Playing the Long Game

Can Switzerland lead the way in generative AI?

Contents

Executive Summary

Disruption provides opportunity
Half of Swiss executives believe their companies are well-prepared to harness the opportunities presented by technological disruptions, with generative AI (gen AI) being a primary driver today. Our research indicates that Switzerland is third worldwide in terms of the impact of generative AI on work time. This technology could significantly boost the Swiss economy, potentially unlocking an additional CHF 92 billion of economic value by 2030 under what we refer to as a "people-centric" scenario.

Switzerland will need to take a people-centric approach
To seize the economic opportunity, the Swiss workforce needs to be prepared. Accenture's analysis of the Swiss workforce and its tasks reveals that 45% of work time in Switzerland is highly likely to be impacted by gen AI. This transition, however, is viewed not as a threat, but as an opportunity to enhance productivity, particularly within financial services.

Revenue opportunities, rather than mere productivity increases
Generative AI has the potential to do more than just boost productivity. In Switzerland, 91% of executives believe gen AI will have a greater impact on revenue growth than reducing costs. The optimistic outlook bodes well for Swiss companies, as evidenced by the proactive steps taken by Helvetia, Roche, Novartis, Givaudan, ABB, and Swisscom.

Switzerland is a top innovative country, having been ranked first in the WIPO Global Innovation Index for the last 13 years. Its talent is recognized, too: Switzerland has ranked first in the INSEAD Global Talent Competitiveness Index for the last ten years.

Challenges remain

To become a global leader in generative AI, Switzerland needs to address key challenges in three areas: enterprise, workforce, and regulatory readiness. Top Swiss companies have room to increase their use of AI. Only a small portion of Swiss companies are currently scaling gen AI initiatives and expect to take longer compared to what global peers believe. Swiss workers, meanwhile, are highly open to gen AI. They recognize its value and are willing to acquire new skills. Still, while their optimism is evident, they maintain a cautious stance on job security, work quality, and overall well-being.

The regulatory focus on AI has dramatically increased globally in the last decade. Swiss policies largely align with the OECD principles, although not completely. This has led to an ongoing and dynamic public debate within the federal parliament, as shown by how frequently generative AI was discussed between 2019 and February 2024.

Clear action points for Swiss companies

Five imperatives for Swiss companies to scale gen AI throughout their organization are: leading with value; understanding and developing an AI-enabled secure digital core; reinventing talent and ways of working; closing the gap on responsible AI; and driving continuous reinvention.

Ideas for Swiss policymakers

Starting from a position of strength, there are some further ideas to allow the country to capture the full benefits of gen AI, including defining a strategic vision for gen AI, fostering international collaboration, enhancing role transition mechanisms, strengthening the dialogs and oversight on the AI/gen AI revolution, and supporting gen AI literacy in society.
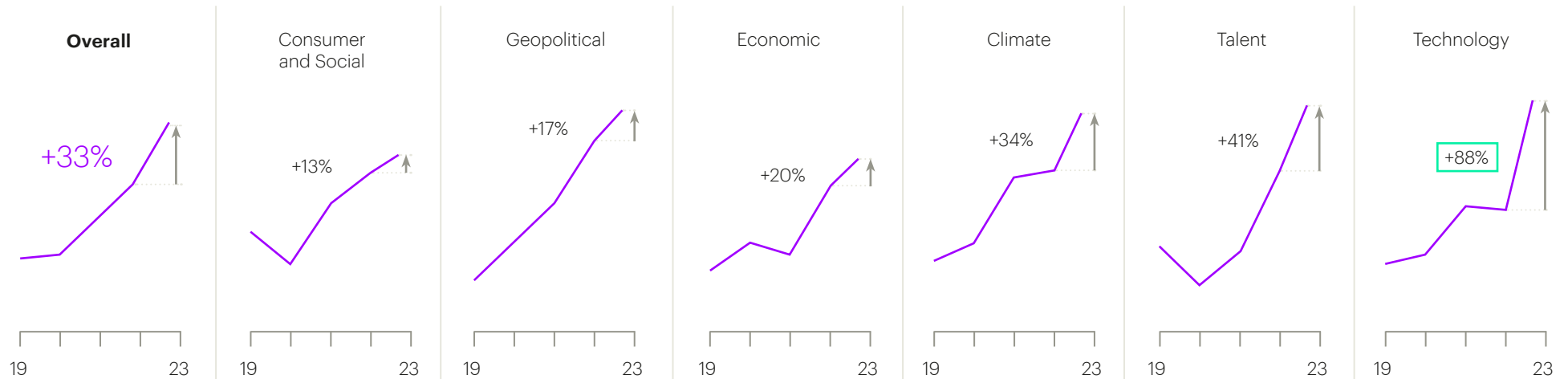
Switzerland truly has a world of opportunity ahead!

01

Generative AI Can Have a Profound Impact on the Swiss Workforce and Economy

Disruption is on the rise and is driving the need for reinvention

Disruption has become a prominent force in today's business landscape, compelling organizations to adapt and reinvent themselves to stay competitive. The Accenture Pulse of Change Index measures disruption across various categories, including consumer, social, geopolitical, economic, climate, talent, and technology categories. The indexed scores from 2019 to 2023 reveal a significant increase in technology disruption, primarily driven by advancements in generative AI. This highlights the urgency for businesses to embrace innovation and reinvent their strategies to navigate the evolving landscape effectively.

Accenture Pulse of Change Index
Indexed score, 2019–23

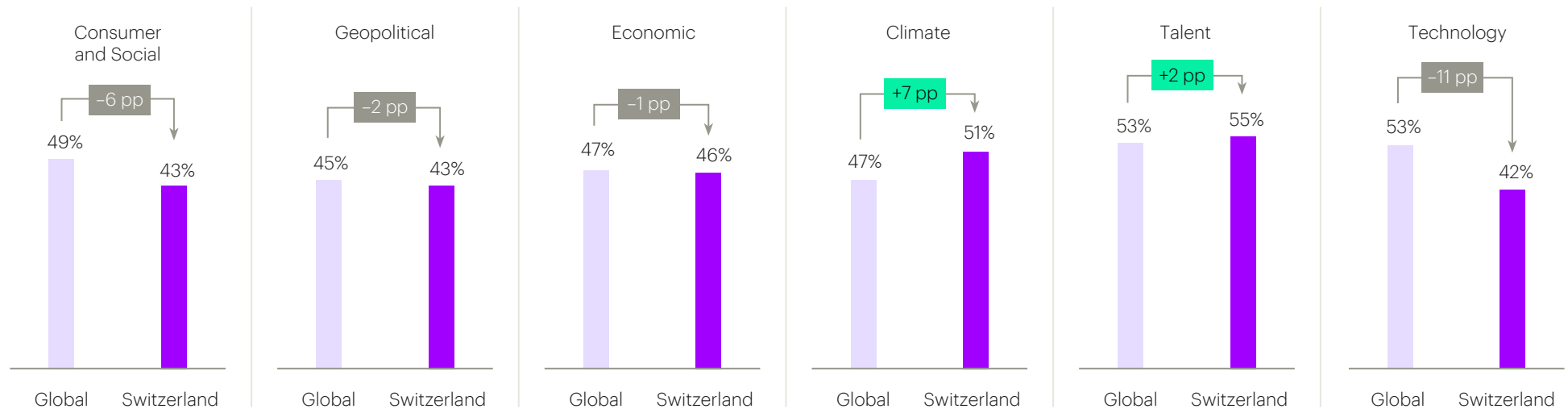| Overall	Consumer and Social	Geopolitical	Economic	Climate	Talent	Technology
+33%	+13%	+17%	+20%	+34%	+41%	+88%
19 — 23	19 — 23	19 — 23	19 — 23	19 — 23	19 — 23	19 — 23

Source: Accenture Pulse of Change Index 2024. Overall measure of disruption is based on the average of the six sub-components, each of which are based on a set of indexed scores of a set of indicators.

Only one in two Swiss executives feels prepared for the multifaceted disruption ahead, with technology readiness trailing behind.

Preparing for disruption is crucial for organizations to thrive in an ever-changing environment. The data shows that only about half of Swiss executives feel "very prepared" to tackle the multifaceted disruption ahead, particularly in technology. This indicates a need for organizations to enhance their readiness by investing in technology adoption, upskilling employees, and fostering a culture of innovation.

