# Ending the Capability Overhang

AI is advancing fast and countries must better use today's capabilities to close the gap

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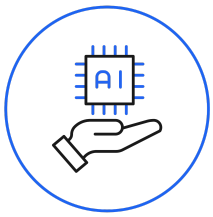
OpenAI




## A capability overhang is growing as innovation outpaces adoption

The history of general purpose technologies – from steam engines to semiconductors – suggests that the biggest economic gains come not from invention alone, but from turning new capabilities into scaled, everyday use. AI is advancing at unprecedented speed: the length of tasks it can perform has been doubling roughly every seven months, and progress does not appear to be slowing. In 2022, frontier models could reliably complete tasks that take human experts about 1 minute to complete; today, they can complete tasks that take human experts more than 30 minutes.[1] However, increased capabilities alone do not lead to productivity benefits or economic impact. To capture these benefits, countries, companies, and people need to fully use AI tools in real workflows to solve real problems.

As AI capabilities have improved, we see a widening "capability overhang," defined as the gap between what AI tools can do and how typical users are using them. This overhang increases as capabilities progress beyond simple chat to more sophisticated, multi-step workflows. The capability overhang is also associated with measurable productivity impact, as workers who use more advanced capabilities report higher time savings.[2] Across an economy, these gains compound, freeing people to tackle harder tasks, build new products and services, and accelerate innovation that raises growth and living standards.

At its core, this overhang reflects gaps not just in access but in agency. Access is the admission ticket: without it, people, organizations, and institutions can't participate fully in the AI era. Agency is what turns access into impact: the ability and incentive to deploy AI meaningfully in real work. When access and agency align, more people can participate not just as users of AI, but as active drivers of the growth it enables.

Addressing this capability overhang is central to people and countries realizing AI's full economic and social potential. It's also central to OpenAI's mission to ensure that artificial general intelligence benefits all of humanity, which means doing our part to close the gap between access and impact by expanding both the availability of AI tools and people's ability to deploy them effectively in real work. By enabling more people, organizations, and institutions to move from basic use to deeper, more capable

[1] METR (2025), Measuring AI Ability to Complete Long Tasks
[2] OpenAI (2025), State of Enterprise AI

workflows, we can help AI scale human ingenuity, drive productivity and growth, and create opportunity for people everywhere, not just a few early adopters.

ChatGPT usage data shows how large this overhang has become. To estimate how deeply AI capabilities are being used, we measure the amount of effort the model uses to respond to user queries, reflecting usage depth. When users ask more difficult and complex questions, the model typically spends more effort reasoning to produce a better answer. Counting reasoning tokens is a way of measuring this effort, and throughout this report we refer to this metric as "thinking capabilities." Task and tool usage are also important measures of capability adoption, reflecting both breadth and depth of AI capabilities.

**The typical power user uses 7x more thinking capabilities than the typical user.**[3] We also observe a clear country-level gap. Across more than 70 countries with the highest ChatGPT users, **leading countries use 3× more thinking capabilities per person than users in lagging countries.** Major economies like the United States and India lead in total users, and smaller high-income countries like Singapore and the Netherlands lead in population penetration. Still, advanced AI adoption is not confined to large or high-income countries, with nations like Vietnam and Pakistan ranking among the world's top users of agentic tools. Leading countries also use AI more deeply, with more than 2x higher per person usage of key tasks and advanced tools like data analysis, Apps (formerly Connectors), Codex and more.

### The "Capability Overhang" is creating a widening gap

*Measuring the amount of effort ChatGPT spends thinking in response to user queries*


This capability overhang will not disappear on its own and may even widen as some countries lead in applying frontier AI capabilities and others fall behind. AI can drive broad-based growth, but only if frontier capabilities are applied to help solve economically valuable problems. AI is for the Intelligence Age what electricity was for the later Industrial Age and the internet was for the Information Age, and countries that seize the opportunity will be ahead competitively, economically, and socially.

[3] Typical users are 50th percentile and power users are 95th percentile. All analysis related to "thinking capabilities" has been filtered to Plus plans to ensure a like-for-like comparison. See Methodology for more information.

