## **SWITZERLAND**

### **COUNTRY REPORT**

## **Unlocking Switzerland's AI Ambitions**

Switzerland has emerged as a digital leader in Europe, with businesses and citizens embracing AI and recognising the transformative impact it is likely to have in the coming years. Swiss businesses are increasing their digital investment and looking to adopt more advanced technologies, such as AI, as they progress on their digital journey.

AWS supports this vision and commissioned independent research consultancy, Strand Partners, to undertake research to examine Switzerland's progression on its digital journey.

This research shows that Swiss businesses and citizens recognise the potential of AI to unlock economic potential and transform lives. Businesses are significantly increasing their adoption of digital technology.

#### Key Statistics (methodology here)

- A significant majority of Swiss businesses (76%) rely on digital technology to the extent that they would face major operational difficulties without it.
- 30% of Swiss businesses adopted Al<sup>1</sup> in 2023, compared to 22% in 2022. This is a growth rate of 36%.
- Only a small minority of businesses in Switzerland (18%) consider it easy to hire staff with good digital skills.
- The increased adoption of digital technologies, most notably Al, could unlock 127 billion CHF for Switzerland's economy by 2030.
- Looking forward, Swiss businesses predict that digital skills will remain crucial, with 62% suggesting that digital proficiency will overshadow traditional academic qualifications when hiring within five years.

## Harnessing the Power of Digital

Swiss businesses recognise the benefits of digital technology for businesses. Reflecting European trends, a significant majority of Swiss businesses (76%) cite a reliance on digital technology to the extent that they would not be able to operate effectively without it.

Many Swiss businesses understand the importance of digital technology for growth, with 85% reporting that digital technology is important to realising their five-year growth plans - consistent with the European average (84%). Reflecting its growing importance, Swiss enterprises ramped up digital technology investments by 52% since 2022.

This trend is only likely to accelerate, with Swiss businesses predicting a further 49% increase in digital investment in the next twelve months. This excitement about and commitment to the adoption of emerging digital technologies is helping businesses to unlock economic benefits and pushing Switzerland towards realising its AI ambitions.



**76%** would not be able to operate effectively without digital technology



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Over the past year, Swiss enterprises ramped up digital technology investments by **52%** 

## 2023: a 'year of Al' driving an acceleration in economic growth

Swiss businesses saw a large increase in the rate of adoption of AI technologies in 2023. **30**% of Swiss businesses reported adopting AI in 2023, up from 22% in 2022; this is a percentage increase of 36%.

If this rate of growth is maintained, the adoption of digital technologies (especially AI) could add 127 billion CHF to the Swiss economy by 2030.2

Adoption is even higher among businesses already familiar with Al. Of these, a majority have fully integrated Al into their business operations, with 28% reporting that they consistently use a single Al-powered tool and an additional 28% reporting that they consistently use multiple tools. Taken together, these adoption numbers (56%) are largely in line with the European average (59%), although suggest that there is an even greater opportunity for Swiss business to take the lead in unlocking opportunities provided by emerging digital technologies.

Indeed, a further 16% of companies say that in 12 months time they will have developed a plan for AI adoption, significantly more than the European average (6%). However, this is skewed by business size. 25% of large businesses (employing over 250 people) say that they will have developed a plan for further AI adoption, compared with just 12% of small businesses (those employing under 50 people). Together with the recent upsurge in cloud technology adoption, Swiss businesses demonstrate a strong momentum in emerging digital technology integration.

Al uptake in Switzerland is highest among financial services (51%), transport and logistics (49%) and information and communications (45%). Education (9%), construction (10%) and retail (13%) industries currently show opportunity for growth, with the lowest adoption rates for Al.

Swiss companies that have embraced AI are reporting tangible benefits:



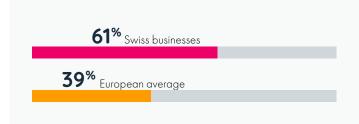




of Swiss businesses have also noted that they are currently using AI and machine learning in order to achieve their sustainability (ESG) goals, such as through the optimisation of practices

Businesses recognise that AI is likely to be a transformational technology, with more than half (63%) predicting that their industry will be largely or entirely transformed by AI in the coming years.

#### However, Swiss businesses would benefit from greater flexibility in choice of AI provider



61% of Swiss businesses cite limited choice among Al providers as a barrier to their adopting of Al tools, a concern that is significantly higher than the 39% European average. The widespread use of Al in Swiss companies can be further promoted through, among other things, easy access to customisable, industry-specific Al solutions and the seamless interaction between different Al applications. Solutions that contribute to the flexibility of businesses can enable the Swiss economy to take full advantage of the economic benefits of Al and help the country as a whole to accelerate its digital goals.

## Cloud computing: a foundational technology

Cloud computing underpins Europe's journey to becoming a digital leader and forms the foundation for the adoption of digital and AI technology. In particular, cloud underpins the Foundation Models which form the basis of generative AI.