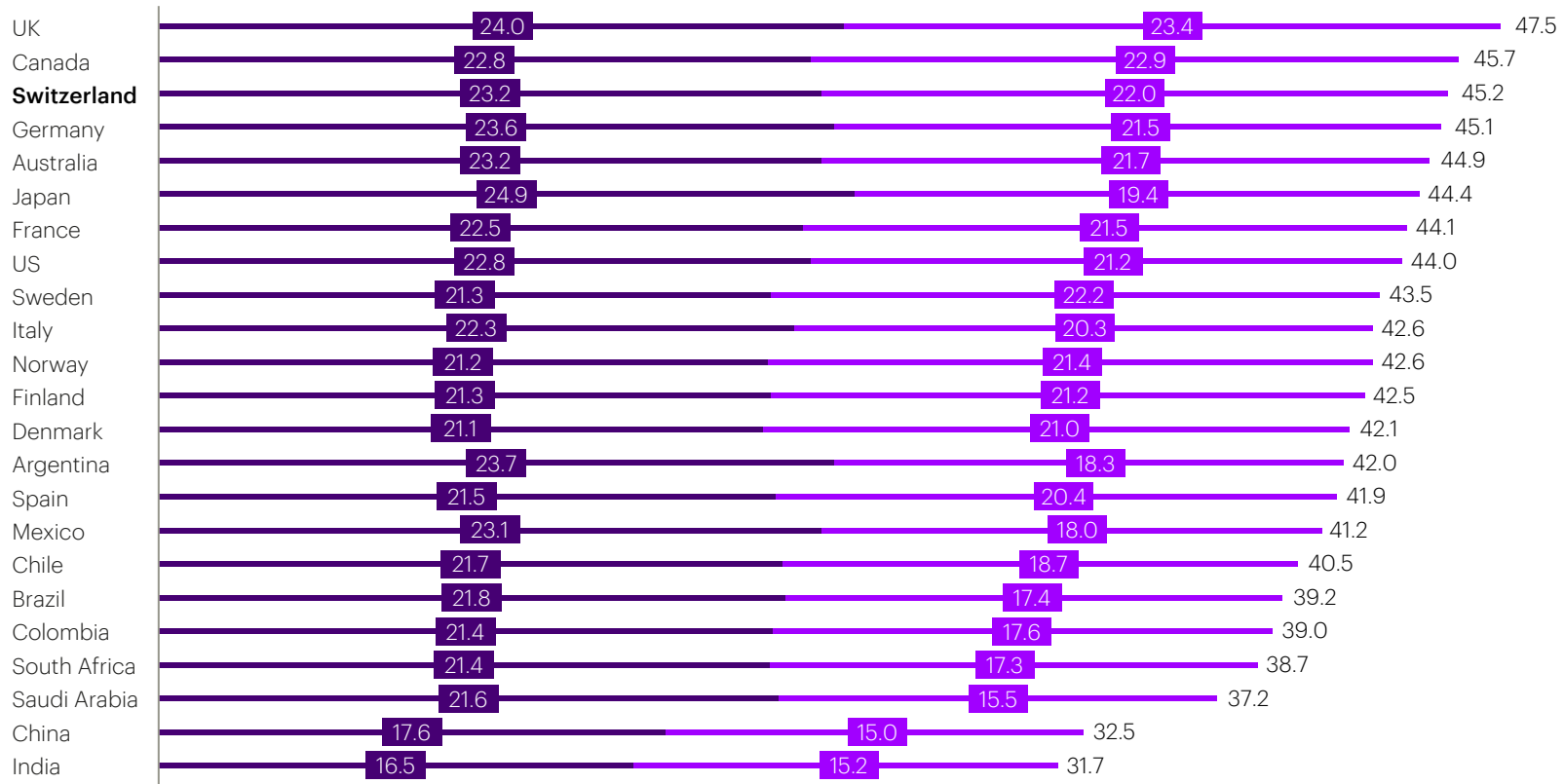## Level of preparation of companies for different types of disruption
(% of respondents saying they are "very prepared")

Consumer and Social
−6 pp
Global 49%
Switzerland 43%

Geopolitical
−2 pp
Global 45%
Switzerland 43%

Economic
−1 pp
Global 47%
Switzerland 46%

Climate
+7 pp
Global 47%
Switzerland 51%

Talent
+2 pp
Global 53%
Switzerland 55%

Technology
−11 pp
Global 53%
Switzerland 42%

Source: Accenture Pulse of Change 2024. Global N = 3450; Switzerland N = 100

Proportion of working hours in scope to be either automated or augmented by gen AI

Working hours in scope for ■ automation ■ augmentation

Country	automation	augmentation	total
UK	24.0	23.4	47.5
Canada	22.8	22.9	45.7
Switzerland	23.2	22.0	45.2
Germany	23.6	21.5	45.1
Australia	23.2	21.7	44.9
Japan	24.9	19.4	44.4
France	22.5	21.5	44.1
US	22.8	21.2	44.0
Sweden	21.3	22.2	43.5
Italy	22.3	20.3	42.6
Norway	21.2	21.4	42.6
Finland	21.3	21.2	42.5
Denmark	21.1	21.0	42.1
Argentina	23.7	18.3	42.0
Spain	21.5	20.4	41.9
Mexico	23.1	18.0	41.2
Chile	21.7	18.7	40.5
Brazil	21.8	17.4	39.2
Colombia	21.4	17.6	39.0
South Africa	21.4	17.3	38.7
Saudi Arabia	21.6	15.5	37.2
China	17.6	15.0	32.5
India	16.5	15.2	31.7

Switzerland is the third most exposed country to generative AI, with 45% of work time highly likely to be impacted.

Note: Estimates are based on Human+Machine identification of work tasks exposure to impact of generative AI. For details see the methodological notes in the appendix.
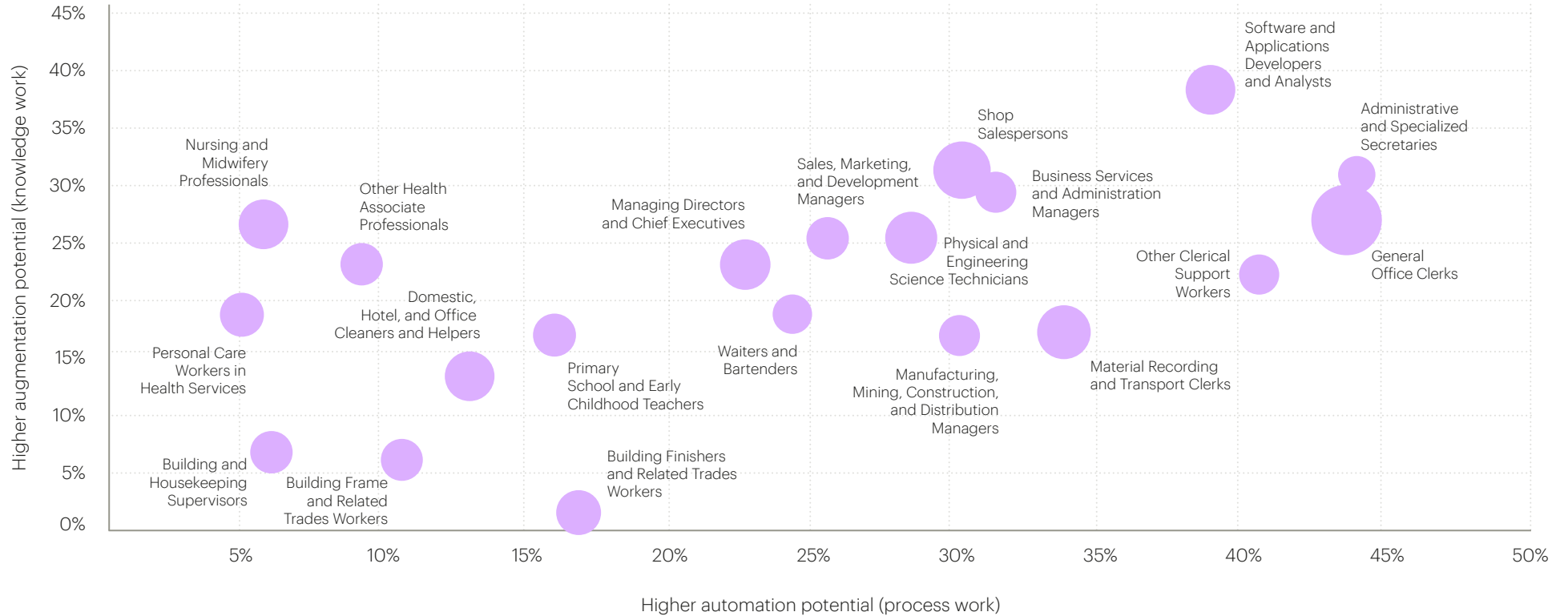
Source: Accenture Research based on National Statistical Institutes and O*Net.

Work roles will be transformed in different ways and to different degrees, depending on the specific nature of tasks and the time that each task takes.

Exposure to generative AI for top 20 occupations in Switzerland
Percentage of working time by role

Higher automation potential (process work)

Higher augmentation potential (knowledge work)

Software and Applications Developers and Analysts

Administrative and Specialized Secretaries

Shop Salespersons

Nursing and Midwifery Professionals

Sales, Marketing, and Development Managers

Business Services and Administration Managers

Other Health Associate Professionals

Managing Directors and Chief Executives

Physical and Engineering Science Technicians

Other Clerical Support Workers

General Office Clerks

Domestic, Hotel, and Office Cleaners and Helpers

Personal Care Workers in Health Services

Waiters and Bartenders

Primary School and Early Childhood Teachers

Manufacturing, Mining, Construction, and Distribution Managers

Material Recording and Transport Clerks

Building and Housekeeping Supervisors

Building Frame and Related Trades Workers

Building Finishers and Related Trades Workers

Bubble size
Number of employees in Switzerland
150K
75K
10K

Note: Estimates are based on Human+Machine identification of work tasks exposure to the impact of generative AI. For details, see the methodology notes in the appendix.

Source: Accenture, Federal Statistical Office of Switzerland, and O*Net.

Case Study
The office clerk's apprenticeship

Focusing on the worker of the future
Switzerland revamps its commercial apprenticeship program

In the wake of rapidly advancing artificial intelligence, traditional models of vocational training face unprecedented challenges, with companies potentially preferring to turn to generative AI rather than hiring apprentices.

The concept of apprenticeship needs to undergo a profound transformation, as this development risks marginalizing the human element of learning and innovation. In the long term, this shift could lead to a widening skills gap, where the workforce lacks essential problem-solving and creative thinking skills.

