Ideas for **Europe** for the next **Five Years**

Democratic

Dynamic

Digital

Microsoft

Our mission is to empower every person and every organization on the planet to achieve more.

Microsoft

Democratic
Dynamic
Digital

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Ideas for Europe for the next Five Years

Protecting & Securing Democracy

Driving Innovation & Growth

Advancing Sustainability & Energy Resilience

Leading In Responsible AI

Enabling An Inclusive Workforce

OUR IDEA

An inclusive Europe that upholds the fundamental pillars of democracy, guarantees robust and fair elections, and addresses disinformation and foreign influence operations.

An open Europe that leads amid global challenges, leveraging technology and innovation for economic growth and competitiveness.

A Europe that leverages AI technology to advance sustainability and increase its energy resilience.

A Europe that decarbonizes its energy system through a multi-technology approach.

Europe as a global leader in responsible AI, in line with its values, striking the right balance between safety and security while fostering growth and innovation.

A Europe that cultivates an inclusive and diverse workforce that is highly skilled, digitally proficient, and prepared to harness the technological advancements shaping the future.

OUR APPROACH

Deploy advanced cybersecurity and AI tools to safeguard election processes, protect institutions and individuals, and foster a healthy information ecosystem.

Build and roll out transformative AI tools that power European industry and the SME ecosystem, fostering an innovative, sustainable, and resilient European economy.

Deploy AI solutions to measure, predict, and optimize complex systems and tackle challenges such as climate change, renewable energy production, and biodiversity loss.

Strive to enable a decarbonized electricity future for our company, our customers, and the world.

Develop AI responsibly, harnessing its power to address societal opportunities and challenges, and empowering Europe with safe, secure, and trustworthy solutions.

Empower Europe's workforce with innovative AI tools and help bridge the digital skills gap with educational programs and initiatives.

Nanna-Louise Linde,
Vice President of European
Government Affairs, Microsoft

Foreword

Empowering Europe through technology

In 2024, European citizens will vote in elections that will determine how the European Union tackles issues such as reinforcing our democratic values, responding to a changing geopolitical landscape, mitigating climate change, strengthening the economy, and embracing ever changing technology in our evolving world.

At Microsoft, we work closely with large and small European businesses, governments, and civil society, as well as the EU Institutions themselves. Our technologies touch the lives of millions of Europeans every day – including our nearly 20,000 employees in the region – and we share their hopes and concerns for the future. As the EU heads into this election year, I am proud to share our ideas for empowering Europe through technology in five key areas: protecting and securing democracy; driving innovation and growth; advancing sustainability and energy resilience; leading in responsible AI; and enabling an inclusive workforce.

Europe runs on **Democracy**. In the current geopolitical context, Europe can continue to serve as a model on the global stage, projecting and defending our fundamental values. New technologies can be tools for strengthening and modernizing democracy, but they are also a double-edged sword, and when misused they can pose a threat to the very same principles that we are trying to protect. Microsoft is committed to protecting our democratic foundations and ensuring the security and integrity of electoral processes. Our efforts include leveraging artificial intelligence (AI) in cyber-defense, as well as using technology to counter disinformation and foster an independent press.

Europe must remain **Dynamic** and increase its competitive edge to enable its green and digital transition. Microsoft is committed to actively supporting Europe in adopting and integrating cutting-edge technologies that can help redefine the region's economic landscape. Our commitment extends beyond innovation and economic growth as it encompasses bolstering Europe's energy resilience and accelerating progress towards reaching our climate targets. By collectively embracing forward-thinking solutions, we aim to contribute to a more sustainable and resilient future, aligning our efforts with Europe's broader vision for a prosperous and sustainable society.

Finally, the **Digital** transformation is crucial for Europe. This mindset has been consistently reinforced by the EU's 2030 Digital Decade targets. The key to enabling Europe's digital transformation is the increased adoption of AI and Cloud technologies, coupled with closing the digital skills gap. These are all areas where Microsoft has made commitments to ensuring digital development in Europe. This includes our work on democratizing AI, ensuring that it is developed responsibly, and that it is safe, secure, and accountable to the European public.

Microsoft stands for technology as a positive force in society and people's lives, in line with our **mission of empowering every person and organization to achieve more**. As we navigate the next five years towards 2030, we look forward to continuing to work closely with all our European stakeholders to help harness technology that enriches and empowers Europe.

01 Protecting & Securing Democracy

The 2024 European elections are part of a global election year in which over two billion people – from Europe, to India, to the United States and beyond – will cast their votes. But this all comes as democracy, including European democracy, is under pressure from cybersecurity threats, disinformation, and the weakening of trusted media ecosystems.