Launched in 2025, OpenAI for Countries is our initiative to help governments put AI and its benefits into the hands of people around the world, aligned with local needs, institutions, and priorities. Now under the leadership of former UK Chancellor of the Exchequer George Osborne, we are expanding this work with new initiatives focused on education, health, AI skills training and certifications, cybersecurity, disaster relief, and startup accelerators. These offerings give nations a range of options for how to partner with us to address their needs and priorities. Taken together, they also offer a roadmap for unlocking AI's benefits for their citizens and economies by closing the capability overhang.

*All analyses in this report are based on de-identified, aggregated usage data. Message content was classified using automated systems, and no OpenAI employee reviewed individual user data as part of this analysis.*

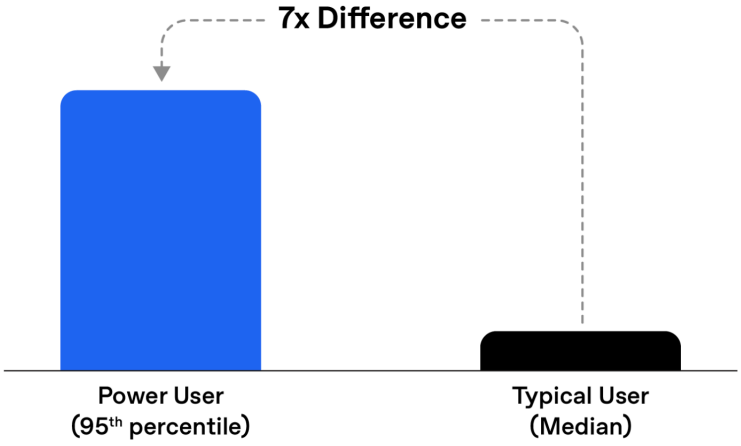
# The capability overhang is reflected by differences in the depth of usage

ChatGPT is the fastest-adopted technology in history, growing from 1 million users in 2022 to now more than 800 million weekly active users. AI's capabilities are advancing rapidly – yet its use is uneven and many are only just scratching the surface of what's possible. Measuring the gap between typical users and power users is a practical measure of the capability overhang.[4]

Despite paying for the same Plus plan, the typical power user (95th percentile) uses 7x more thinking capabilities than the typical user (median). This gap also persists at the message level, with power users requesting almost 3x more thinking capabilities per message than the typical user. This is a large gap and reflects the difference in how most people currently use ChatGPT. However, this measure understates the true size of the capability overhang. For example, the average OpenAI employee uses 15x more thinking capabilities per user and more than 5x more thinking capabilities per message than the typical Plus user.[5]

**The typical power user uses 7x more thinking capabilities than the typical user**

*Volume of thinking capabilities used per monthly active user, across Plus plans*




[4] While an imperfect proxy because it doesn't accurately measure the true capability ceiling of AI tools (unlike GDPval and FrontierMath benchmarks), it provides a grounded measure of the gap in how people are currently using ChatGPT today.
[5] This is a conservative estimate of OpenAI's depth of usage as it is limited to ChatGPT usage and does not include other tools such as APIs or Codex, the primary tools used among software engineers and researchers.

## The real-world impact of leveraging AI's capabilities

These differences are not abstract, and they show up clearly in how people actually use AI tools today, and in the real-world outcomes that follow when people and institutions are able to move beyond basic access to meaningful, everyday use.

### 🇳🇱 Dr. Fleurique Franke, General Practitioner, Netherlands

**About:** Dr. Fleurique Franke runs two clinics serving roughly 4,300 patients, and uses ChatGPT to modernize routine care while preserving the human connection at its core.

**Leveraging AI's capabilities**

- Facing a heavy daily load of patient consultations, she built custom GPTs to draft clear, patient-ready responses grounded in national guidelines, which she then reviews and personalizes. The approach saves her an estimated one-third of her time while improving the consistency and clarity of care.
- Franke also uses ChatGPT to tailor explanations to different reading levels across her patient population, from healthcare professionals to residents in supported living.
- Franke also uses ChatGPT to support nurse training by turning complex cardiovascular protocols into practical checklists.

**Impact:** By embedding AI directly into everyday workflows, her clinics deliver faster, clearer care while expanding capacity in a system under strain.

### 🇧🇪 Mark Jeffrey, IT professional, Belgium

**About:** For Mark Jeffrey, ChatGPT became a critical tool for navigating complex cancer treatment decisions. After his diagnosis in 2024, he began using ChatGPT to interpret lab results, translate medical reports across English, French, and Dutch, and understand side effects and treatment options when guidance from different clinicians was inconsistent.