The majority (61%) of Swiss businesses adopted cloud technology between two and four years ago. There has been a promising uptick in 2023, with 17% of Swiss businesses saying they had adopted cloud technology in that time period. This is the highest rate out of all European markets, where the average stood at 14%.

Swiss companies can thereby continue to accelerate cloud adoption and lay the foundations for a digitalised economy, which is likely to bring them direct benefits. For instance, **57%** of Swiss businesses utilising cloud technologies point to its benefits for enabling remote working and improving online security.

As our research shows, some Swiss businesses have also noted the usefulness of cloud computing and data analytics in sustainability practices, with 32% noting that they use data analytics to achieve their sustainability goals, and 21% reporting that cloud technology is helping them in this area. This points to an important area for growth in which Switzerland can take a leading role.

## **Huge Economic Potential Hindered by Skill Gaps**

Although Swiss businesses indicate a strong desire to explore and access the benefits of AI, their digital skill capabilities lag behind, creating a deficit that could prevent the country from reaching its full digital potential.



Only a minority of businesses in Switzerland (18%) consider it straightforward to hire staff with good digital skills





This falls to just 13% among small businesses which employ under 50 people

These skill gaps are not unique to Switzerland; Swiss businesses mirror their European peers in experiencing these challenges of digital skill acquisition. This is a fundamental requirement for a successful digital transition: beyond increasing the number of IT technicians, Switzerland's citizens must attain a basic digital proficiency level.

Those in the workforce are familiar with this issue:



31% of Swiss citizens feeling restricted in their career prospects by a deficiency in digital skills

The effort to address this issue through upskilling is recognised, with 85% of Swiss companies offering some form of digital training opportunities.

Opportunities for employee development and growth are crucial, and these efforts enable better digital opportunities for businesses while also potentially increasing job opportunities. Looking forward, Swiss businesses predict that digital skills will remain crucial, with 62% reporting that digital proficiency will overshadow university qualifications when hiring within five years.

# The Cybersecurity Landscape: Investment Trends, Public Sentiment, and Data Security Assurance

Cybersecurity remains an important tenet of digital adoption. The best tools that emerging technology can offer cannot be put to the most important challenges if data is compromised. These goals include ensuring all companies have a cybersecurity strategy, and that all are equipped with the ability to keep users, companies and cities safe from potential threats.

Cybersecurity poses a pivotal concern in Switzerland's journey of digital technology adoption. 68% of Swiss businesses expressed their intent to increase their investments in cybersecurity over the next 12 months. Many of these companies are adopting a multi-faceted approach to resolving cybersecurity issues, with:



45% looking to technological innovations to do so



41% training their staff to do so



35% enhancing infrastructure to do so



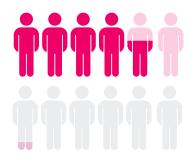
34% integrating cloud computing to do so

Furthermore, 29% plan to augment their cybersecurity efforts through new hires.

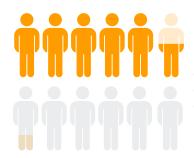
While Swiss businesses are showing a proactive stance towards issues of cybersecurity, concerns about the national cybersecurity landscape persist. 63% of Swiss businesses believe that overall, there are not sufficient financial resources allocated to safeguard Swiss data, a sentiment mirrored by Swiss citizens, 72% of whom share the same concern. Meanwhile, businesses generally express confidence in their own data security, with 75% indicating that they possess the requisite technologies and strategies to secure their and their customers' data - although this leaves 25% who do not think they have the requisite tools. Furthermore, a minority of businesses hold doubts regarding the security of data with Swiss companies. 78% of businesses feel that their data is secure, while 22% harbour doubts.

## Citizens share excitement around AI, but anxiety remains

In Switzerland, citizens maintain a more cautious outlook on the immediate influence of AI than their European peers.

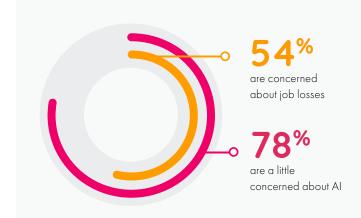


Only 39% of Swiss citizens anticipate a significant impact of AI in the next three years, significantly lower than the European average of 51%



However, Swiss citizens still believe in the long-term transformative impact of AI. 46% believe AI will be key in addressing societal challenges, such as climate change.

They also believe AI will positively transform industries in the next five years, most notably **healthcare (58%)**, **education (56%)**, **and transportation (53%)**. Public awareness of AI is also lower in Switzerland than across Europe. **69%** had heard of the technology before, compared to 73% of European citizens. However, only a quarter (**25%**) reported that they were very familiar with the technology and understood what it meant.



## Citizens in Switzerland are also concerned about the negative impact of AI.

**78%** of Swiss citizens report being at least a little concerned about AI, more than the European average (75%). Over half (54%) are concerned about job losses as a potential result of AI, compared to 48% across Europe.

Emerging research suggests that these fears are overstated. A World Economic Forum report estimates that AI will have a 25.6% net positive impact on job growth until 2028.<sup>3</sup> The WEF 2024 white paper on the <u>Rise of Global Digital Jobs</u> similarly noted that by 2030, the number of global digital jobs is expected to rise to around 92 million - these are generally higher paid roles.