The **recent election influence report** by Microsoft's Threat Analysis Center paints a sobering picture: the world in 2024 will see multiple authoritarian states seek to interfere in electoral processes, combining traditional techniques with AI and other new technologies to threaten the integrity of electoral systems. This underscores the urgent need to strengthen digital defenses, preserving the openness, security, and resilience of democratic processes against foreign influence operations.

Microsoft is **committed to protecting democracy** against rapidly evolving digital threats. We are deploying advanced cybersecurity solutions, using AI to enhance cyber-defenses, and protecting high-risk, highly targeted individuals and institutions.

However, safeguarding democracy extends beyond cybersecurity. To flourish, **a democracy needs a thriving ecosystem of trustworthy information**. Aware that bad actors also use sophisticated AI to undermine trusted information sources, we are using AI and other technologies to empower individuals to identify and disseminate reliable and safe information, such as countering inauthentic content including deepfakes. Recognizing the media's importance in a democratic society, we also equip journalists and newsrooms with tailored tools. These resources help them fulfill their role as watchdogs and platforms for diverse voices, enabling public accountability of politicians and facilitating informed decision-making among citizens.

As we stand at this critical juncture, **our commitment to using our technology and teams to safeguard democracy is stronger than ever**. Partnering with governments, technology companies, and media organizations, we pledge to continue working hand in hand to ensure democracy's resilience in the face of ever-evolving digital threats.

European Spotlight

Democracy Forward Initiative

Microsoft's "Democracy Forward" initiative is designed to ensure the security of democratic processes, promote the health of the information ecosystem, and advocate for corporate civic responsibility. A cross-company team leads and coordinates efforts to partner with governments, non-governmental organizations, academics, political campaigns, and industry to protect democratic processes around the world.

Critical institution security

Protecting the critical infrastructure of the institutions that underpin democracy is key to maintaining operations and combating cyberattacks. Microsoft has developed toolkits which help to protect these institutions from sophisticated attacks. This includes AccountGuard, a cybersecurity threat detection and notification service, available in most European Union member states. Such toolkits add an extra layer of protection to high-risk, high-targeted organizations.

Combating foreign interference

Microsoft has developed AI-driven tools and is partnering with other actors in the ecosystem (e.g. Project Origin and the Coalition for Content Provenance and Authenticity (C2PA)). These tools aim to increase societal resilience against disinformation, bring additional transparency to the information ecosystem, and bolster societal resilience so that influence operations are less impactful on public opinion and less disruptive to democratic discourse and electoral processes. Upcoming features in Microsoft products include cryptographic provenance for AI-generated content, bolstering transparency and authenticity in the digital realm. Microsoft is also a signatory and active stakeholder to the EU's Disinformation Code of Practice (CoP), in which we co-chair a new "Generative AI" working group that looks at the impact of this technology on the spread of disinformation and how the CoP can effectively address this.

02 Driving Innovation & Growth

Digital innovation, especially in the field of AI, presents a unique opportunity for Europe to reshape its economy, increase its resilience, and improve its ability to compete. AI is projected to boost the economic output of European organizations and entrepreneurs by €2.7 trillion, or 20%, by 2030. With an accelerated growth in AI skills and digital innovation, this number could potentially increase by an additional €900 billion. Recognizing the magnitude of this opportunity, the EU aims for 75% of businesses across the region to utilize AI, cloud, and big data solutions by the decade's end.

Microsoft's approach aligns with the EU's growth trajectory, focusing on enabling a competitive European economy through the deployment of transformative AI tools.

At the heart of our approach is the development of robust partner ecosystems. **Our partnerships seek to empower European businesses, particularly SMEs and startups, which form the backbone of the European economy**, to drive economic growth, innovation, and job creation. Through our collaborations, we provide enterprises with advanced AI tools and resources, enabling them to increase efficiency, optimize operations, create new business models, and compete on a global scale. This not only fortifies the European economy against current and future challenges, but also accelerates Europe's twin transition towards a greener and more digital future by offering groundbreaking solutions to environmental challenges.

Supportive regulatory frameworks are essential in reaping the benefits of AI, especially in key sectors like automotive, manufacturing, energy, healthcare, and transport and logistics. We encourage European policymakers to continue to strike the right balance between encouraging innovation and regulating against potential harms. This is vital for creating an environment that is not only conducive to technological advancements but also preserves European values and the integrity of the EU Single Market.