**Leveraging AI's capabilities**

- Using ChatGPT to understand reimbursement rules, Jeffrey independently pursued an additional treatment that was not reimbursed domestically, arranging a prescription in Belgium and pickup across the border in Germany.
- He also used ChatGPT to structure exercise and nutrition during therapy, monitor side effects, and help inform other patients with clear explanations.

**Impact:** "My quality of life would be a lot lower," he says. In his case, AI did not replace clinical care, but expanded his ability to engage with it meaningfully.

## Methodology note

To enable a like-for-like comparison, we filtered results to only include ChatGPT Plus users who have standardized and automatic access to reasoning models and tools. This improves comparability but likely introduces some selection bias. For example, in lower-income markets, paying US$20/month is a larger share of income, so Plus users may be more intensive users than the average resident. We also apply minimum active-user thresholds to reduce the influence of very small samples.

However, these estimates are also conservative and likely understate the overall capability overhang. By focusing largely on ChatGPT Plus usage, we exclude the most advanced users (e.g., ChatGPT Pro) and capabilities available only via our API. Finally, "thinking capabilities" is only one proxy for depth; we also examine task mix and tool usage, and will continue improving measurement over time.

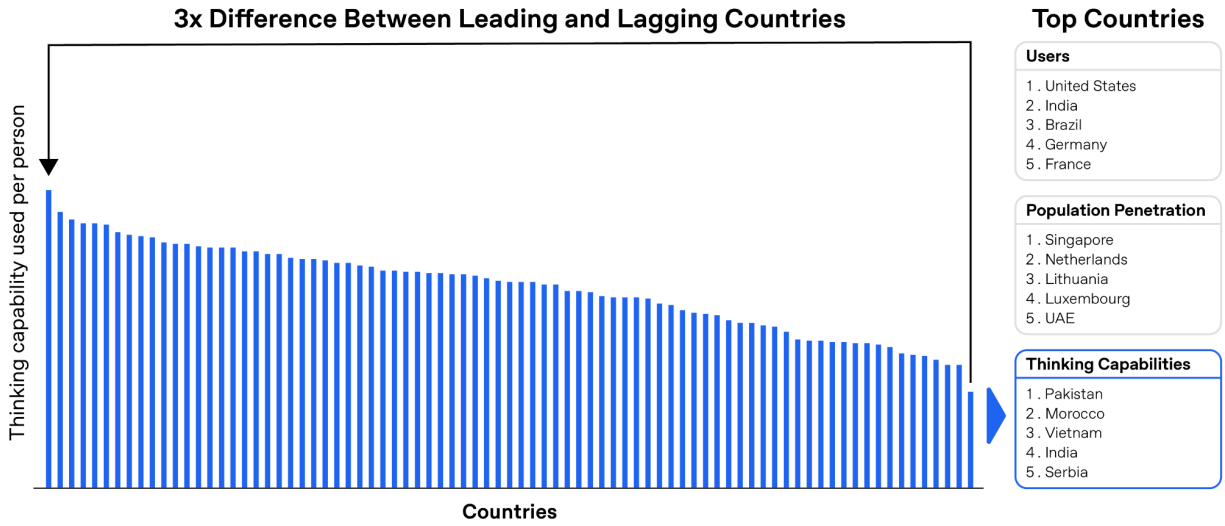
Comparing thinking capabilities across users and countries is only one measure of how deeply AI capabilities are being used, and OpenAI endeavors to provide better measurement of this gap going forward. Richer insights on the capability overhang can inform training and education initiatives that help more people benefit from what today's AI can already do.

Across more than 70 countries with the largest ChatGPT user bases, we also observe a clear country-level capability overhang. Leading countries use 3× more thinking capabilities per person than users in lagging countries. Major economies like the United States, India and Brazil lead in top users and smaller higher-income countries like Singapore and the Netherlands lead in population penetration. However, Pakistan, Morocco, and Vietnam have the highest average usage of advanced thinking capabilities, outpacing many wealthier economies.

These differences could reflect many factors — digital infrastructure and connectivity, access to devices, affordability, language coverage, education and digital skills, industry mix, and the availability of complementary tools and training.

