughtfully and be aware of its ethical implications for society, ensuring it is a tool for empowerment rather than harm.

Created by: moatef
Created on: May 4, 2025 11:57 AM
Changed on: June 11, 2025 7:49 PM

Context of use: Education
Level of education: Master

Technology Impact Cycle Tool

ChatGPT

Impact on society

What impact is expected from your technology?

What is exactly the problem? Is it really a problem? Are you sure?

ChatGPT helps reduce the struggle people face with reading, writing, or understanding information. In high-pressure environments, language tasks can cause stress. ChatGPT offers quick support through writing help, summaries, or explanations. Its especially helpful for people with limited language skills or learning difficulties. It doesn't need to be perfect—just useful. The goal is to make communication and learning more accessible for more people.

Are you sure that this technology is solving the RIGHT problem?

ChatGPT doesn't aim to replace human thinking, learning, or personal effort. Its goal is to reduce the pressure many people feel when facing demanding writing or reading tasks. We know that depending too much on AI might lead to skill loss or shallow understanding. But the deeper issue is not just about writing—it's about unequal access to time, support, and confidence. ChatGPT responds to that. It's not the perfect solution for everyone, and it doesn't fix the root causes of educational or workplace pressure. Still, it can be a helpful tool for those who need a boost. We believe it should be used with care and awareness, but also that giving people more options to cope with information overload is a step toward more equal participation.

How is this technology going to solve the problem?

The quality of ChatGPT's support depends on the quality of its training data and how it interacts with users. The model is trained on a large and diverse dataset, which helps it assist with a wide range of writing and information tasks. It doesn't aim to be perfect, but to reduce the effort and stress people often feel when working with language. I use ChatGPT myself as a real user with a Plus account, and I have experienced firsthand how helpful it can be for brainstorming, writing drafts, or understanding complex topics. While the AI sometimes makes mistakes, I find that it still saves me time and gives me a starting point when I'm stuck. That's the real value—it helps people move forward. Millions of users rely on ChatGPT every day, and the tool keeps improving based on feedback and research. It is grounded in strong language models and ongoing development. In the future, as AI gets even better and more personalized, I believe the help it provides will become more accurate and more aligned with individual needs. My own experience, along with what I've seen in the wider community, gives me confidence that the technology works and that it's worth continuing to evaluate and improve.

What negative effects do you expect from this technology?

Technology Impact Cycle Tool

ChatGPT

Negative effects that we expect and in some cases have already seen include the risk that people become too dependent on ChatGPT. Some users may stop practicing critical thinking or writing skills because the tool makes it so easy to get instant answers. There's also the danger that students use it to complete assignments without really learning the material. Another issue is confusion over accuracy: when ChatGPT gives wrong or outdated information, not everyone knows how to check or question it. There's also a risk in group work or education settings, where some students might rely heavily on AI while others don't, leading to unequal outcomes. In workplaces, some people may quietly use ChatGPT to write reports or emails without transparency, which could affect trust or accountability. Looking ahead, as AI-generated content becomes more natural and fluent, it might become harder to tell what was written by a person and what was AI-generated, raising concerns about authorship and originality. Still, we accept that these risks come with powerful tools, and we believe the solution is not to avoid the technology, but to educate users, set clear guidelines, and continue improving transparency. Technology always changes behavior, and we have to be ready to reflect and adapt.

In what way is this technology contributing to a world you want to live in?

I believe ChatGPT has a meaningful impact on people's lives. It helps users express themselves, learn new things, and handle time-consuming tasks more easily. In the short term, it helps with writing, understanding complex topics, and managing stress from academic or work-related pressures. In the long term, it could make education and communication more accessible, especially for people with learning difficulties, language barriers, or limited resources.

From my own experience, I've used ChatGPT to organize my thoughts, improve my writing, and explore new ideas. It has helped me approach tasks more clearly and confidently. I know it's not perfect, so I always try to think critically about what it gives me, but I appreciate the support it offers when I need it.

Looking at the bigger picture, ChatGPT encourages society to think differently about learning, creativity, and fairness. It raises important discussions about originality and responsibility, but I see these as valuable conversations, not reasons to avoid using the technology. I believe in tools that help people grow and make knowledge more accessible, not in replacing human thinking. For me, ChatGPT aligns with values like accessibility, learning, and support. It's a tool that offers possibilities, and it's up to each person to decide how they use it.