Importantly, Europe's journey towards growth and competitiveness requires collaboration **with likeminded, trusted partners**, particularly the United States. Stronger transatlantic cooperation, grounded in shared democratic values and the responsible use of technology, will benefit both sides of the Atlantic. By working together to define principles for standards and rules in areas such as AI, data transfers, digital trade, and technology supply chains, the US and the EU can grow stronger together in the face of the challenges of a changing world where technology plays a critical role.

European Spotlight

Strategic partnerships with European businesses

Mercedes-Benz and Microsoft collaborate to boost efficiency, resilience and sustainability in car production: Mercedes-Benz is leveraging Microsoft Cloud to connect its global car plant network, improving process efficiency and supply chain management. With enhanced AI and analytics, they intend to quickly resolve supply issues and increase sustainability. This initiative is part of Mercedes-Benz's goal to boost production efficiency by 20% by 2025, crucial for its transition to an all-electric future.

Strategic partnerships with European businesses

Novo Nordisk uses Microsoft AI to accelerate drug discovery and development. Microsoft's computational services, AI, and cloud are combined with drug discovery, development, and data science capabilities which enable faster and scaled uses of AI in drug discovery. Thanks to this collaboration between Novo Nordisk and Microsoft, AI models can automatically summarize and assess information from various sources such as patents, scientific reports, and literature. Another case involves developing models to forecast an individual's risk of developing atherosclerosis. Ultimately, the use of AI leads to more breakthrough innovations and efficiency gains to better serve the needs of patients.

Successful partnerships with European SMEs & startups

Danish start-up O2matic has developed AI-based technology to automate oxygen therapy: Over 328 million people annually suffer from chronic obstructive pulmonary disease (COPD). Utilizing Microsoft Azure, O2matic has built an AI system which automatically adjusts oxygen levels based on the patient's needs, measured through a pulse oximeter. This technology, especially beneficial during the COVID-19 pandemic, has eased the burden on hospitals and allowed COPD patients to receive more tailored and efficient oxygen therapy at home. The AI-enabled device not only improves patient care by maintaining optimal oxygen levels but also provides real-time data to healthcare professionals, enhancing treatment effectiveness and potentially improving patients' quality of life.

03 Advancing Sustainability & Energy Resilience

The pace and scale of change needed to meet the EU's climate goals is unprecedented. Against a backdrop of geopolitical challenges, as well as energy and material dependencies, Europe's implementation of the Green Deal is charting a path towards greater sustainability and strategic self-reliance.

Microsoft is dedicated to supporting Europe's journey towards achieving these interconnected goals through the deployment of cutting-edge AI solutions. Additionally, we bolster Europe's efforts with our commitments to renewable energy and carbon removals by creating a market fit for those technologies.

AI technologies help advance sustainability by offering three key capabilities: First, they help measure, predict, and optimize complex systems, making it possible to manage critical challenges like combating climate change, reducing water leaks, managing wildfires, or tracking biodiversity, which are often too intricate for conventional analysis. Second, AI accelerates the development of sustainable solutions, such as enhanced efficiency of business operations, as well as game-changing breakthroughs including low-carbon materials to better capture solar power, renewable energy production, or climate-resilient crops. Finally, AI empowers the workforce by providing streamlined access to vast information resources and enhancing its ability to design, drive, and track progress toward sustainability goals.

However, to ensure that AI has an overall positive impact on accelerating sustainability, we have to manage its carbon footprint. Microsoft is proactively working to reduce the energy consumption of our infrastructure and find new efficiencies in energy use, while also shifting towards renewables. Reducing our consumption also necessitates investing in modernizing and decarbonizing power grids, which involves both upgrading existing grids to welcome the diverse clean energy sources currently available and intensifying efforts to boost clean energy production. This includes expediting clean energy grid interconnections within and across Member States. Additionally, leveraging digital technology is key for managing, optimizing, and safeguarding the grid, ensuring efficient distribution and resilience against various challenges.

Embracing digital transformation is key for a successful green transition. The EU should enhance its sustainability efforts by incorporating AI as a tool for evidence-based policymaking. This approach can significantly contribute to achieving climate goals by modelling the potential carbon reduction impact of specific policies. Moreover, AI's potential to assist different sectors in reducing carbon emissions is an important factor for EU policymakers to consider. This includes not only the potential benefits but also the necessary preconditions for effective implementation, ensuring a comprehensive and pragmatic approach.

Accelerating Sustainability with AI: A Playbook.