## Leading countries use 3× more thinking capabilities per user than in lagging countries

*Volume of thinking capabilities used per monthly active user, Plus plans, by country*




Note: Thinking capabilities reflect the volume of reasoning tokens used by the median monthly active plus user. Filtering by plan improves comparability but likely introduces some selection bias where Plus user access represents a larger share of income. Limited to the top 70 countries with large samples.
Source: OpenAI usage data (2026)

To better understand the capability overhang across countries, we examine differences in the depth of AI use. We break out depth into two components:

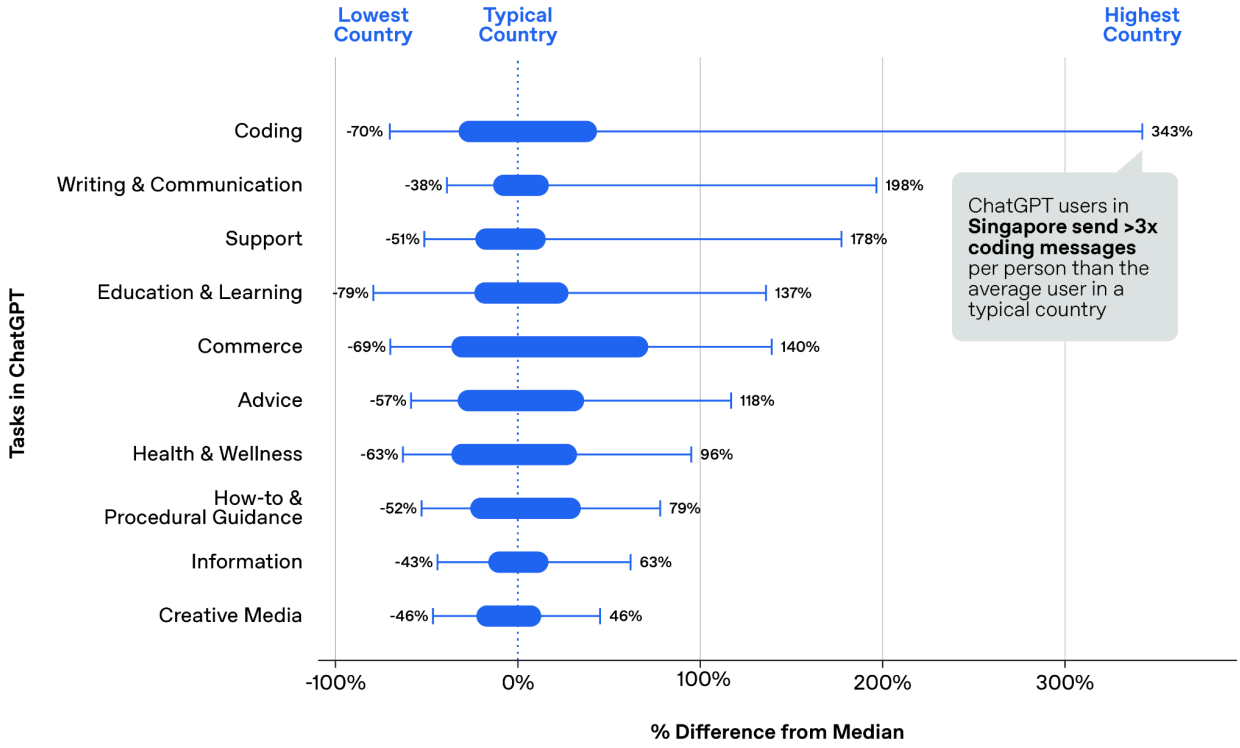
1. Task mix, i.e., how activity is distributed across task categories, such as writing/editing and coding.
2. Tool usage, i.e., the extent to which users adopt higher-capability tools, such as search and data analysis.

Differences along these two dimensions can explain cross-country divergence and specific areas of opportunity.

The chart below shows that cross-country differences are largest in coding, where the highest-usage country, Singapore, sends >3x more coding messages per person than the average user in a typical country. By contrast, more accessible categories like information and creative media have a smaller and more equal distribution, with leading countries only sending 46% more messages per user.