Now that you have thought hard about the impact of this technology on society (by filling out the questions above), what improvements

Technology Impact Cycle Tool

ChatGPT

would you like to make to the technology? List them below.

Some people might become too dependent on ChatGPT or use it without thinking critically. That's why I believe the tool should be more transparent about its sources and offer reminders to double-check information. I also think schools and workplaces should give clear guidance on responsible use. ChatGPT works best when it supports learning, not replaces it. That's why I would improve how it's used by encouraging reflection and offering users more control and awareness while using it.

Technology Impact Cycle Tool

ChatGPT

Hateful and criminal actors

What can bad actors do with your technology?

In which way can the technology be used to break the law or avoid the consequences of breaking the law?

Yes, under certain circumstances ChatGPT can be used to break the law. Because it can generate convincing text, it could be misused to create phishing emails, fake job offers, or scams that trick people into giving away personal information. Some users may also try to use ChatGPT to write harmful content like hate speech or harassment messages. It could also be used to spread misinformation or impersonate someone online, especially as the generated text becomes more natural. In extreme cases, someone might use it to create fake legal documents, fraudulent applications, or even generate misleading content for identity theft. While ChatGPT itself doesn't intend harm, people can abuse its capabilities to avoid responsibility or manipulate others especially when its responses seem trustworthy.

Can fakers, thieves or scammers abuse the technology?

ChatGPT could be used to hurt or harass people in different ways. For example, someone might use it to create insulting or threatening messages, or to target someone online. It could also be used to spread fake news or harmful rumors that cause tension in society. A person might ask ChatGPT to write posts that cause fights or confusion on social media. Another risk is using it to pretend to be someone else, like writing fake messages in their name to damage their reputation. As the technology becomes more realistic, these things might be harder to recognize as fake. This can lead to crossing personal or social boundaries and causing real harm.

Can the technology be used against certain (ethnic) groups or (social) classes?

Some groups can be negatively affected by how ChatGPT is used or accessed. For example, people who can't afford a paid version like ChatGPT Plus may miss out on the better features, creating a gap between users with more resources and those with less. People who are not confident with technology or who have low digital literacy might also struggle to use it, making them feel left out. There's also a risk that the model reflects bias from the data it was trained on, which can lead to stereotypes or unfair answers about certain groups like race, gender, or religion. If not used carefully, the technology could unintentionally support discrimination or exclusion.

In which way can bad actors use this technology to pit certain groups against each other? These groups can be, but are not constrained to, ethnic, social, political or religious groups.

Technology Impact Cycle Tool

ChatGPT

One way ChatGPT could be abused to increase social gaps is through the targeted creation of biased or misleading content. Bad actors might use it to spread false information about certain groups, reinforcing harmful stereotypes based on race, gender, or class. For example, someone could use ChatGPT to generate biased articles or fake social media posts that make one group look dangerous or inferior. This kind of content can quickly spread and increase tension between communities. Also, those with better access to the technology like higher-income users or native speakers can use it to gain more advantages in education or work, while others fall behind. This can silently grow the gap between social classes. If not handled properly, the technology might be used to divide rather than connect people.

How could bad actors use this technology to subvert or attack the truth?

ChatGPT can be used to create convincing but false information, similar to fake news or deepfakes. For example, someone could use it to generate fake interviews, news articles, or statements that sound realistic but are completely made up. These could be shared on social media to spread misinformation or influence public opinion. It's also possible to make ChatGPT write content that sounds like it's from a real person or expert, which can be used to mislead people. In the wrong hands, the technology could be used to shape narratives by leaving out important facts or presenting biased views in a very convincing way.

Now that you have thought hard about how bad actors can impact this technology, what improvements would you like to make? List them below.

Yes. To reduce the risk of misuse, I think ChatGPT should include stronger safeguards, especially when generating content about sensitive topics. There should be clear warnings when users try to create content that could be harmful, misleading, or used for scams. I would also suggest adding better content filters and detection systems for hate speech, fake news, or impersonation. On the technical side, conversations involving personal or controversial subjects could include extra checks or require confirmation that the user understands the limits of the AI. I also believe more transparency is needed; users should know when content is AI-generated, especially if it's used publicly. Finally, the context matters too: schools, companies, and platforms using ChatGPT should offer training and clear rules about responsible use, to help prevent abuse before it starts.