Microsoft has developed a 5-point plan for governments, businesses, and civil society organizations to leverage AI to accelerate progress on a variety of climate and environmental challenges that the world is facing. This includes investing in AI to expedite sustainability solutions, developing digital and data infrastructure for the inclusive use of AI for sustainability, minimizing resource use in AI operations, advancing AI policy principles and governance focused on sustainability, and building workforce capacity to leverage AI for sustainability. These steps will ensure AI's transformative impact in addressing critical bottlenecks, fostering innovation, and accelerating progress towards sustainability goals, while being inclusive, efficient, and governed by sound principles.

European Spotlight

Building innovative green energy solutions

Ørsted, a Danish leader in offshore wind energy, is shifting from fossil fuels to renewables, aiming to bring power to more than 30 million people by 2025. The company has reduced coal usage by 82% and plans to eliminate it by 2023. Using Microsoft's AI and analytics, Ørsted optimizes maintenance for its 1,300 turbines and enhances employee productivity, aligning with their vision for a green-energy future and a shared mission with Microsoft for a sustainable world.

Building innovative green energy solutions

Vestas Wind Systems, a leading wind turbine manufacturer, has partnered with Microsoft to generate more energy. Using AI and high-performance computing, they developed a proof of concept for wake steering, a technique to increase energy capture from wind turbines.

A woman works in Vesta's blades factory in Nakskov, in south Denmark (Photo courtesy of Vestas)

Ensuring Sustainability Reporting Readiness

As ESG reporting expands and we shift from voluntary to regulatory reporting, we know that data management will become increasingly important. Microsoft is committed to sharing our experiences with customers and partners, offering solutions such as Microsoft Cloud for Sustainability and Microsoft Sustainability Manager. For instance, Microsoft Cloud for Sustainability is building AI into many of our products and solutions to help customers quickly perform advanced analytics and generate detailed, actionable insights.

04 Leading In Responsible AI

Europe has the opportunity to foster and embrace AI's immense potential to drive innovation, productivity, global competitiveness, and help address societal challenges. In an era marked by rapid technological change, Europe can demonstrate both innovation leadership and responsible AI development that will encourage the investment and economic growth vital to European prosperity.

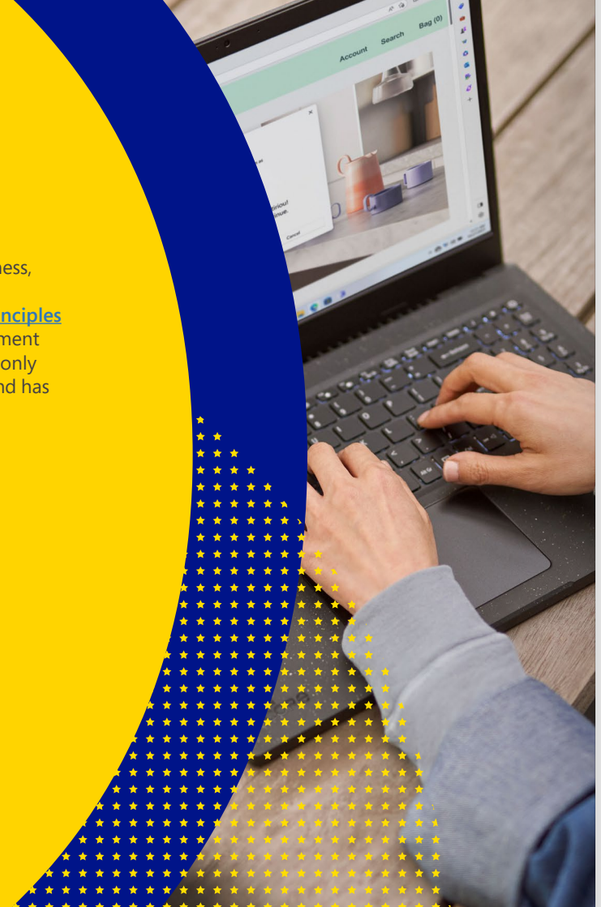
Microsoft is committed to developing and deploying AI in a safe and responsible way. We believe that industry, academia, civil society, and governments need to collaborate to advance the state-of-the-art and learn from one another. Together, we need to answer open research questions, close measurement gaps, and design new practices, patterns, resources, and tools. Having long called for responsible regulation of AI, especially for the highest risk use cases and most advanced models, we support the objectives of the AI Act - the world's first set of comprehensive and binding rules for governing AI. **Effective regulation can help manage the potential risks and encourage responsible innovation** and AI uptake in Europe. In the implementation phase, European leaders and policymakers must find the right balance to realize the benefits of this powerful new technology while safeguarding core European values.