## The task-level gap is largest for coding and writing, between 2-3x

*Difference in relative messages per monthly active user by country, all users with accounts*




Note: Population includes all logged-in users since all users can access these tasks. Chart is indexed at the task level to the average number of messages sent, per monthly active user, in the median country.
Source: OpenAI usage data (2026)

Across countries, the biggest gains come when users move beyond basic chat into repeatable multi-step workflows, shifting from asking questions to delegating work. A recent survey of 9,000 workers across almost 100 enterprises found that reported time savings were correlated with the use of more advanced ChatGPT features like deep research, data analysis, and image generation.

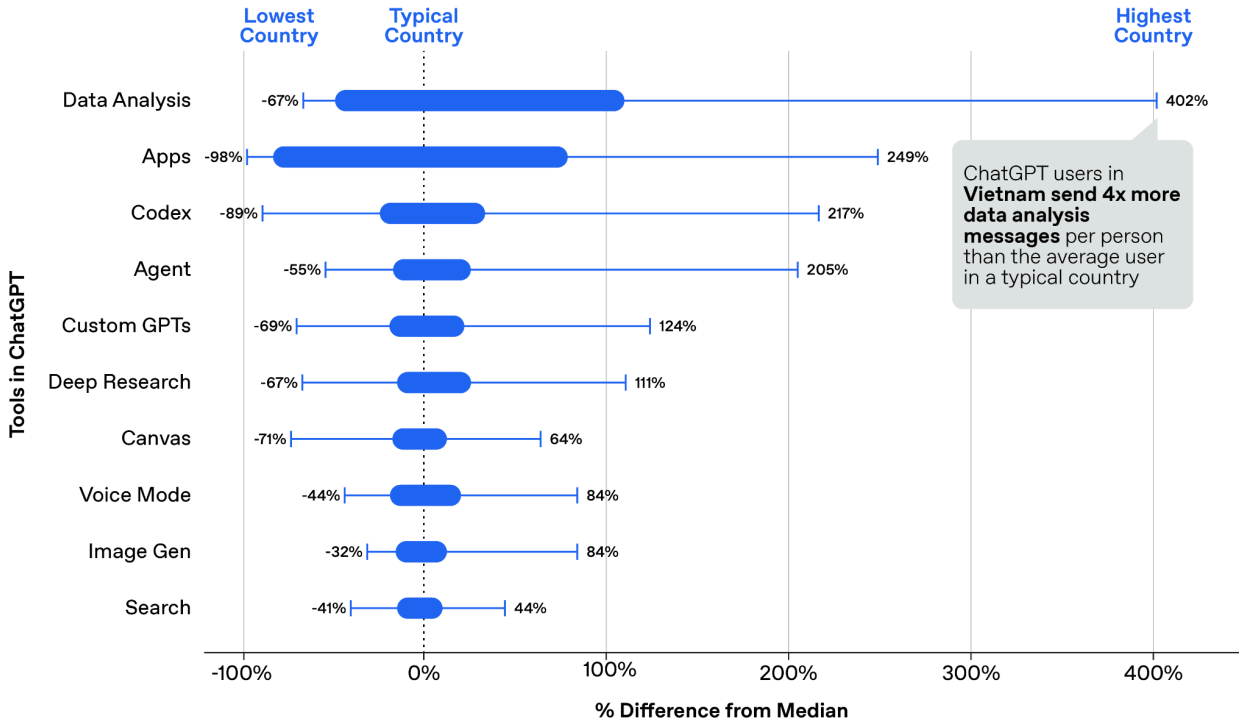
However, many users have not yet engaged with these higher-capability tools. Even among monthly active paying ChatGPT Enterprise users, 19% have never used data analysis, 14% have never used reasoning, and 12% have never used search.[6] This is despite popular benchmarks that demonstrate AI's proven capabilities to reliably solve a meaningful share of common knowledge worker tasks.[7]

[6] OpenAI (2025), State of Enterprise AI
[7] OpenAI (2025), GDPval. GDPval measures AI performance on 1,320 specialized tasks from 44 occupations selected from the top 9 industries contributing to U.S. GDP, and recent results from GPT-5.2 found that frontier models could complete approximately 70% of these tasks to the level of industry experts

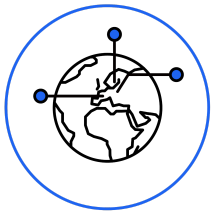
The tool-level gap is also broad across countries, with leading countries using advanced capabilities like data analysis, Apps (formerly Connectors), Codex, and Agent, between 2-4x more per person than the average user in a typical (median) country. Countries like Vietnam and Pakistan repeatedly appear among the top countries for agentic tool use, showing that frontier AI capabilities are not confined to high-income nations. Similar to tasks, more accessible tools such as voice mode, image gen, and search are much more evenly used, indicating a smaller capability gap.