Switzerland has taken a proactive stance to address this problem by rejuvenating the basic vocational training programs such as the "Kauffrau/Kaufmann EFZ" and "Kauffrau/Kaufmann EBA" programs. Both have been updated to optimally prepare young businesspeople for the changing world of work and the future of commerce.[1] The commercial apprenticeship (KV) in Switzerland is notably popular, with 12,000 apprenticeships annually accounting for almost a fifth of all young professionals starting their training across roughly 250 recognized professions.[2]

Schools and companies are equally involved, with trainees benefiting from learning at school, at companies, and through inter-company courses. What's more, teaching centers on a hands-on approach. For example, while vocabulary tests are still necessary, that knowledge is immediately taken further, interwoven into professional situations, practiced with fictitious customer conversations, and consolidated in training units and practical assignments.
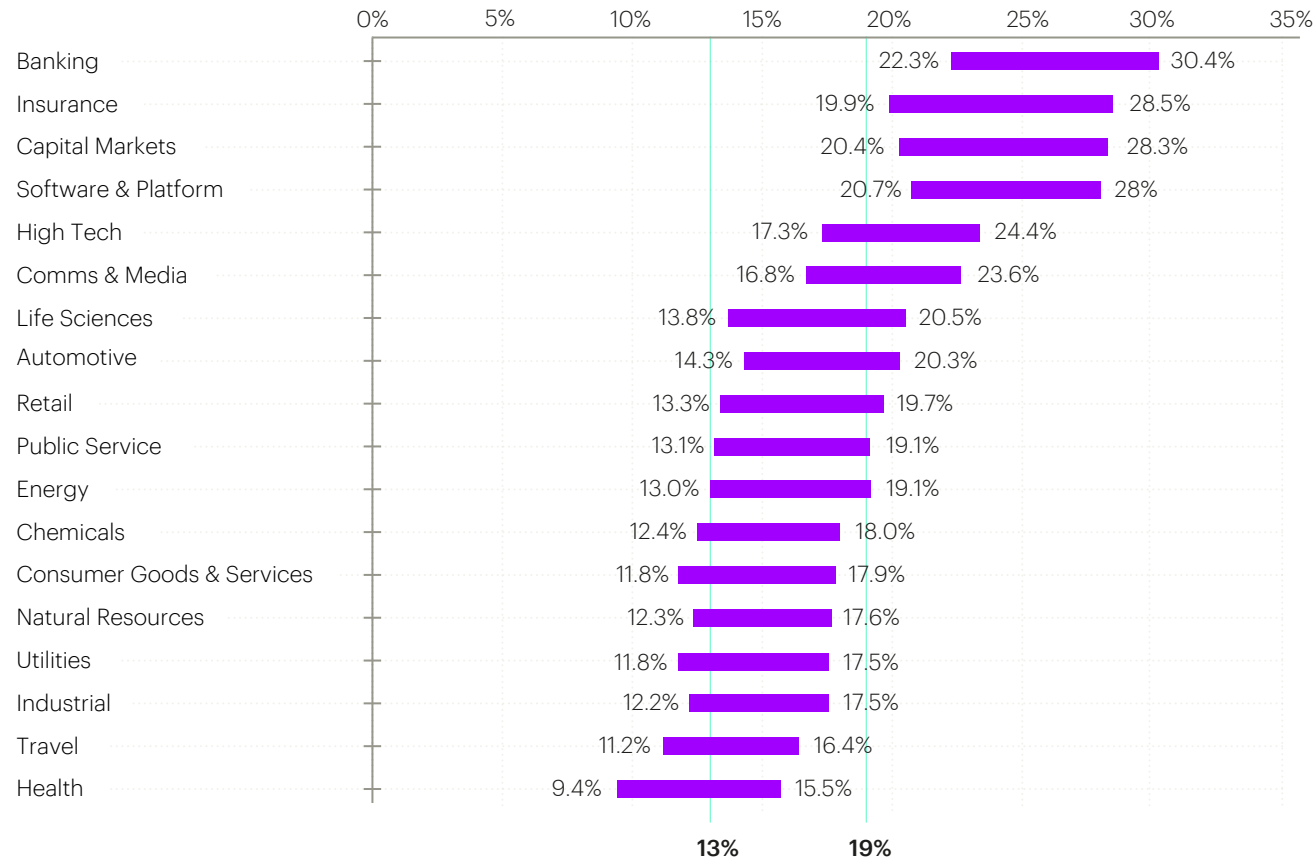
Emphasis is put on imbuing a digital mindset and shifting towards skills machines cannot easily replace, such as critical thinking, creativity, social skills, and working independently. Moreover, trainees are prepared for the modern agile business environment, learning to adapt to changes quickly and fluently.

Final examinations are taken by future learners through hands-on tasks that reflect the most essential professional situations and combine basic knowledge in German, English, IT, and economics, including accounting, general education, and education in professional practice.[3]

This initiative is just an example, but as generative AI evolves and matures, it's critical to keep updating apprenticeship programs at scale, to keep them relevant and to adequately prepare the workforce to work effectively alongside AI, leveraging these technologies to augment human capabilities rather than replace them. In doing so, society can foster a more adaptable, skilled, and resilient workforce that is prepared to meet the challenges of the future.

Productivity improvement driven by gen AI by industry in Switzerland
% of time

Industry	Lower	Upper
Banking	22.3%	30.4%
Insurance	19.9%	28.5%
Capital Markets	20.4%	28.3%
Software & Platform	20.7%	28%
High Tech	17.3%	24.4%
Comms & Media	16.8%	23.6%
Life Sciences	13.8%	20.5%
Automotive	14.3%	20.3%
Retail	13.3%	19.7%
Public Service	13.1%	19.1%
Energy	13.0%	19.1%
Chemicals	12.4%	18.0%
Consumer Goods & Services	11.8%	17.9%
Natural Resources	12.3%	17.6%
Utilities	11.8%	17.5%
Industrial	12.2%	17.5%
Travel	11.2%	16.4%
Health	9.4%	15.5%

Reference lines: **13%** and **19%**

Note: Estimates are based on Human+Machine identification of work tasks exposure to impact of generative AI. For details see the methodological notes in the appendix.

Source: Accenture Research based on National Statistical Institutes and O*Net.

Gen AI has the potential to increase productivity by double digits in all industries, with financial services leading the pack. Additionally, Swiss executives see it as a driver of new revenues.

While industries in the financial services sector – capital markets, insurance, and banking – have the highest exposure to gen AI, no Swiss industry is likely to remain untouched.

To put this into context, this is a similar increase in productivity to what Switzerland witnessed in the aftermath of the Internet revolution, from 2000 to 2006–09, and the same increase seen in the last 11–16 years.

Swiss executives agree that generative AI will be a key driver for revenue growth over cost reduction.

Do you view generative AI as being more beneficial to revenue growth or cost reduction for your organization?
% of Swiss companies' respondents

Cost reduction
9%

91%
Revenue growth

Source: Accenture Pulse of Change, Nov. 2023; n (Switzerland) = 100; companies' press releases

91% of Swiss executives (76% globally) believe generative AI will be more beneficial for revenue growth than cost reduction. This highlights a significant optimism about leveraging generative AI for strategic advantages, beyond automation.

Examples of top
Swiss players turning
to generative AI to
increase top line growth

Novartis
launched the Generative Chemistry (GenChem) initiative, revolutionizing drug discovery. Using advanced AI, GenChem designs molecule structures and identifies potential new medicines. This approach speeds up the discovery of top-quality molecules and enhances their developmental success rates. With the support of over 250 data scientists, key research areas, from target identification to predictive biomarkers, are optimized.

Givaudan
has launched a generative AI creation assistant, a proprietary AI model, trained on the company's knowledge and data to support the creativity of perfumers and flavorists.

Swisscom and NVIDIA
have joined forces with an investment of CHF 100 million to spearhead the development of generative AI supercomputers in Switzerland and Italy. This collaboration aims to establish a Trusted AI Factory, focusing on creating secure, sovereign gen AI solutions.

Economic growth simulation, Switzerland 2023–2038

GDP in billion CHF (2015 constant prices and exchange rate)
Baseline: Oxford Economics. Simulations for three scenarios.
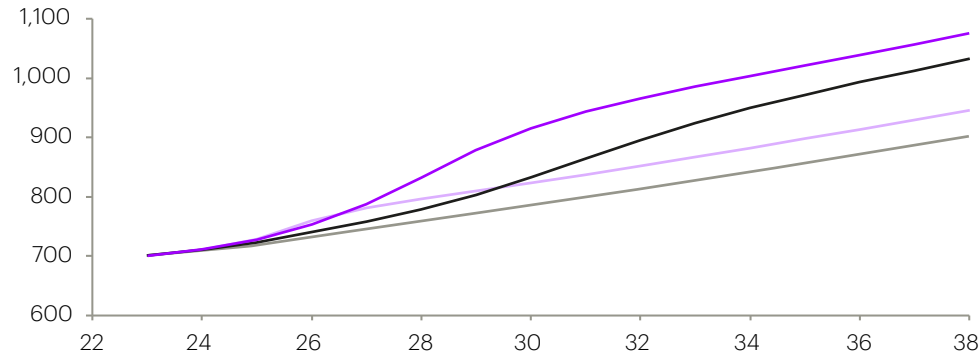
■ People-centric ■ Cautious ■ Aggressive ■ Baseline

Note: Higher-quality jobs defined as those with higher Net Better Off score.
Source: Accenture Research analysis. See methodology slide for further details.

By adopting generative AI in a people-centric and responsible manner across the Swiss economy, significant benefits are anticipated by 2030. Focusing on enhancing rather than replacing jobs could yield an extra CHF 92 billion in economic value, contributing to an additional annual growth rate of 1.6%.

The people-centric scenario assumes a moderate adoption pace, achieving full integration within ten years with no effects on unemployment. It also emphasizes active support for workers transitioning to higher-quality jobs, ensuring that the adoption of generative AI enhances, rather than undermines, employment quality.

Impact of generative AI on Swiss GDP, by scenario

GDP added against baseline by 2030 and annual growth 2023–2030, billion CHF and %

Annual growth rate 2023-30: 3.9% 2.5% 2.3%

People-centric 131, Cautious 48, Aggressive 39

CHF 92 billion additional value unlocked by 2030
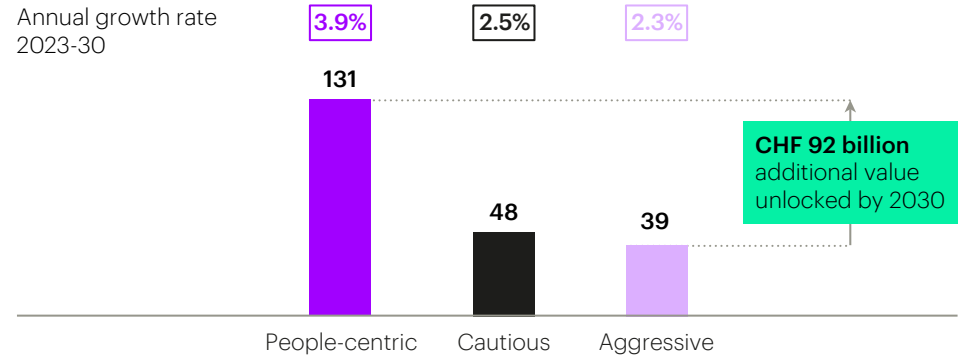
By embracing a responsible, people-centric approach to generative AI, the Swiss economy stands to unlock additional economic value of CHF 92 billion by 2030.