AI – like many technologies – is and will be developed and used across borders, making a globally coherent approach to AI governance vital. There is potential for broader international collaboration with the US, G7 members, India, and Indonesia, to align on shared values and principles for AI. Efforts to harmonize AI regulations across different countries will help ensure consistent standards and practices worldwide, facilitating global innovation while mitigating risks. In the interim, public-private partnerships can accelerate progress with greater focus and care, ensuring responsible AI governance has an impact today.

European Spotlight

Developing AI responsibly

Microsoft's approach to responsible AI is grounded in fairness, reliability and safety, privacy and security, inclusiveness, transparency, and accountability. These Responsible AI Principles are not just guidelines; they are integral to our AI development process across the company, ensuring our technology not only meets regulatory standards but is responsible by design and has a positive impact on society.



Developing AI responsibly

Building on these, we have created our Responsible AI Standard, a set of goals, requirements and practices designed to help our engineers identify a wide range of AI risks and mitigate them effectively. We continue to update our Responsible AI Standard in light of evolving regulatory requirements, AI uses, and new risks, making it more concrete, actionable, and easier to integrate into existing engineering practices.

In June 2022, we published the latest version of the Standard to share what we have learned so far, invite feedback, and contribute to global discussions on building better AI norms and practices. We have also proposed strong guardrails to protect citizens, governments, and businesses across Europe, which we highlight in our whitepaper, ***Advancing AI governance in Europe and internationally.***

We will continue to contribute to the development of responsible AI technologies. Whether it's unlocking opportunities in healthcare, improving education, or enhancing business efficiency and sustainability, our goal is to leverage AI as a catalyst for positive change.

05 Enabling An Inclusive Workforce

Europe is navigating the dual challenges of rapid technological change and a growing digital skills gap. Putting people at the center of digital transformation is foundational to the EU's vision for the Digital Decade. Boosting digital skills among Europeans remains critical to Europe's competitiveness and achieving its digital goals. Yet, the EU is on track to miss its goal of achieving basic digital proficiency for 80% of its population by 2030, with a projected shortfall of 21%. Similarly, the ambition to have at least 20 million ICT professionals employed in the EU will fall short as predictions anticipate only 12 million ICT professionals in the region by 2030.

As Europe strives to foster a diverse and inclusive workforce that is not only highly skilled but also adept at harnessing the transformative power of technology, Microsoft is committed to contributing to these efforts by providing skilling and educational programs and tools to help enhance Europe's talent pool and bridge the skills gap.

AI has tremendous potential to empower Europeans, but only if they acquire the skills to use it effectively. The rapid pace of technological advancements underscores the importance of continuously upskilling both current and future workers. This is essential to empower individuals to succeed in an ever-changing digital economy.

Microsoft's programs are designed to provide accessible and inclusive learning opportunities, which enhance workers' skills to seamlessly take advantage of new technologies in professional environments. Additionally, we focus on equipping teachers and trainers with the necessary resources to confidently incorporate AI into education, thereby enriching teaching and learning experiences.

Recognizing the untapped potential of people with disabilities, we strive to unlock this talent pool for a more inclusive economy. **Prioritizing accessibility in AI tools not only fosters responsible deployment but also broadens the talent base, fueling innovation**. Our approach aims to build accessible workplaces and reduce the employment gap for those with disabilities.

We call on EU policymakers to create a policy framework that focuses on expanding access to AI and digital literacy resources, investing in workforce development and providing increased support for employers, particularly small and medium-sized enterprises, to facilitate employee training.

European Spotlight

AI Skills Development

Through Microsoft's **AI Skills Initiatives**, we are helping people and communities around the world learn how to harness the power of AI. This will not only help advance individuals but also serve as a catalyst for innovation, benefiting industries from healthcare to finance and beyond, as we prepare the European workforce for the technology-driven landscape of tomorrow. LinkedIn and Microsoft are also offering the first professional certificate on generative AI in the online learning market available for free through 2025 to ensure widespread access to the skills and knowledge necessary to seamlessly incorporate this technology into individuals' personal and professional lives.

Microsoft AI School by Simplon

Over five years, this program has successfully established a network of schools in France providing AI education, significantly contributing to the upskilling of the European workforce in the high-demand field of AI. Microsoft and Simplon (a network of social digital factories that offer free, intensive courses in digital professions) have run 52 training programs dedicated to AI and have trained 1,200 underserved people and long-term unemployed who have been subsequently hired.

Expanding Europe's cybersecurity talent pool

At Microsoft, we were encouraged by the launch of the EU Cybersecurity Skills Academy - which aims to increase the number of European professionals trained in cybersecurity - and have ourselves committed to contribute with our expertise and resources to help diversify the EU cyber workforce and train 100,000 European learners over a two-year period.

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