## The tool-level gap is largest among the most advanced tools such as Data Analysis, Apps, Codex, and Agent

*Difference in relative tool use per monthly active user by country, Plus plans*




Note: Population filtered to Plus users to ensure a like-for-like comparison. Chart is indexed at the tool level to the average number of messages sent per tool, per monthly active user, in the median country. See Appendix for an explanation of ChatGPT's tools.
Source: OpenAI usage data (2026)



## Leading countries are seizing the opportunity to narrow the capability overhang

Most countries are still operating far short of what today's AI systems make possible. Simply by improving the quality and depth of adoption, moving from asking questions to delegating tasks, and from lightweight tools to advanced capabilities, countries have enormous headroom to raise productivity, improve public services, and strengthen competitiveness.

OpenAI for Countries is designed to accelerate that process. Over the past year, OpenAI has launched partnerships that stretch from Latin America to Europe, Asia, and the Middle East. These collaborations with governments and companies span five continents, reach countries with a total population of more than 350 million people and a combined GDP of around $15.4 trillion, and are a major step forward in building the foundation of the Intelligence Age.

Now, we're expanding these efforts with a new set of initiatives designed to make it easier for countries to work with us to meet their unique needs, and to bring AI's benefits to even more people around the world.

These offerings are designed to be practical, flexible, and shaped in ongoing discussions with our partners, and will help ensure that 2026 will be characterized by increasing enterprise adoption and impact:

- **Education**: OpenAI's Education for Countries initiative is designed to help governments bring AI into their universities and education systems in ways that strengthen learning and prepare students for the workforce. It combines large-scale access to advanced AI tools, research into AI's impact on education and learning, and training programs for both educators and students. The first set of partners includes Estonia, Greece, Jordan, Kazakhstan, Slovakia, Trinidad & Tobago, the United Arab Emirates, and Italy's CRUI[8].
- **National Startup Accelerators and the NextGen Program**: We're launching national startup accelerators and student programs that help countries grow AI-native companies and prepare the next generation of talent to become founders and connect with investors as they build and scale locally.

[8] National association representing Italy's university leaders, also known as the Conference of Rectors of Italian Universities.

- **AI Skills and Certifications**: We're expanding AI skills programs and certifications that help learners build practical, job-relevant capabilities recognized by employers, supporting countries as AI reshapes their economies. We will start with partners in a select number of markets in EMEA, Canada, Australia and the UAE with more to come in the following months.
- **Cyber Safety and Security:** We're launching a new offering to help governments protect people and public services from scams, fraud, and cybercrime. The program also helps public institutions develop and deploy their own AI-enabled systems to support these efforts.
- **Disaster Preparedness and Response**: We're exploring new partnerships that use AI to help governments prepare for, respond to, and recover from natural disasters. Governments define the problems they want to solve, and OpenAI works with public agencies and partners to apply AI in real-world emergencies. One such opportunity we are exploring is a partnership with K-water, South Korea's national water authority and a global leader in flood and drought control and water infrastructure. By pairing OpenAI's frontier AI with K-water's unparalleled data, expertise and infrastructure, we can build an intelligent, real-time water-disaster warning and defense system against the world's most devastating climate-driven water crises.
- **Health:** Building on the recent launch of ChatGPT Health (consumers) and ChatGPT for Healthcare (hospitals and clinics), we're working with ministries and health systems to identify and implement ways AI can help people better understand health information and support health systems as they deliver care at scale — with safety, privacy, and trust as core requirements.

### 11 countries around the world have already established partnerships as part of OpenAI for Countries

🇦🇷 **Argentina** – OpenAI for Argentina will establish new data center capacity to expand national compute access. The program supports public-sector modernization, workforce development, and digital entrepreneurship in Latin America's second-largest economy. Nearly one in five Argentines use ChatGPT weekly, a sign of how fast AI adoption is growing across the region.