02

Barriers to Unlocking the Full Potential of generative AI

Switzerland's tech competitive advantage

By several measures, Switzerland is in an excellent position to be leading the generative AI wave

1st

In the WIPO Global Innovation Index in the last 13 years[4]

1st

In the INSEAD Global Talent Competitiveness Index in the last 10 years[5]

5th

In the IMD World Digital Competitive Ranking in 2023[6]

Large existing talent pool

Switzerland is recognized for its robust talent pool, particularly in tech. Almost 6% of its employment base are ICT specialists[7], 1.5 times the European average.

According to the latest Global Talent Competitiveness Index, Switzerland, along with the US and Singapore, is at the top of the ranking in attracting and retaining skilled professionals.

High focus on R&D expenditure

Switzerland has consistently been among the countries with the highest R&D expenditure as a proportion of GDP. The latest data indicates that the private sector plays a significant role, contributing to over two-thirds of the R&D expenditure, which amounts to over 3% of the GDP[8], more than 1% higher than the European average. Switzerland's leadership in patents also highlights the commitment to innovation. In 2023, it led the world in patent applications per million residents, filing twice as many as Sweden, the second-ranked country, and nearly eight times more than the United States[9], with significant contributions across various industries such as pharmaceuticals, consumer goods, and high tech.

World-class research institutions

Nine Swiss institutions appear in the latest ranking of the 500 best global universities, with ETH named the top university in continental Europe[10]. In 2023, approximately 2,000 patents were published in Switzerland, with around 1,200 patents granted. It ranked first in applications per million residents, with a large margin over other innovative countries. Swiss companies filed almost seven times as many patent applications per million inhabitants last year as companies in the United States, with significant contributions across a range of industries such as pharmaceuticals, consumer goods, and high tech.

Strong tech infrastructure

The Swiss National Supercomputing Centre (CSCS) provides strong computing capacity via several supercomputers (e.g., Piz Daint exceeding 25 petaflops) for detailed and complex simulation across various fields[11]. CSCS will also house the new Alps supercomputer (10,000 GPUs NVIDIA), which will be launched in spring 2024 thanks to the efforts of ETH Zurich and EPFL to develop open-source models for generative AI[12].

To seize the full potential of generative AI and capitalize on its opportunities, Switzerland needs to address three key challenges

Enterprise readiness

Regulatory readiness

Workforce readiness
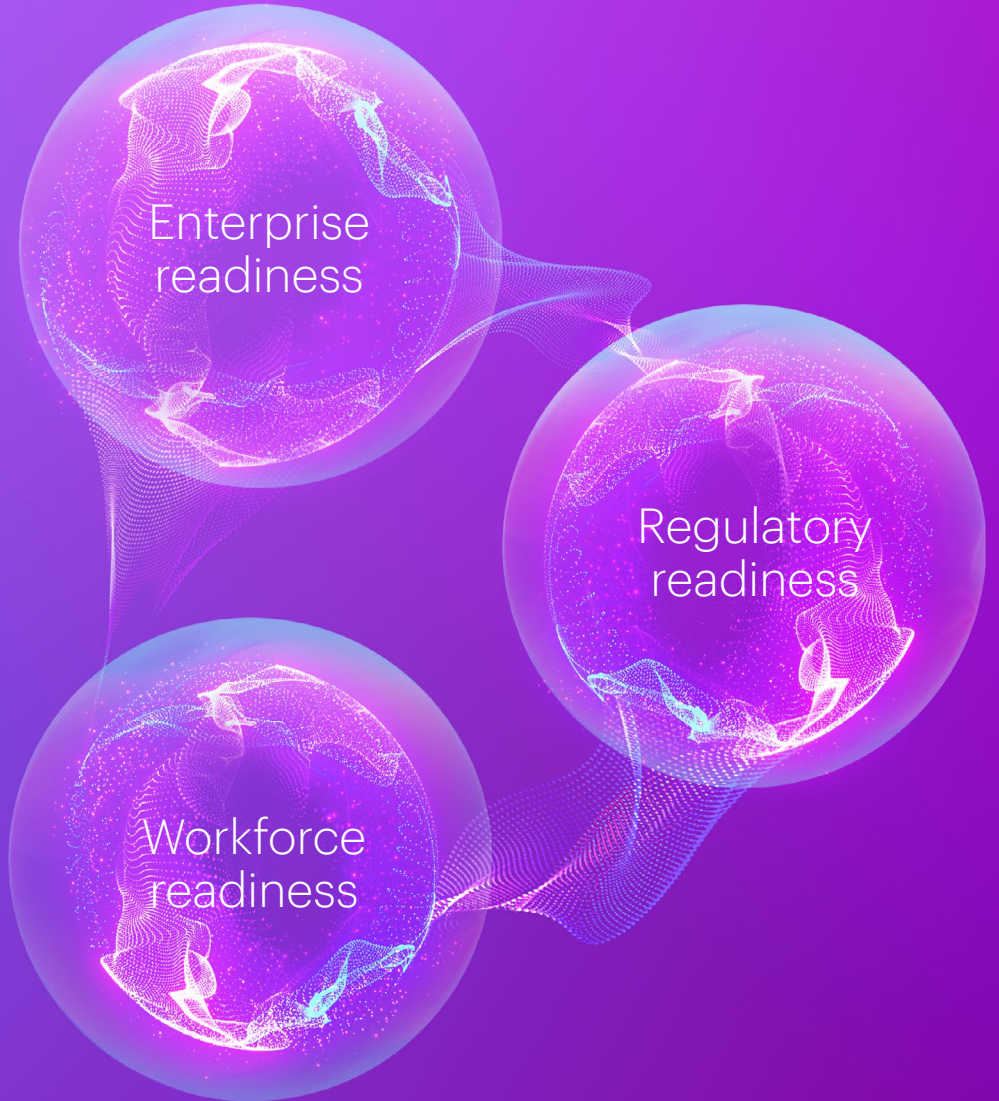
Enterprise readiness

Room for improvement in terms of AI readiness

Our AI index reveals that top Swiss companies have the potential to enhance their AI readiness. While there are some pioneers in different aspects of AI, many companies have room for improvement, particularly when it comes to AI talent and responsible AI.

Difficulty in scaling

A survey[13] reveals that 62% of Swiss companies have implemented AI to some degree. However, the challenge lies in expanding the technology throughout the entire organization. Our pulse survey[14] indicates that only 2% of Swiss companies are currently scaling gen AI initiatives and expect to take longer compared to what global peers believe. Also, only 7%, half the global average, are "extremely confident" they have the right data strategy and core digital capabilities in place to effectively leverage generative AI.

Difficult AI governance

To leverage gen AI for specific use cases, businesses might need to feed sensitive data into these models. This requires businesses to implement strong safeguards to protect sensitive information and prevent unauthorized access or breaches that could compromise privacy and trust. 52% of Swiss organizations lack clear AI workplace policies, indicating a critical need for guidelines[15], and only 4% have progressed from designing or initiating the scaling up of a responsible data and AI model to fully integrating one into their enterprise[16].

Playing the Long Game Can Switzerland lead the way in generative AI?

20

Workforce readiness

Lack of digital skills in the workforce

An Adecco survey shows that Swiss workers are trailing their peers in the acquisition of digital skills[17] (e.g., artificial intelligence, machine learning, data analytics, data mining, design thinking, digital design, digital marketing, programming, data analysis), and instead are more focused on job-specific and functional skills (e.g., accounting, marketing, finance, human resources, analysis, IT).

Unseen use of AI

Our Accenture global workforce survey shows that 85% of Swiss workers already utilize generative AI in their jobs in various ways[18]. This trend reflects the increasing integration of generative AI into everyday tasks and highlights a possible disconnect in formal training and understanding of these technologies' capabilities and ethical implications among the workforce.

Trust deficit

Based on our workforce survey, 50% of Swiss workers are concerned about the quality of gen AI output, in line with the global sample[19]. Additionally, 48% fear job displacement due to generative AI. This skepticism extends beyond the workplace into other aspects of Swiss daily life. A study by the University of Zurich's Research Center for the Public Sphere and Society (fög) showed that merely 29% of participants would engage with news articles authored entirely by AI, in stark contrast to the 84% who would opt for content crafted by journalists[20].

Regulatory readiness

Rapid technological advancement
The pace at which AI and gen AI technologies evolve far exceeds the speed at which regulatory frameworks can be developed and implemented, leading to a perpetual catch-up scenario for regulators.

Social expectations and ethical implications
Gen AI raises complex ethical and social questions, connected to bias, privacy, and the potential for job displacement. Developing regulations that effectively address these concerns without stiffing innovation is a delicate balance. In particular, the expected workforce shift will likely lead to substantial changes in job roles within the next few years, adding societal pressure regarding skill training and policy development.

International coordination
The global nature of gen AI development and deployment necessitates international collaboration and harmonization of regulatory standards. Switzerland's active participation in international discussions and bodies, such as the Council of Europe's Committee on Artificial Intelligence, highlights the importance of global cooperation. However, aligning international norms with national regulations presents a challenge.

Our outside-in analysis indicates that top Swiss companies have room to bring their use of AI to a higher level in some areas.

Playing the Long Game Can Switzerland lead the way in generative AI?