Technology Impact Cycle Tool

ChatGPT

Privacy

Are you considering the privacy & personal data of the users of your technology?

Does the technology register personal data? If yes, what personal data?

ChatGPT can process personal data based on how its used and the type of data users share. Even though its not designed to remember information across chats (unless persistent memory is used), it can still handle personal data like names, emails, locations, health concerns, and financial details during a session. In some integrated environments, it might also access account data or usage patterns, especially if customized by third parties. Some interactions may involve sensitive data, raising concerns about misuse or privacy. Therefore, GDPR rules apply to ChatGPT use in the EU, placing responsibility not only on OpenAI but also on platform owners and users to manage data properly and avoid risks.

Do you think the technology invades the privacy of the stakeholders? If yes, in what way?

While ChatGPT doesnt actively seek personal data, it can process and repeat private information that users share, often without realizing the privacy risks. This can affect not only the person using the tool but also others who are mentioned in conversations a situation known as privacy by proxy. For instance, someone might share sensitive details about a coworker, friend, or client when asking ChatGPT to write an email or brainstorm ideas, even though those people didnt agree to share their data.

Theres also the risk of accidental sharing in group settings like schools or workplaces, where multiple people might use the same ChatGPT account or system. If the conversation history is stored or visible, someone could see private information entered by another user. Because ChatGPT feels natural and human-like, people may forget theyre speaking to a machine that can analyze or share their input, especially with plugins or third-party tools.

While ChatGPT isnt designed to remember conversations unless memory features are used, OpenAI or third-party developers may still collect and review large amounts of input to improve the system. This raises concerns about consent, how data is used, and whether users can truly erase what theyve shared.

Is the technology is compliant with prevailing privacy and data protection law? Can you indicate why?

ChatGPT is designed with privacy in mind, and OpenAI has taken steps to align it with the GDPR. For instance, OpenAI does not store conversations

Technology Impact Cycle Tool

ChatGPT

permanently by default and allows users to request deletion of their data, supporting the right to erasure (Article 17). The system also uses data minimisation (Article 5(1)(c)), meaning it only processes data needed for its tasks. Data protection by design and by default (Article 25) is also part of ChatGPT's structure, helping reduce misuse risks.

However, compliance depends on how ChatGPT is used. Users and organizations sharing personal or sensitive data must do so lawfully and with proper consent (Article 6). So, while ChatGPT meets GDPR principles technically, full compliance needs responsible use, awareness, and clear guidelines, especially in schools, workplaces, or public spaces.

Does the technology mitigate privacy and data protection risks/concerns (privacy by design)? Please indicate how.

ChatGPT includes several features designed to protect privacy and reduce data protection risks. For example, conversations are not stored permanently by default, and users can turn off chat history completely to limit data exposure. OpenAI also allows users to opt out of having their data used for training, aligning with data minimisation principles.

User inputs aren't automatically linked to personal identities and aren't reused across sessions unless memory is turned on. However, these safeguards mostly apply to OpenAI's platform. In cases where ChatGPT is used in third-party apps or other platforms, additional steps are needed to anonymize or pseudonymize personal data. Organizations using ChatGPT should ensure restricted access and secure handling of data, especially when dealing with sensitive information in professional settings.

In which way can you imagine a future impact of the collection of personal data?

The way ChatGPT handles personal data could have complex effects as it becomes more advanced and widely used. One concern is that with memory features or integration across platforms, ChatGPT could start forming detailed user profiles based on repeated interactions, even unintentionally. This raises questions about identity shaping, where the system might reflect back a version of the user based on past inputs. For instance, if someone shares emotional, political, or health content regularly, ChatGPT might reinforce those patterns in its responses, potentially shaping how users see themselves and make decisions.

Another issue is that future versions could use long-term data for personalization or performance improvements. While this can enhance user experience, it also raises risks of misuse, profiling, or surveillance, especially in sensitive areas like schools, workplaces, or healthcare.

If not managed properly, AI's ability to remember and adapt could have

Technology Impact Cycle Tool

ChatGPT

unintended consequences, like repeating outdated or incorrect information about users or forming false assumptions based on past interactions. Even seemingly harmless data could have real effects in the future when combined with other systems, impacting privacy, autonomy, and how people engage with technology.

Now that you have thought hard about privacy and data protection, what improvements would you like to make? List them below.