🇦🇺 **Australia** – OpenAI for Australia will build sovereign AI capacity through a partnership with NEXTDC, which will develop an A$7 billion hyperscale AI campus and large-scale GPU supercluster in Sydney. The project will allow OpenAI's most advanced models to run securely onshore, supporting sensitive and mission-critical work across government, research, and national infrastructure. OpenAI is also partnering with leading Australian

employers and banks to deliver AI skills training to more than 1.5 million workers and 1.3 million small businesses nationwide.

🇪🇪 **Estonia** – Through OpenAI for Estonia, we've integrated ChatGPT Edu into every secondary school in the country. Over 60% of teachers use ChatGPT Edu weekly for lesson planning, grading, and creative instruction, providing students with equitable, safe access to frontier AI.

🇩🇪 **Germany** – Nearly every young adult in Germany now uses ChatGPT weekly, and usage has grown nearly fivefold in the past year. OpenAI for Germany will partner with SAP/Delos to make frontier AI tools available to government agencies through sovereign cloud infrastructure that meets the country's strictest standards for privacy, security, and legal oversight. The goal: give public servants more time to focus on people, not paperwork, and ensure that access and benefits are broadly shared.

🇬🇷 **Greece** – OpenAI for Greece is helping integrate AI directly into the national education system. Working with local ministries, we're piloting AI-powered learning programs and digital teacher training across the country. A new project will bring AI tools into classrooms nationwide, part of a broader strategy to make AI access as universal as public education. We also launched a Greek AI Accelerator Program – including OpenAI technology and credits; technical mentorship from OpenAI engineers and global experts; tailored workshops; and international exposure – to support a new wave of local founders building with AI.

🇮🇪 **Ireland** – OpenAI for Ireland builds on our European headquarters in Dublin and advances the Government of Ireland's ambition to make the country a leader in the safe and innovative use of AI. With more than 1 million weekly ChatGPT users, Ireland is already one of Europe's most dynamic digital economies and home to OpenAI's European headquarters. The initiative — designed and implemented in partnership with the Government of Ireland, Dogpatch Labs, and Patch — focuses on helping small businesses, founders, and young builders integrate AI into their work through hands-on training, practical workshops, and direct access to OpenAI experts. It will solidify Ireland's emergence as a home for world-class AI innovation.

🇮🇹 **Italy** – OpenAI's engagement in Italy focuses on workforce readiness and startup enablement. With over 6 million ChatGPT users, AI adoption is scaling rapidly across universities and regional business accelerators. A partnership with CDP Venture Capital's AI

Fund supports early-stage Italian AI startups with access to OpenAI technology, API credits, and mentorship. From fashion and advanced manufacturing to agritech, Italian entrepreneurs are adopting AI to strengthen one of Europe's most creative economies.

🇳🇴 **Norway** – Stargate Norway is OpenAI's first European infrastructure deployment, bringing clean, renewable compute powered by hydropower. This site anchors Europe's democratic AI network and supports regional developers building in Norwegian and Sámi. It will also provide research access for universities and create hundreds of skilled jobs. Norway's leadership shows how small democracies can shape global AI infrastructure.

🇰🇷 **South Korea** – OpenAI for Korea builds on the country's world-class digital infrastructure. More than 25 million Koreans use ChatGPT monthly, often for study, work, and creative projects. Universities and national labs are conducting joint research on AI for science and language preservation, while new compute capacity in partnership with Samsung and SK under Stargate Korea will power model development and innovation across industries.

🇦🇪 **United Arab Emirates** – Stargate UAE will be the largest AI infrastructure project in the Middle East. This partnership anchors the region's democratic AI rails, advancing Arabic-language model research and powering national education and training programs. More than 3.5 million residents already use ChatGPT to learn, create, and work more efficiently.

🇬🇧 **United Kingdom** – In partnership with the UK government, we announced an AI infrastructure project under OpenAI for the United Kingdom. The initiative will help establish sovereign AI capacity while expanding access for researchers, startups, and universities. With more than 20 million ChatGPT users and a thriving base of 400,000 developers, the UK is poised to drive responsible AI innovation across the democratic world. Educational programs are also helping secondary students learn to use AI responsibly and creatively.

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As part of OpenAI for Countries, a growing group of governments is also working with us to integrate AI into their national education systems. The first Edu for Countries partners include **Estonia**, **Greece**, **Italy's CRUI**, **Jordan**, **Kazakhstan**, **Slovakia**, **Trinidad & Tobago**, and the **United Arab Emirates**.