23

Swiss companies AI index
(Average percentile rank vs global industry peers, 23 Swiss players, 2023)

- ● Top quartile
- ● Bottom quartile
- ◆ Median
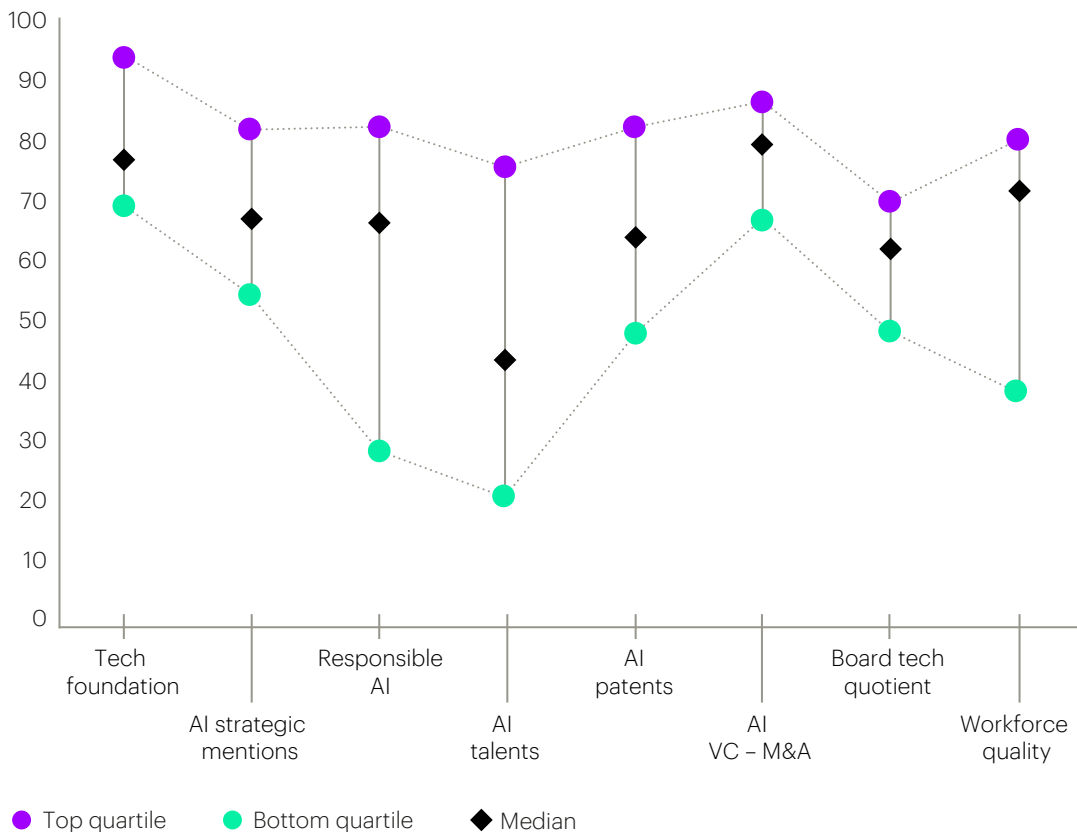
Note: Strategic mention is defined as any reference to AI-related terminology during earnings calls that link AI to one or more specific categories: future trends, strategy, investment, use cases, risk, and human capital.

Source: AI Index, Accenture Research.

Our AI index, an outside-in analysis that measures a company's level of advancement in its AI journey, highlights the presence of pioneering companies that excel. However, a wide interquartile range across several indices suggests that many firms still have significant untapped potential to harness. The companies analyzed exhibit a robust tech foundation with a significant median score, indicating a well-established IT infrastructure and a willingness to embrace emerging technologies, which is critical for AI development. In strategic communications, Swiss companies demonstrate a proactive approach to AI, with 35% mentioning AI at least once in a strategic context during their earnings calls.

In responsible AI, Swiss companies exhibit a dynamic range, with some demonstrating commendable ethical AI practices while others have yet to reach such standards. This variance presents a dual challenge and opportunity – encouraging a universal commitment to ethical AI can propel Swiss firms to the forefront of responsible innovation and serve as a beacon for global standards. The index highlights a critical gap in AI talent. While there are standout players, the data reveals that on average, only 4% of job postings mention AI skills. This indicates a potential shortfall in the required skill sets for advancing AI technology.

This graph shows how Swiss companies compare with global industry peers across various AI index pillars. For example, Swiss companies have a median score of 43.5 in the AI talents pillar, indicating they surpass **43.5%** of their worldwide competitors in their ability to attract and retain AI talents.

Expected / actual timing to fully scale up generative AI enterprise-wide
% of respondents

Global	9%	69%	20%	3%
Switzerland	2%	61%	36%	1%
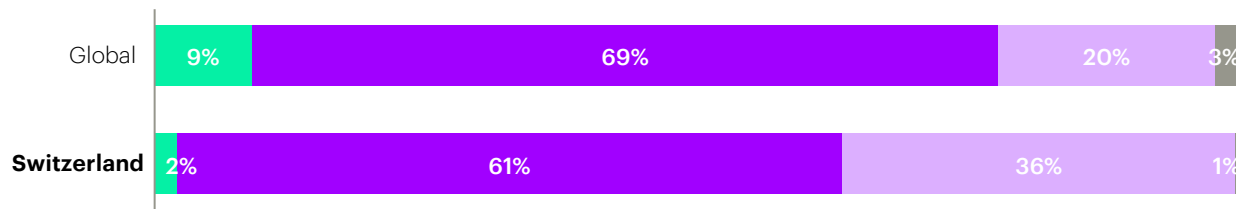
The organization has the right data strategy and core digital capabilities (e.g., the use of structured, unstructured, and synthetic data) in place to effectively leverage generative AI
% of respondents saying "extremely confident"

Global	13%
Switzerland	7%
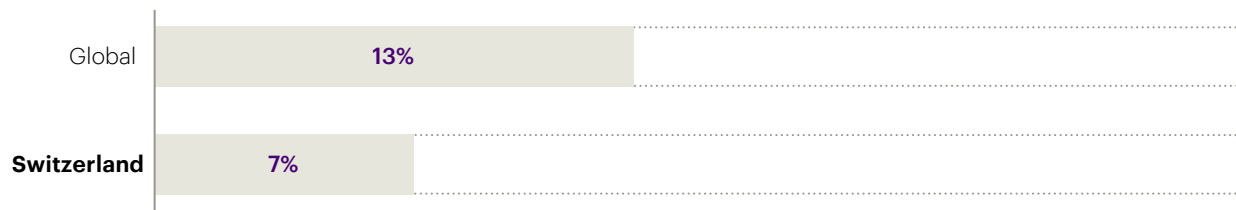
■ Currently scaling up generative AI enterprise-wide ■ Within 12 months
■ 12 to 18 months ■ Longer than 18 months

Source: Accenture Pulse of Change, March 2024. n (Global) = 2,800, n (Switzerland) = 100

C-suite leaders are less confident and more conservative in their timelines for scaling generative AI enterprise-wide compared to their global counterparts.

Only 2% of Swiss companies say they are currently scaling up generative AI enterprise-wide and a significantly higher percentage of Swiss leaders than those globally expect this integration to take between 12 and 18 months. Furthermore, fewer Swiss leaders are "extremely confident" in their data strategy and digital capabilities to effectively leverage generative AI than leaders globally.
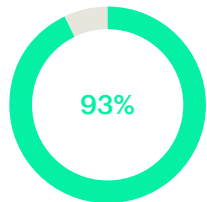
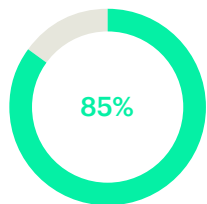## Swiss employees' view on generative AI
% of respondents

Swiss employees are **highly receptive to generative AI** technology, recognizing its value and showing a willingness to acquire new skills ...
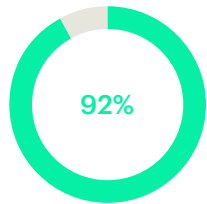
92% see value in working with gen AI
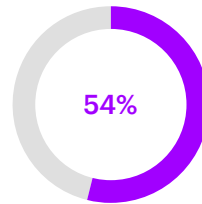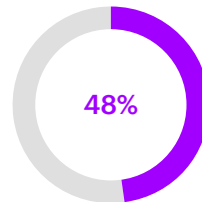
93% want to learn new gen AI skills

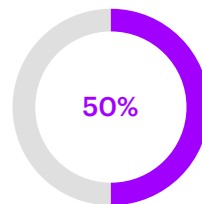**85%** are already using gen AI at work in some fashion

... but while their optimism is evident, they maintain a **cautious stance** on job security, work quality, and overall well-being.

54% say it could add to their stress and burnout
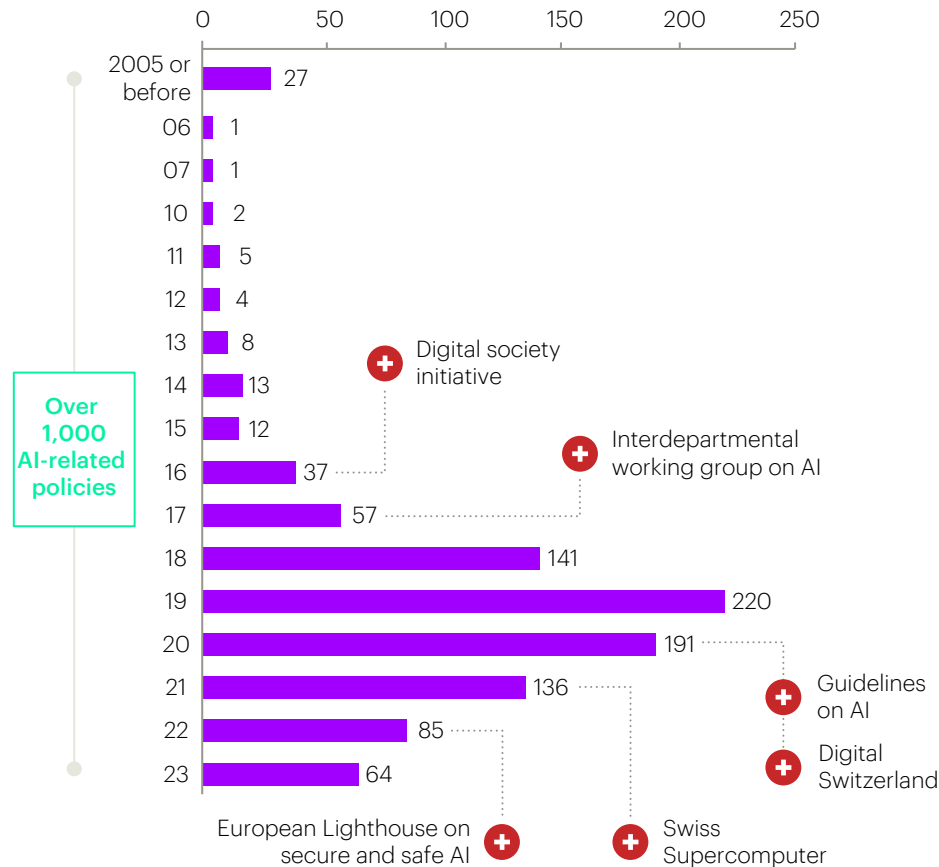
48% are concerned about job displacement

50% are concerned about accuracy of tool output

Swiss workers are highly open to generative AI, but companies should address their remaining concerns: stress, job displacement, and output accuracy.