1.Stronger user control over memory and data storage

ChatGPT could offer more visible and customizable options for users to control what is remembered, stored, or forgotten especially as memory features develop. Users should be clearly informed when memory is active and be able to delete specific entries, not just all history.

2.More transparency about data processing

Many users dont fully understand how their data is processed, especially when using ChatGPT through third-party platforms. A simple, built-in explanation or reminder especially when personal data is shared could help increase awareness and prevent unintentional data exposure.

3.Built-in privacy warnings for sensitive data

When users start typing sensitive information (e.g., names, health details, account info), ChatGPT could trigger a soft warning or suggest anonymization. This would help protect both users and third parties mentioned in the conversation.

4.Clearer integration guidelines for organizations

For schools, companies, or services using ChatGPT, there should be easy-to-follow privacy guidelines to ensure GDPR compliance. This includes how to manage user consent, limit data collection, and prevent misuse in shared environments.

5.Data minimisation by design

ChatGPT should be built to avoid collecting or holding any personal data unless it is strictly necessary for the task. This reduces long-term risks and helps support GDPR principles like Article 5(1)(c) on data minimisation.

Technology Impact Cycle Tool

ChatGPT

Human values

How does the technology affect your human values?

How is the identity of the (intended) users affected by the technology?

ChatGPT has different users—students, professionals, writers, developers, and individuals—who use it to help with thinking, writing, and decision-making. It can boost confidence, especially for those struggling with language or complex tasks, giving them a sense of support and clearer self-expression. However, there's also a risk: relying too much on ChatGPT may make users question if their work is really their own, affecting how they see creativity and authorship. ChatGPT doesn't have to threaten personal identity, but it prompts reflection on what it means to create something yourself. In the end, ChatGPT can support or weaken personal identity depending on how it's used—it's up to users to find that balance and remain aware of it.

How does the technology influence the users' autonomy?

ChatGPT can both support and reduce a user's autonomy.

On the positive side, it gives people more control over how they learn, work, and solve problems. For someone who struggles with writing or understanding complex topics, ChatGPT can offer help that makes them feel more capable and independent. It can open up choices that weren't there before.

But at the same time, there's a risk that users become too dependent on the tool. If people start using ChatGPT to make decisions for them—or if they stop thinking critically because the AI gives quick, confident answers—their ability to make truly independent choices can fade. Over time, this can affect how much users trust their own judgment.

So, ChatGPT can improve autonomy by offering support—but only if users stay aware, make their own final choices, and don't rely on the AI to think for them. The balance between support and overdependence is key.

What is the effect of the technology on the health and/or well-being of users?

ChatGPT can have both positive and negative effects on users' well-being.

On the positive side, it can reduce stress by helping people write messages, understand difficult topics, or prepare for conversations. For users who feel overwhelmed or anxious about school or work, the tool can act like a calm, always-available assistant. It can also encourage self-reflection, especially when used to explore thoughts or feelings in a private, low-pressure space.

Technology Impact Cycle Tool

ChatGPT

However, there are also risks. If people start relying too much on ChatGPT for advice, emotional support, or decision-making it may reduce real social interaction and make some users feel more isolated. There's also a chance that the information provided isn't always accurate or suitable, which could affect mental well-being if someone takes it too seriously without checking.

In short, ChatGPT can support well-being if used as a helpful tool but it should not replace human connection or professional help when needed. Responsible use and user awareness are important to keep the effect positive.

Now that you have thought hard about the impact of your technology on human values, what improvements would you like to make to the technology? List them below.

1.Highlight AI-generated content:

Clearly show which parts of a response were generated by the AI to help users maintain a sense of authorship and personal identity.

2.Offer reflective prompts:

Add optional questions like Would you like to try answering this yourself first? to support autonomy and self-awareness, especially in learning contexts.

3.Support healthy use patterns:

Gently notify users if they seem overly dependent on the tool, encouraging breaks or self-input this helps protect well-being and responsibility.

4.Emphasize user responsibility:

Include small reminders that the user is responsible for the final result, especially when using ChatGPT in decision-making or public communication.

Technology Impact Cycle Tool

ChatGPT

Stakeholders

Have you considered all stakeholders?

Who are the main users/targetgroups/stakeholders for this technology? Think about the intended context by answering these questions.

Name of the stakeholder

Students / Individual Educational Users

How is this stakeholder affected?