It is recognised that AI will significantly change the workplace but that technology adoption will be a driver of growth rather than unemployment. The key to unlocking a smooth transition within the workforce is therefore ensuring that all citizens are equipped with the right digital skills to be a part of the digital economy.

## CASE STUDY:

#### NeuroPro



# How Digital Tech is Improving the Diagnosis of Brain Diseases

NeuroPro is a Swiss-based digital health company that is using digital technologies to improve the diagnosis of brain diseases. The company's VMLpro platform provides physicians with access to the data and tools they need to diagnose patients quickly and accurately. Increasing the speed and accuracy of diagnostics has the potential to revolutionise healthcare. Over half of Swiss citizens (58%) think AI will transform the health sector in the next 5 years.



#### VMLpro uses a variety of digital technologies, including:

- **Cloud Computing:** VMLpro is hosted on AWS, which provides a scalable and reliable infrastructure for the platform.
- Machine Learning: VMLpro uses machine learning to analyse data and make predictions about brain diseases.
- **Artificial Intelligence:** VMLpro uses artificial intelligence to automate tasks and improve the accuracy of diagnoses.
- Virtual Reality: VMLpro uses virtual reality to allow physicians to visualise patient data and make diagnoses.



#### These digital technologies have enabled NeuroPro to raise its ambitions in a number of ways:

- Reduce the time it takes to diagnose brain diseases: VMLpro can process large volumes of data in real time, so physicians can reach a diagnosis faster.
- Improve diagnostic accuracy: VMLpro uses machine learning and artificial intelligence to
  analyse data and make predictions about brain diseases. This helps physicians to make more
  accurate diagnoses.
- Increase the availability of diagnostic services: VMLpro can be used by physicians anywhere in the world, so patients have access to diagnostic services regardless of their location. AWS also enabled NeuroPro to comply with data security regulations in a range of different countries.
- Empower patients: VMLpro gives patients access to their own data, so they can be more involved in their own care.
- Advance research: VMLpro can be used to collect and analyse data from a large number of
  patients, which can help researchers to better understand brain diseases.
- NeuroPro is a great example of how digital technologies can be used to improve healthcare. By
  using digital technologies, NeuroPro has been able to provide patients with faster, more accurate
  diagnoses and improve the availability of diagnostic services.

# Here are some additional details about how digital technology has enabled NeuroPro to raise its ambitions:

NeuroPro is able to collect and store large amounts of data about brain diseases. This data can be used to train machine learning models that can help physicians to make more accurate diagnoses.

NeuroPro can develop and deploy a range of new diagnostic tools and technologies. For example, virtual reality can be used to allow physicians to visualise patient data and make diagnoses.

An online digital platform has made it possible to collaborate with partners and suppliers around the world. This has allowed NeuroPro to get access to the expertise and resources it needs to develop new diagnostic technologies.

### Conclusion

This study shows that there is clear potential for Switzerland to maintain its increased adoption of Al and to realise the full economic benefits unlocked by the technology. While businesses recognise and invest in the potential of digital technologies, certain gaps, especially skills, need bridging. Swiss citizens, though hopeful, remain cautious in its expectations, emphasising the need for an informed approach to the nation's digital transformation.

In order to fulfil its digital ambitions and fully realise the benefits of AI, it is important that Switzerland seizes upon the momentum of increased digital technology uptake in the past year to strengthen its capabilities. By investing in infrastructure and education, citizens and businesses can leverage the strength of AI and cloud computing for their own advantage and the country can benefit from the vast transformative potential promised by AI.

#### References:

- 1. Artificial intelligence is the field of computer science dedicated to solving cognitive problems commonly associated with human intelligence, such as learning, creation, and image recognition. Modern organisations collect large volumes of data from diverse sources like smart sensors, human-generated content, monitoring tools, and system logs. The goal with AI is to create self-learning systems that derive meaning from data. Then, AI can apply that knowledge to solve new problems in human-like ways. For example, AI technology can respond meaningfully to human conversations, create original images and text, and make decisions based on real-time data inputs. Organisations can integrate AI capabilities in their applications to optimise business processes, improve customer experiences, and accelerate innovation.
- 2. Our headline estimate of the potential economic impact of digital transformation is based on adding Switzerland to economic modelling about the value of digitalisation <u>first published in 2022</u>, with new survey data from 2023. The data, most notably on accelerated Al uptake, shows that the digital transformation is set to add 127 billion CHF to Switzerland's economy by 2030. This model is based on the potential impact of Switzerland achieving the following four goals, based on the European Commission's Digital Decade targets:
  - Increasing businesses' cloud computing uptake to 75%.
  - Small business adoption of three key digital tools and services (CRM, ERP, and fast broadband) increases to 90%.
  - 80% of Swiss adults achieve basic digital skills.
  - Taking maximum advantage of the potential impact of  ${\sf Al}$  and  ${\sf big}$  data.
- 3. The World Economic Forum, 'Future of Jobs Report 2023', May 2023.