... and while only 30% of Swiss organizations are currently reskilling their workforce to meet growth goals, **91% recognize the necessity to revise their reskilling strategies in response to generative AI**.

Source: Accenture Change workforce survey, Oct.–Nov. 2023, n (Switzerland) = 250; Accenture Pulse of Change, March 2024. n (Global) = 2800, n (Switzerland) = 100

Number of global AI-related policy initiatives over time

Number of global AI-related policy initiatives over time (bar chart):

Year	Value
2005 or before	27
06	1
07	1
10	2
11	5
12	4
13	8
14	13
15	12
16	37
17	57
18	141
19	220
20	191
21	136
22	85
23	64

Over 1,000 AI-related policies

Annotations:
- Digital society initiative
- Interdepartmental working group on AI
- Guidelines on AI
- Digital Switzerland
- Swiss Supercomputer
- European Lighthouse on secure and safe AI

Source: Accenture Research on OECD AI Policy observatory.
Data related to 71 countries analyzed (including European Union)

The regulatory focus on AI has dramatically increased at a global level in the last decade.

As of 2023, the OECD counted more than 1,000 AI-related policies globally, reaching a notable peak in 2019. Since 2019, there has been a slight slowdown, but still a high level of activity in AI policy introductions, indicating sustained interest and investment.

National AI policies are the most widespread type of AI-related policies (70%), with all the 71 countries analyzed placing a strong emphasis on developing national policies addressing AI, directly or indirectly.

27% of all policies focus on **trustworthy, human-centric AI**, with greater emphasis in APAC and North America on this theme.

Only 10% of overall policies focus on **AI coordination and monitoring**, suggesting that some countries might be weaving these efforts into broader digital governance strategies, indicating a holistic approach to technology policy, or that some countries may have a decentralized approach, focusing on individual policy initiatives without an overarching coordination mechanism.

Countries have diverse approaches to regulating AI: some approach this horizontally, while others see more benefit in industry-specific regulation

Market-driven approach
A regulatory strategy emphasizing innovation and economic growth by minimizing government intervention in the development and application of AI technologies.

Risk-based approach
A regulatory strategy that focuses on identifying, assessing, and mitigating potential risks associated with AI technologies to protect consumers and society.

Horizontal approach
The regulatory framework covers a broad range of issues, from AI development to economic impact, in one document.

Vertical approach
The approach implements various regulations focused on different aspects, or types of AI.
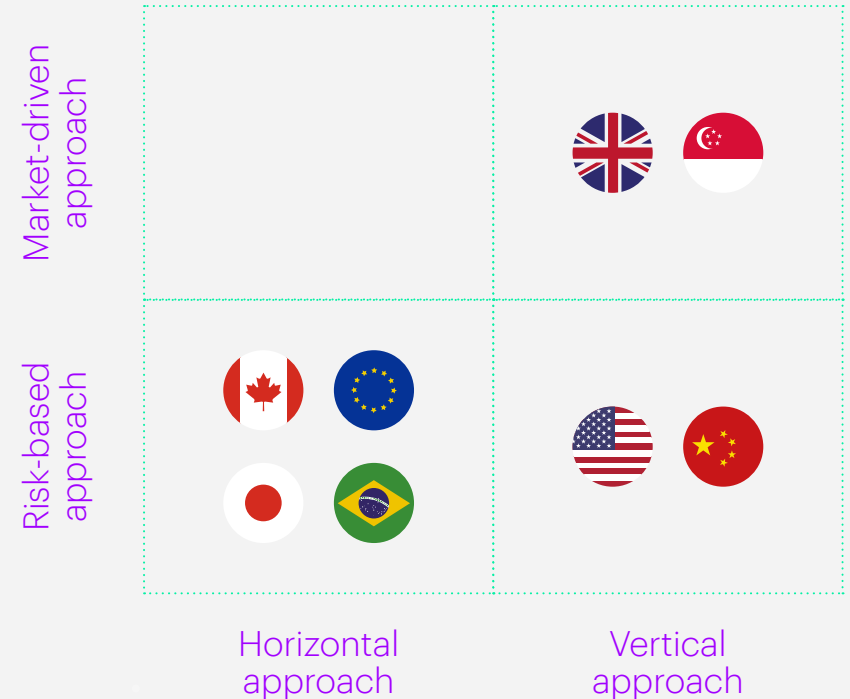
Source: Accenture Research on HSBC, AI Regulation, Assessing impact on companies, Feb. 2024; Accenture Research analysis

Qualitative classification of selected countries' AI-related policies approach

Final text of the EU AI Act approved in March to provide risk-based classification to ensure safety and compliance with fundamental rights.

The AI Act also applies to providers and developers outside of the EU whose AI systems affect EU individuals.

Artificial Intelligence and Data Act (AIDA) to manage risks and information disclosure regarding high-impact AI systems.

The 2019 Social Principles of Human-Centric AI identify seven AI principles that guide the privacy, security, use, and development of AI.

METI's Governance Guidelines for the Implementation of AI Principles offer non-binding guidance to support companies' efforts around AI governance.

Bill No. 2338/2023 has the goal of establishing detailed rules, principles, and guidelines for the development and application of AI in the country.

AI laws are distributed across federal agencies and state-level regulations (e.g., California on gen AI).

The 2022 Advancing American AI Act defines principles for the government's use of AI.

Different issue-specific regulations mostly focused on mitigating harm to individuals and aiming for global leadership in AI.

Draft guidelines for the standardization of the AI industry proposing to form more than 50 national and industry-wide standards for AI by 2026.

2023 pro-innovation approach to AI regulation white paper 2023.

Five cross-sectoral principles for regulating AI on a non-statutory basis to be applied by different sector regulators.

AI policy in 2019 and the Model AI Governance Framework updated in 2020 provide principles and guidance to address AI-related ethical and government issues.

AI Verify testing framework to provide businesses with standardized testing for AI deployment.

🇨🇭 Switzerland's position

The OECD has classified six Swiss policies as AI-related.

The Federal Council prioritizes AI in its Digital Switzerland Strategy and established an interdepartmental AI working group in 2018.

This group's 2019 report highlighted Switzerland's strong position to tackle AI challenges, leading to the creation of AI usage guidelines within the Federal Administration in 2020.

Rapid advancements in generative AI, especially with the release of ChatGPT and the development of the EU AI Act, have sparked debates on the necessity of AI-specific regulations.

In response, the Federal Council directed DETEC in November 2023 to explore potential AI regulatory frameworks.

Source: Accenture Research analysis

Percentage of policies addressing OECD AI principles by region
% of total regional AI-related policy initiatives

OECD AI Principles	CH (6)	APAC (188)	Europe (577)	North America (98)	Middle East (32)	Africa (42)	LATAM (110)
Inclusive growth, sustainable development, and well-being	50.0	24.0	32.4	28.6	40.6	50.0	51.8
Human-centered values and fairness	50.0	32.0	33.8	40.8	37.5	23.8	29.1
Transparency and explainability	50.0	29.3	20.1	33.7	31.3	11.9	27.3
Robustness, security, and safety	50.0	32.0	24.6	36.7	34.4	23.8	20.9
Accountability	16.7	28.0	13.0	20.4	31.3	14.3	19.1
Investing in AI R&D	50.0	40.7	32.4	43.9	37.5	47.6	23.6
Fostering a digital ecosystem for AI	83.3	41.3	48.5	45.9	65.6	61.9	53.6
Providing an enabling policy environment for AI	33.3	34.7	34.5	30.6	56.3	50.0	38.2
Building human capacity and preparing for labor market transformation	0	29.3	21.5	21.4	25.0	31.0	29.1
International cooperation for trustworthy AI	16.7	21.3	13.7	13.3	21.9	14.3	18.2

Source: Accenture Research on OECD AI Policy observatory. Data related to 71 countries analyzed (including European Union)

Switzerland's AI policy landscape is characterized by a strong emphasis on creating a robust digital ecosystem, ensuring the ethical use of AI, and investing in research and development.

However, it shows a notable gap in policies focused on preparing the workforce for AI-induced changes.
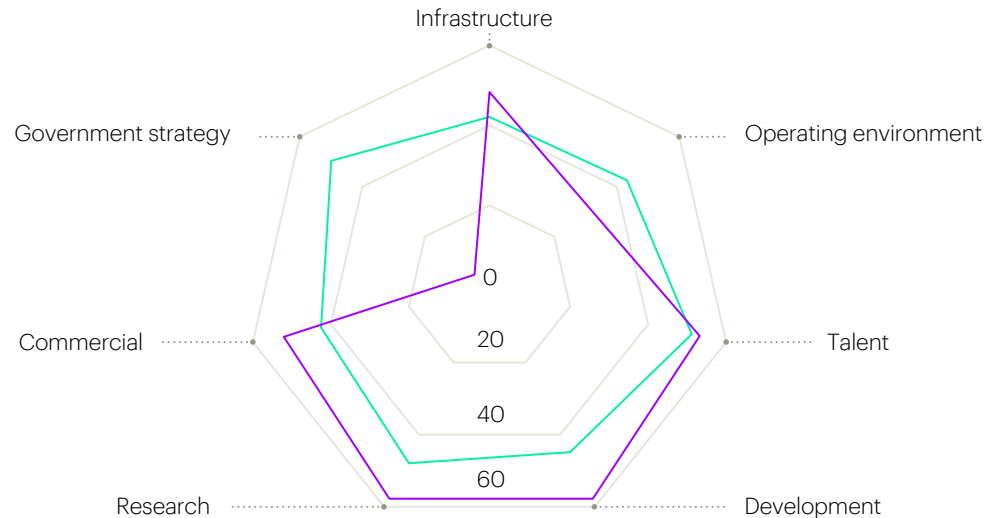
External benchmarks suggest that, when it comes to AI, Switzerland has not leveraged policies as much as its neighboring countries.