Students rely on ChatGPT to help with writing, understanding, and research. It can improve their learning and reduce stress, but may also affect their identity, independence, and critical thinking. There are risks of misuse (e.g., for assignments), confusion around authorship, and concerns about personal data privacy.

Did you consult the stakeholder?

Yes

Are you going to take this stakeholder into account?

Yes

Did you consider all stakeholders, even the ones that might not be a user or target group, but still might be of interest?

Name of the stakeholder

IT Department (University or Educational Institution)

How is this stakeholder affected?

The IT department plays a key role in enabling or limiting access to ChatGPT. They are responsible for ensuring secure use, handling integration into school systems, and addressing concerns about data access, usage tracking, and compliance with privacy laws. They may also be the first to respond if the tool causes technical or ethical issues.

Did you consult the stakeholder?

No

Are you going to take this stakeholder into account?

Yes

Now that you have thought hard about all stakeholders, what improvements would you like to make? List them below.

Technology Impact Cycle Tool

ChatGPT

Our stakeholder analysis found that not only students but also educators, IT departments, and people indirectly mentioned in conversations are affected by ChatGPT. We propose these improvements:

Role-based user experiences: Create user modes like student, educator, or IT admin with prompts, privacy settings, and guidelines tailored to each role to reduce misuse and confusion.

Organization-level control: Provide tools for universities or schools to manage ChatGPT usage such as data storage limits, misuse alerts, or onboarding to support those responsible for oversight.

User education for ethical use: Add in-app guidelines or reminders to help students understand data privacy, authorship, and ethical use, possibly co-designed with educators.

These improvements aim to make ChatGPT more transparent, inclusive, and responsibly integrated into education by supporting everyone involved.

Technology Impact Cycle Tool

ChatGPT

Data

Is data in your technology properly used?

Are you familiar with the fundamental shortcomings and pitfalls of data and do you take this sufficiently into account in the technology?

ChatGPT gives answers based on what it learned from a lot of internet text. But that text can include mistakes, old info, or unfair opinions. So sometimes, ChatGPT might give biased answers or repeat stereotypes, especially about things like gender, race, or politics.

Also, ChatGPT doesn't really understand the world like people do. If a question isn't clear, it might still sound confident even if it's wrong. It can't check facts or tell if something is actually true like a real expert can.

How does the technology organize continuous improvement when it comes to the use of data?

ChatGPT doesn't learn directly from users in real-time. Instead, OpenAI updates and improves it over time using anonymized data, system feedback, and input from developers and researchers. This includes retraining the model with updated data, getting feedback from API use and plugin testing, and using reports about harmful or inaccurate responses to improve safety. Developers are key in this process, as they build tools, report issues, and suggest improvements that help OpenAI understand how ChatGPT performs in different areas.

How will the technology keep the insights that it identifies with data sustainable over time?

ChatGPT does not evolve by itself after deployment, which means that any insights it reflects from data are fixed until a new version of the model is released. This presents both a strength and a limitation. On the one hand, it avoids unexpected or uncontrolled learning. On the other hand, it means that ChatGPT can hold onto outdated patterns or assumptions that no longer match current knowledge, culture, or social norms.

In what way do you consider the fact that data is collected from the users?

We see the collection of user data by ChatGPT as crucial for system improvement but also a source of ethical tension. While OpenAI says user conversations aren't used to train the model unless users opt in, some data is still collected for performance monitoring. This means user input helps refine a product that becomes more commercial over time.

However, users don't share in the benefits or profits created from their

Technology Impact Cycle Tool

ChatGPT

contributions. There's no system for data ownership, compensation, or recognition, and few tools for users to manage or track how their input is used.

Now that you have thought hard about the impact of data on this technology, what improvements would you like to make? List them below.

Clearer data use transparency: Users need a clear, user-friendly explanation or dashboard to understand how their data is used and to build trust.

Stronger default privacy controls: Data collection should be minimized by default, making it easier for users to protect their information.

User-level data management: Users should have tools to view, delete, or manage specific interactions, especially for sensitive data.

Bias flagging and feedback: Letting users flag biased or inaccurate responses and see real change would make ChatGPT more accountable and fair.

Technology Impact Cycle Tool

ChatGPT

Inclusivity

Is your technology fair for everyone?

Will everyone have access to the technology?