## The road ahead

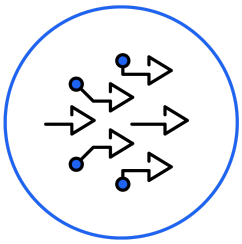
We're still at an early stage of what AI can deliver at national scale. In the months ahead, OpenAI for Countries will continue expanding these partnerships — working with governments, educators, entrepreneurs, and public institutions to turn AI into practical capability across healthcare and education systems, workforces, public services, and other essential national functions. They will help narrow the capability overhang and put AI into the hands of more people.

Our North Star is that AI should be treated as essential infrastructure, and that broad access to AI and its benefits is the best way to help people everywhere unlock their potential and shape their own futures. Like the combustion engine or electricity, AI can grow the economic pie by expanding people's ability to think, create, build, and produce. Through OpenAI for Countries, we're committed to working with partners around the world to do exactly that.

**About OpenAI**

Artificial intelligence is an innovation like electricity—it will change how we live, how we work, and how we engage with one another. OpenAI's mission is to ensure that artificial general intelligence benefits all of humanity. We're building AI to help people solve hard problems because by helping with the hard problems, AI can benefit the most people possible—through more scientific discoveries, better healthcare and education, and improved productivity. We're off to a strong start, creating freely available intelligence being used by more than 800 million people around the world, including 4 million developers. We believe AI will scale human ingenuity and drive unprecedented productivity, economic growth, and new freedoms that help people accomplish what we can't even imagine today.

***Cover image created with ChatGPT Images***



# Appendix

## OpenAI for Countries — In Their Words

🇦🇪 **Dr. Andrew Jackson, Group Chief AI Officer, G42** – "The UAE's approach to AI has always been rooted in openness, collaboration, and shared progress. At G42, we work with partners around the world to help build the foundations of an Intelligence Grid, one that enables AI to be developed and deployed responsibly, equitably, and at societal scale. Efforts like OpenAI for Countries are an important part of translating that ambition into practical outcomes for governments, economies, and the public."

🇩🇪 **Christian Klein, CEO of SAP SE** – "Applied AI is what truly creates value. As a Business AI company with decades of experience serving public sector organizations, we believe OpenAI for Germany represents a huge step forward. We're bringing together SAP Sovereign Cloud expertise with OpenAI's leading AI technology to pave the way for AI solutions that are built in Germany, for Germany."

🇬🇷 **Takis Theodorikakos, Greek Minister for Development** – "OpenAI for Countries opens up new opportunities for Greece to use AI to be more competitive, more productive, and more innovative. Our cooperation with OpenAI - a leading technology company - is yet another step toward the country's new productive model – a model based on innovation, openness, and the reduction of inequalities."

# Appendix

## ChatGPT tools explained

**Data analysis**: “From Raw Numbers to Real Insight.” Upload a spreadsheet/CSV and have ChatGPT surface patterns, create charts, and summarize takeaways.

**Apps in ChatGPT:** Previously known as “Connectors”. Connect to trusted apps and internal sources so ChatGPT can pull the right context on demand.

**Codex:** “Your AI Pair Programmer.” Draft, refactor, and debug code across your workflow to ship faster.

**Agent**: “Your AI on Autopilot—With You in Control.” Delegate multi-step tasks end-to-end (plan → execute → iterate), while you stay in charge of checkpoints.

**Custom GPTs:** “Build Your Own Expert.” Create custom assistants with your instructions (and optional Actions) for repeatable workflows.

**Deep Research**: “More Than Search—It’s Strategy on Autopilot.” ChatGPT reads across sources and produces a synthesized, cited report.

**Canvas**: “Work Side-by-Side with ChatGPT.” A visual workspace to co-write and co-edit (especially useful for long-form writing + coding workflows).

**Voice Mode**: “Talk It Out with ChatGPT.” Speak naturally for brainstorming, iterating, and hands-free workflows.

**Image Gen**: “Visuals in a Flash.” Turn text into images (mockups, diagrams, concepts) and iterate quickly.

**Search**: “Real-Time Answers Without the Tab Overload.” Pulls in up-to-date web information and summarizes it into an answer.