Switzerland's AI readiness in an international comparison
External benchmarks show that Switzerland excels in many of the pillars analyzed, especially in its innovation capacity and research and development. However, these assessments show more conservative results regarding Switzerland's capacity to leverage its government policies and set up a vision for AI.
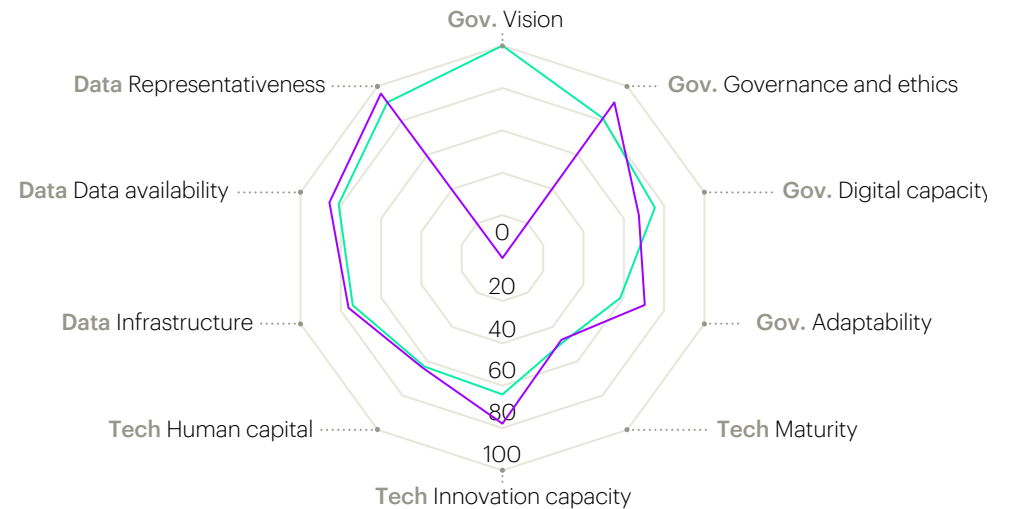
Tortoise Global AI index 2023
Switzerland (purple) vs selected European countries (green)*

*Selected European countries: France, Germany, Netherlands, UK, Italy, Spain

Source: Tortoise, The Global AI index, 2023

Oxford Insights Government AI Readiness Index 2023
Switzerland (purple) vs selected European countries (green)*

Source: Oxford Insights, Government AI-readiness Index, 2023

Playing the Long Game Can Switzerland lead the way in generative AI?

32

There is an ongoing dynamic public discussion within the federal parliament on several aspects of AI

Regulatory intensity
There's a strong emphasis on addressing AI's ethical, legal, and societal implications, highlighting the urgency of refining AI regulation and addressing legal gaps.

International alignment
Discussions reflect an inclination to align with international standards, especially EU regulations, to ensure global competitiveness and cooperation in AI advancements.

Societal and ethical concerns
Switzerland is proactive in considering AI's long-term societal impacts and ethics, underscoring the relevance of considering AI's educational effects and impact on the workforce. However, public engagement is rarely cited in the parliamentary interpellations analyzed.

AI-related topics discussed in the Swiss federal parliament
Frequency, based on how often the topic was discussed, 2019 to Feb. 2024

Education and research
Tools for monitoring AI guidelines
National security and defense
International AI cooperation
Data protection
Ethics and social impact
Cybersecurity and AI integration
AI governance and federal strategy
Public engagement and digital transformation
Transparency and accountability in AI
Labor market and employment
Governance and regulation
Monitoring and societal impact
Impact in energy sector

Low frequency ━━━━━━ High frequency

Source: Accenture Research analysis on Swiss Federal parliament database of parliamentary acts. 19 acts analyzed containing "Artificial intelligence" keyword, from 2019 to Feb. 2024

When compared to other countries, the Swiss policy approach to AI shows both strengths and possible areas for further development.

Strengths

High engagement in AI ethics and social impact
The emphasis on creating clear and effective regulations to protect human rights and privacy and ensure ethical AI usage is evident from the call for protective measures against cyber threats and manipulation.

Active international cooperation
Switzerland's active role in the Council of Europe's "Committee on Artificial Intelligence" (CAI) demonstrates its commitment to shaping a legal framework that strengthens human rights, democracy, and the rule of law at an international level.

Strong focus on security and defense
Switzerland's emphasis on integrating AI into national security and defense, with a clear understanding of the associated benefits and risks, showcases its strategic approach to leveraging AI for national safety and cybersecurity.

Support for innovation and research
The focus on AI in education and research, including ethical principles in engineering education, indicates a solid foundation for nurturing future AI talent and innovation.

Possible further developments

Comprehensive vision and strategy
Based on the analysis of existing AI-related policies and parliamentary discussions, it appears Switzerland is heading toward a risk-horizontal approach to AI. There is a notable emphasis on AI governance and risks. However, the progress towards implementing a comprehensive and unified national regulation and strategy appears to be slow. This could hinder the development and application of AI technologies by creating uncertainty for businesses and researchers.

Public engagement
Although efforts are made to engage the public in digital transformation, there is room for improvement in outreach and involving citizens more directly in shaping AI policies and understanding their implications.

Dependence on international developments
Switzerland seems to be waiting for outcomes from international forums and the EU AI Act. Although understandable, as the impact of the EU AI Act will be important for Swiss companies and set standards globally, this wait-and-see approach could delay the country's regulatory responses and adaptation to AI advancements.

Risk of falling behind international standards
The potential delay in integrating international AI standards into Swiss law is noted. While active in international forums, Switzerland must ensure timely integration of global AI standards to maintain its competitive edge.

03

Final
Considerations

Five imperatives for Swiss companies to scale gen AI throughout their organization

Lead with value

Potential actions

- Define the company vision for generative AI with clear goals, outcomes, and success metrics.

- Shift from siloed use cases to prioritizing business capabilities that offer the highest ROI and the ones that offer more chances to differentiate from competitors.

Impact

- Enables a whole-enterprise transformation approach, beyond just changing singular, "siloed" processes.

- Superior outcomes through a profound reinvention of value chains and development of enduring business capabilities.

Understand and develop an AI-enabled secure digital core

Potential actions

- Enhance digital infrastructure to support AI and invest in technology for seamless operations and the creation of new capabilities.

- Data needs to be cleaned, governed, and piped from source for use in the cloud.

Impact

- Ability to scale generative AI at a much faster pace.

Reinvent talent and ways of working

Potential actions

- Invest in people and skills development: Emphasize continuous learning and skill development to ensure workers can adapt and thrive alongside generative AI technologies (AI literacy throughout the organization).

- Implement human-centered change management: Focus on reshaping the workforce and work to be more inclusive, adaptive, and supportive of human potential alongside AI advancements.

Impact

- Creation of a workforce prepared for the future with roles that complement AI, leading to more fulfilling work.

Close the gap on responsible AI

Potential actions

- Commit to ethical AI use.

- Define the principles of responsible AI and the overarching values that will guide decision-making.

- Develop practical guides that translate these principles into daily practice for each worker.

- Perform ongoing reviews of these practical guides to ensure adaptability to developments in generative AI.

Impact

- Trustworthy AI applications that mitigate risks such as bias, security, privacy, and interpretability, adhere to regulations, and protect the organization and its stakeholders.

Drive continuous reinvention

Potential actions

- Fostering an innovation culture and exploring new business models is a critical step towards embracing generative AI.

- Companies need to stay agile, continuously innovate, and adapt the business strategies to leverage the full potential of generative AI. This approach not only enhances operational efficiency, but also opens up new avenues for growth and competitiveness in the evolving digital landscape.

Impact

- An adaptive organization that thrives on change, continuously innovates, and remains competitive.

Playing the Long Game Can Switzerland lead the way in generative AI?

40

Starting from a position of strength, there are some further ideas for Swiss policymakers to allow the country to capture the full benefits of gen AI.

Five ideas for Swiss policymakers

Strengthen dialogs and oversight on AI/generative AI evolution

Details

- Consider the establishment of a platform with a different set of industry stakeholders for ongoing observation and analysis of AI and generative AI trends.

- This platform would serve as a knowledge hub, informing policy adjustments and strategic directions based on the observed impacts on society, economy, and the workforce.

Impact

- Increases national resilience in the face of rapid technology changes.

Foster international collaboration

Details

- Continue and expand international cooperation, to align regulatory approaches and standards. This will help Switzerland navigate the global AI landscape more effectively and ensure that Swiss AI innovations are competitive and compliant internationally.

Impact

- Enhances Swiss global influence and reflects Swiss priorities (e.g., privacy and ethical use of generative AI) in international frameworks.

Define a strategic vision for generative AI

Details

- Cultivate a vision that encourages synergy between companies, research entities, and innovation centers. Integrate ambitions for Switzerland's role in generative AI development and application into the national digital strategy.

- Encourage the development of a vibrant ecosystem where generative AI acts as a catalyst for continued growth and innovation.

- Focus on integrating generative AI to enhance Switzerland's established strengths in key sectors such as robotics, blockchain, cleantech, and others, ensuring these fields remain at the cutting edge of global technology and innovation.

Impact

- Increased certainty for business helps to attract investments and talents to Switzerland.

- Safe and secure environment for generative AI to foster innovation and encourage the adoption across sectors.

Enhance role transition mechanisms

Details

- Implement targeted education and training programs focused on generative AI technologies. This includes integrating generative AI into curricula at all levels of education and offering specialized training programs for the existing workforce to ensure Switzerland has the talent pool needed to lead in generative AI development and implementation.

- Enhance role transition programs to better support the potential wave of workers' transition to less generative AI-impacted roles.

Impact

- Reduced risk for job displacement due to automation, ensuring focus on augmenting human ingenuity, not replacement.