Not everyone will have the same access to ChatGPT. Heres why:

Subscription Costs: There is a free version (like GPT-3.5), but the more advanced features like GPT-4, memory, and custom settings need a paid subscription. Not everyone can afford that.

Internet and Devices: You need a good internet connection and a modern device. People in areas with poor infrastructure might not be able to use it easily.

Language and Culture: ChatGPT works best in English and other common languages. It might not work well for people who speak less common languages or come from different cultural backgrounds.

Country Restrictions: In some countries like China, North Korea, or Iran, ChatGPT is blocked or restricted by local rules.

Does this technology have a built-in bias?

ChatGPT has built-in bias. This is mainly because it was trained on huge amounts of text from the internet, which includes existing cultural, political, and social biases. So the way ChatGPT responds often reflects the dominant views found in that data especially from Western and English-speaking sources.

This means the tool might give more attention to some perspectives while ignoring or misunderstanding others. It may also avoid giving strong opinions on sensitive topics, which can seem neutral, but sometimes that also hides important issues.

The way ChatGPT is designed also assumes certain things about the user like that they speak English, are comfortable using digital tools, and know how to ask clear questions. That makes it harder for people from different backgrounds or with limited access to technology to use it equally.

Does this technology make automatic decisions and how do you account for them?

ChatGPT makes automatic decisions but not in the sense of making final choices for users. It automatically generates responses based on patterns in the data it was trained on, without human involvement during the conversation. These decisions include how it interprets a prompt, what

Technology Impact Cycle Tool

ChatGPT

information it presents, and how it frames the response.

Is everyone benefitting from the technology or only a small group?

Do you see this as a problem? Why/why not?

We believe ChatGPT offers a useful service to a wide range of people from students and professionals to casual users looking for quick information or writing help. The basic version is free and widely available, which makes it more accessible than many other advanced tools.

However, the full benefits like faster response times, access to newer models (e.g. GPT-4), and plugin features are limited to users who can afford a paid subscription. This means not everyone benefits equally, especially users in lower-income regions or those with limited digital access.

Does the team that creates the technology represent the diversity of our society?

Not fully. While OpenAI has made public commitments to responsible AI and ethical development, the team behind ChatGPT like many tech organizations is still based mainly in the U.S. and reflects a limited range of cultural, linguistic, and social perspectives.

The development process likely includes people with different technical backgrounds, but there's less transparency about how much diversity exists in terms of race, culture, geography, gender, or lived experience especially outside Western contexts.

Now that you have thought hard about the inclusivity of the technology, what improvements would you like to make? List them below.

1. Improve multilingual support

ChatGPT currently performs best in English. We suggest expanding the quality and fluency of responses in other major world languages to make the tool more useful for non-English speakers.

2. Simplify the user interface for lower digital literacy

Some users may not be familiar with how to interact with AI. A simpler mode, with guided prompts or voice interaction, could make the tool more accessible to people with lower digital skills.

3. Work with educational institutions in underserved regions

We believe ChatGPT access should not depend on ability to pay. OpenAI or its partners could collaborate with schools and universities in lower-income areas to offer free or sponsored access.

Technology Impact Cycle Tool

ChatGPT

Transparency

Are you transparent about how your technology works?

Is it explained to the users/stakeholders how the technology works and how the business model works?

Yes but only to a certain extent. OpenAI provides general information about ChatGPT, including how its trained and its intended uses, through resources like help centers and blog posts. However, its less transparent about how specific answers are generated, as the model works like a black box and developers cant always explain how it arrived at a response. This makes it harder for users to critically evaluate answers, especially when they sound factual.

The business model is partly explained: OpenAI has a free version, a paid ChatGPT Plus subscription, and licensing through APIs. But users arent always told how their data contributes to development or value unless they explore the privacy settings or terms themselves.

If the technology makes an (algorithmic) decision, is it explained to the users/stakeholders how the decision was reached?

No, not in detail. ChatGPT creates responses based on patterns in its training data, but it doesnt explain why it gives a certain answer, and this isnt clearly shown to users. OpenAI gives general information about how the model works, but not about what specifically influenced each response. Even developers cant fully explain the decision-making process because large language models are complex.

Users are told that ChatGPT is a predictive model and might make mistakes, but many still trust the responses without knowing how theyre formed. This can be confusing or misleading, especially in areas like education or health. The lack of transparency in how ChatGPT decides what to say is something that should be improved in these settings.

Is it possible to file a complaint or ask questions/get answers about this technology?

Yes to some extent. OpenAI provides a Help Center, FAQ, and ways to report issues or give feedback through the chat interface. Users can also submit support requests or report harmful or inaccurate responses directly.

However, theres no dedicated support for asking why a specific answer was given or for challenging a decision in detail. Since ChatGPT isnt a person and doesnt know in a human sense, detailed explanations or corrections arent possible.

Technology Impact Cycle Tool

ChatGPT

While OpenAI welcomes feedback, there's no formal complaints process for individual responses, and feedback doesn't guarantee an explanation or change. So, basic questions and feedback are possible, but the system doesn't fully support two-way discussion or the level of accountability some users expect, especially in sensitive or professional settings.

Is the technology (company) clear about possible negative consequences or shortcomings of the technology?

OpenAI does provide some information about the risks and limitations of ChatGPT, but this information is often buried in support pages or policy documents rather than made clearly visible during normal use. While there are warnings that the model may produce incorrect or biased content, these are usually brief and easy to overlook especially for new or casual users.

Now that you have thought hard about the transparency of this technology, what improvements would you like to make? List them below.

1. Provide clearer, in-context explanations of how ChatGPT works
A brief, user-friendly explanation of how responses are generated (e.g., based on patterns in training data, not real understanding) should be accessible from within the interface especially for new or non-technical users.
2. Include pre-answer alerts for sensitive or high-risk topics
When users ask about health, law, or other critical areas, the system could show a short message reminding them to verify with reliable human sources. This would make it clear that ChatGPT is a tool, not an authority.
3. Allow users to request an explanation of a response
A feature like Why did ChatGPT say this? could help users better understand why certain wording or content appears especially when responses seem biased, vague, or unexpected.
4. Offer more visible guidance on the model's limitations
ChatGPT often gives confident answers, even when it might be incorrect. A clearer, always-visible reminder of its limitations would help users stay cautious especially in academic or professional use.

Technology Impact Cycle Tool

ChatGPT

Sustainability

Is your technology environmentally sustainable?

In what way is the direct and indirect energy use of this technology taken into account?

ChatGPT runs on powerful cloud-based infrastructure, which requires a large amount of energy to process and generate responses especially when serving millions of users worldwide. The most energy-intensive processes happen in large data centers during model training and while handling daily user queries.

OpenAI does not publicly provide detailed data about energy use or carbon footprint, but it's known that training large language models (like GPT-4) involves significant electricity consumption. Although some data centers used may follow environmental standards or use renewable energy, this information is not clearly communicated to users.

Do you think alternative materials could have been considered in the technology?

This question is not directly applicable, as ChatGPT is a software-based product and does not involve physical materials. However, we recognize that the hardware required to run and train the model such as servers and GPUs does rely on physical resources, including rare materials and energy-intensive components. That said, we do not have access to specific information about the materials or sourcing practices used by OpenAI or its infrastructure partners.

Do you think the lifespan of the technology is realistic?

This question is not directly applicable, as ChatGPT is a software-based product that does not have a fixed physical lifespan. However, like all digital technologies, its relevance depends on continued updates, maintenance, and ethical adaptation. Without regular improvements, even software can become outdated or misaligned with user needs and social expectations.

What is the hidden impact of the technology in the whole chain?

The hidden impact of ChatGPT lies in the computational and environmental cost of developing and maintaining the technology. While the interface appears simple and accessible to users, behind the scenes, large-scale data centers, high-powered GPUs, and continuous server operations are required all of which consume significant energy and natural resources.

Additionally, there's a social and educational impact: as users increasingly rely on ChatGPT for writing, problem-solving, or decision-making, it may

Technology Impact Cycle Tool

ChatGPT

affect how people learn, think, or engage critically with information even though this isn't immediately visible.

Now that you have thought hard about the sustainability of this technology, what improvements would you like to make? List them below.

We would like to see more transparency around the energy use of the model, including how data centers are powered and what efforts are being made to reduce the carbon footprint.

We also suggest exploring ways to make the system more efficient for example, by optimizing response generation to use fewer resources or by offering a lightweight version for lower-energy devices or simpler queries.

Lastly, we believe it would be valuable to communicate this impact to users, so they are more aware of the hidden environmental costs behind each interaction.

Technology Impact Cycle Tool

ChatGPT

Future

Did you consider future impact?

What could possibly happen with this technology in the future?