- More equitable implementation of generative AI in the workplace.

Support generative AI literacy in society

Details

- Strengthen efforts to engage the broader public in discussions about AI, with a particular focus on generative AI. Develop public education campaigns to demystify generative AI technologies and their societal impacts, fostering a well-informed public that can contribute to a balanced discourse on AI regulation and implementation.

Impact

- Increased public trust and support for generative AI initiatives.
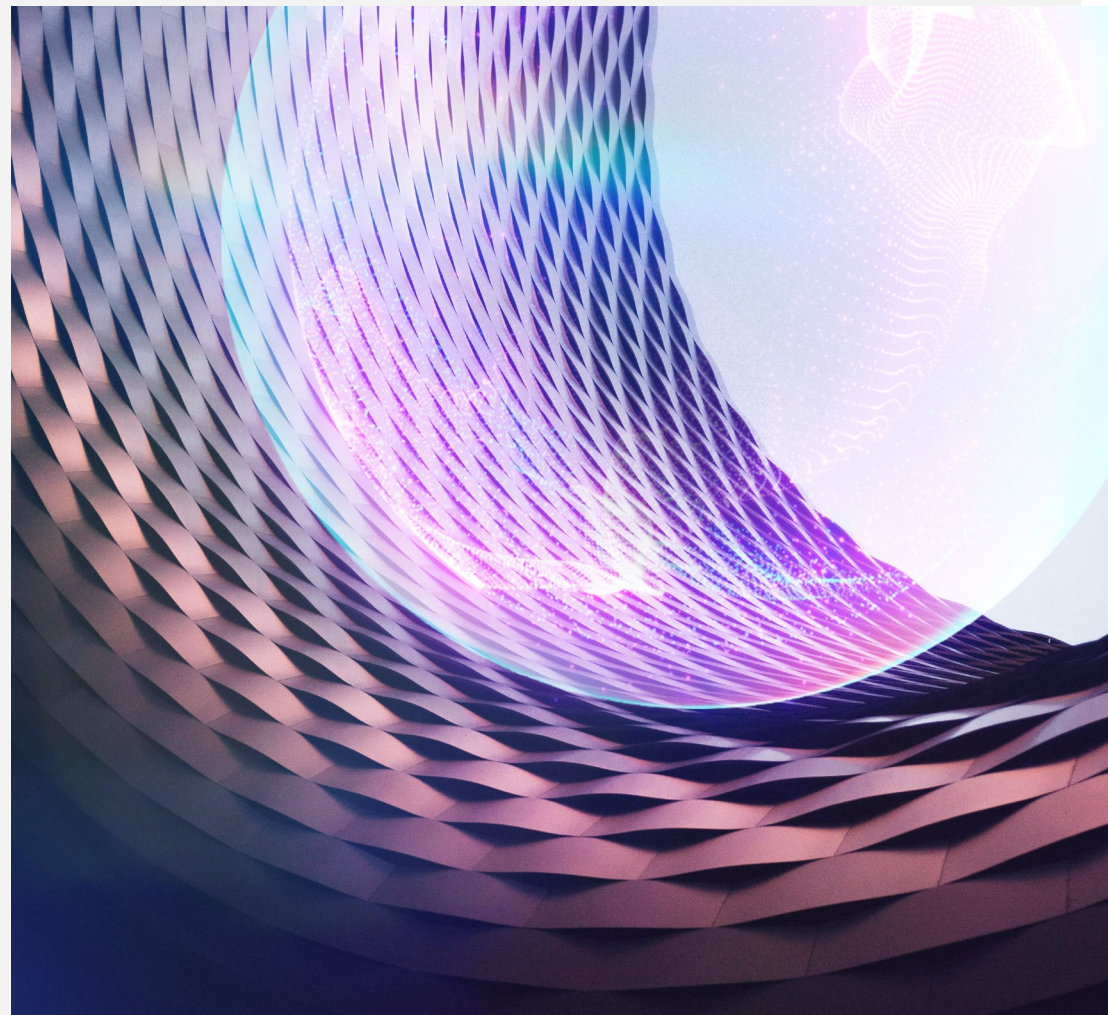
Methodology Appendix

Measurement of changes in generative AI-driven labor productivity

To evaluate generative AI's effect on productivity, we conducted a streamlined analysis using data from the U.S. Bureau of Labor Statistics and O*NET on over 19,000 tasks related to 900 job families in 19 industries. US standard occupations were then mapped to the International Standard Classification of Occupations (ISCO) to compare across countries.

As a first step, we assigned the relevance of tasks to large language models (LLMs) by identifying those requiring extensive use of language. Each task was given a binary score based on whether it involved language (1 for yes, 0 for no). Further, tasks were evaluated on three criteria to ascertain the necessity for human involvement: real-time human interaction, the non-routine or undefined nature of the task, and the legal, ethical, or socially enforced requirement for human participation. Each criterion was marked with a binary value (1 for yes, 0 for no). This yielded a numerical value of 0 or 1 for each of the three different AI-relevancy criteria on each macro task, which we then used to calculate the final task exposure metric to indicate the potential for transformation.

Consequently, for each task, we calculated gen AI-driven productivity gain, defined as the time saved in producing a work-related output, i.e., completing a task by a human worker. We developed a model based on the following three steps to measure generative AI-driven productivity gains.

- First, we assign a measure of time saved in completing a given work task with large language models based on available experimental evidence from reputable academic sources.[21]

- Second, to complete this allocation to all tasks, not just those specifically addressed in the experimental studies, we estimate a regression model that predicts time saved for every task based on the similarity in task exposure to generative AI. The exposure level was created using 19k micro-tasks with a human + machine tagging approach, indicating whether the micro-task is language-intensive, interpersonal, requires human sign-off, and proactive.

- Third, we aggregate time savings at the occupational and Accenture-defined industry levels by adding the savings for each task associated with an occupation and for each occupation mapped into an industry.

Simulation of generative AI's impact on GDP growth

To simulate the overall economic impact of generative AI, we calculated how changes in the composition of the labor force brought about by generative AI adoption would impact long-term gross domestic product growth under different assumptions. We proceeded in several steps.

First, to guide the direction of changes in the labor force, we developed a predictive machine learning model of the likelihood of the occurrence of a transition between all possible pairs of occupations. For that purpose, we trained a model using historical (2019–2022) survey data from the US Current Population Survey on self-reported year-to-year changes between occupations, modeled as a function of skill distance between occupations (using the required skills from job postings using Lightcast data) and labor market features, including average wages, employment levels, occupational growth projection, educational requirements, and experience requirements, from the U.S. Bureau of Labor Statistics.

Second, we created three scenarios to simulate the changes in the labor force due to how gen AI would impact each occupation in Switzerland.

• The Aggressive scenario assumes a very fast adoption rate of the technology (five years to full adoption), and the simulated reshuffling of the labor market occurs based on automation potential only. In this scenario, the talent supply remains rigid (workers cannot adapt skills), and there is a rise in unemployment: some workers won't be able to find employment if their jobs are fully automated.

• In the Cautious scenario, we assume a slow adoption rate of the technology (15 years), the reshuffling of the labor market occurs based on both augmentation and automation potential, and there is no rise in unemployment in the simulation: excess supply always matches with excess demand.

• The People-centric scenario assumes that movement between occupations is based on the augmentation and automation potential and causes no rise in unemployment. In addition, the model also privileges workers moving into higher-quality jobs. These jobs satisfy the dimensions of Accenture's Net Better Off approach, in which the occupation scores above the mean of financial, physical, and mental well-being and perceived purpose of the job, the employability of used skills, and the relational nature of the job role. In this scenario, the pace of adoption is ten years.

Third, our algorithm considers how occupations would win or lose workers based on their roles' exposure to gen AI and the estimated productivity gains (see previous slide). The resulting labor force composition allows us to consider how the total national wage bill would vary, relying on Federal Swiss Statistical Office data on wages by occupation. The variation in the wage bill is considered as the productivity boost that drives economic growth under the central model assumptions that capital and labor shares remain constant.

Finally, we weigh consensus GDP forecasts from Oxford Economics against the productivity boost in a logistic S-curve fashion for each adoption scenario. The resulting output indicates how much each country would grow yearly due to gen AI adoption on top of its baseline growth forecast.

AI index framework

Our AI index framework provides a comprehensive multidimensional analysis of a company's AI capabilities. It focuses on 1,500+ global companies, including 23 Swiss, across 18 industries headquartered in 60+ countries. This framework, which draws upon public data collected both directly and via third-party vendors, is organized into four main categories: Say, Do, Care, and Enable. Each category comprises specific metrics to assess a company's position and progress in the AI landscape.

Say: Strategic AI Signaling

- **Strategic AI Mentions** This metric quantifies the frequency and context of AI discussions by C-level executives during earnings calls, evaluating how AI is integrated into discussions about future trends, investment, and corporate strategy.

- **Responsible AI Index** Assesses a company's approach to ethical AI practices through responsible AI implementations. It measures the demand for and development of AI talent in adherence to business ethics and transparency standards.

Do: AI Assets

- **AI VC and M&A Investment** Represents the proportion of AI-related venture capital and mergers & acquisitions, highlighting the company's investment in and commitment to AI integration and expansion.

- **AI Patents** Evaluates innovation performance through patent quantities, assessing the intensity, economic value, influence, success rate, and innovativeness of AI technology developments.

Care: Talent & Culture

- **AI Talents** Analyzes the number of AI professionals within the company, their skills, and how the company attracts and retains this critical talent pool.

- **Board TQ** Measures the percentage of board members with a background in technology, reflecting the board's ability to guide the company in technology-related decisions.

- **Workplace quality** An indicator of how advanced a company is in creating an attractive workplace for its employees, evaluating components such as labor rights, training and development, compensation, employment quality, and others.

Enable: Tech Foundation

- **Technology Index** Grounded on a variety of technical aspects, such as embracing emerging technologies, cybersecurity measures, IT infrastructure, ESG scores, and research and development partnerships.

Once all the raw data have been gathered, they are normalized to a 0–100 scale to reflect each company's percentile ranking within its respective global industry.

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Acknowledgments

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