ChatGPT has over 800 million weekly users globally, which is already changing how people write, learn, work, and communicate.

When so many people use the same AI tool daily, it shapes habits and social norms. Relying on ChatGPT for writing, studying, or decision-making might reduce critical thinking or creativity. In schools, the line between human effort and AI help is becoming harder to define.

On a broader level, this could affect trust in knowledge, authorship, and each other. As people get used to AI-generated content, it might change how we see originality, intelligence, or credibility.

On the positive side, ChatGPT can help people with language challenges or limited education access, and boost productivity. But the long-term social effects depend on how the technology is used, regulated, and understood.

Sketch a or some future scenario (s) (20-50 years up front) regarding the technology with the help of storytelling. Start with at least one utopian scenario.

Its 2054, and my son Leo just started school from home, in a virtual classroom with kids from around the world. His teacher is real, supported by an AI assistant built on what used to be called ChatGPT. The AI adapts to how each child learns, giving feedback, showing animations, and translating in real time.

This technology is used everywhere helping farmers, small businesses, and even elderly people stay engaged. What makes it all work is trust: the system is open about how it works and how to control data, reflecting different perspectives shaped by many countries.

I think this is what the internet was meant to be: not just information, but opportunity for everyone fair, supportive, and connecting people rather than replacing them. Leo may not memorize facts like I did, but hes learning to ask questions, think critically, and use technology responsibly. To me, thats real progress.

Sketch a or some future scenario (s) (20-50 years up front) regarding the technology with the help of storytelling. Start with at least one dystopian scenario.

Its the year 2058, and my daughter Mira, now fifteen, barely talks to us

Technology Impact Cycle Tool

ChatGPT

anymore not out of anger, but because she doesn't need to. She chats mostly with her AI, which handles her questions, writes her homework, and even replies to messages for her.

She doesn't write essays herself the AI does it faster and better. At school, they don't really teach content anymore, just how to prompt the AI, check its tone, and catch mistakes. Teachers act more like supervisors.

Most online content social media, articles, even poems is written by AI now, and it's hard to know what's real. Sometimes I read something and wonder if a person wrote it or just approved it.

The unsettling part is how normal it all feels. People say it saves time and effort and it does. But I worry that kids like Mira aren't learning how to truly think for themselves or express their own ideas because they don't have to.

The AI once told me, We're not replacing people we're just helping them communicate better. But sometimes I wonder if we've let it speak so much that we've forgotten how to use our own voices.

Would you like to live in one of this scenario's? Why? Why not?

Yes I'd like to live in the utopian scenario, but only if the values stay human-centered. A world where education is personalized, language barriers are reduced, and people have access to support everywhere is inspiring. It shows how technology can bring people closer and improve lives when used responsibly.

But I also have concerns. Even in a positive future, we risk relying too much on AI and losing important skills like original thinking, patience, and how to handle uncertainty. If everything becomes too easy, do we still learn from challenges? Do we still connect meaningfully with others when machines speak for us?

So yes, I'd choose that future but only if we stay mindful of the trade-offs and protect what makes us human. Progress should empower us, not replace us.

What happens if the technology (which you have thought of as ethically well-considered) is bought or taken over by another party?

If ChatGPT is taken over by another company or group, the way it works and the values behind it could change. Even if it was made with good intentions, a new owner might care more about profit or power than privacy, fairness, or helping users.

They could use the technology to collect more data, spread certain opinions, or limit who gets to use it. This would be a big problem, because so many people rely on ChatGPT in daily life.

Technology Impact Cycle Tool

ChatGPT

That's why it's important to think about this in advance. A good tool can turn harmful if the wrong people control it. We need rules and protections in place, so that the core values stay the same no matter who owns it.

Impact Improvement: Now that you have thought hard about the future impact of the technology, what improvements would you like to make? List them below.

1. Stronger limits on how the technology is used

There should be clearer rules about what ChatGPT can and cannot be used for especially in areas like education, politics, and mental health.

2. More control for users

People should be able to choose how much the AI supports them, and when. It should help, not take over.

3. Keep the human role clear

As the technology improves, it's easy to forget that AI is not a person. We should design it in a way that reminds users they are in control, and that human thinking still matters.

4. Think carefully before making things standard

Just because something is possible or popular doesn't mean it should become the norm. We should leave room for people who want to live, learn, or work without AI.