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Whitepaper

# The unseen code

## Unlock Switzerland's female tech potential

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In collaboration with

**McKinsey  
& Company**



**University of St. Gallen**

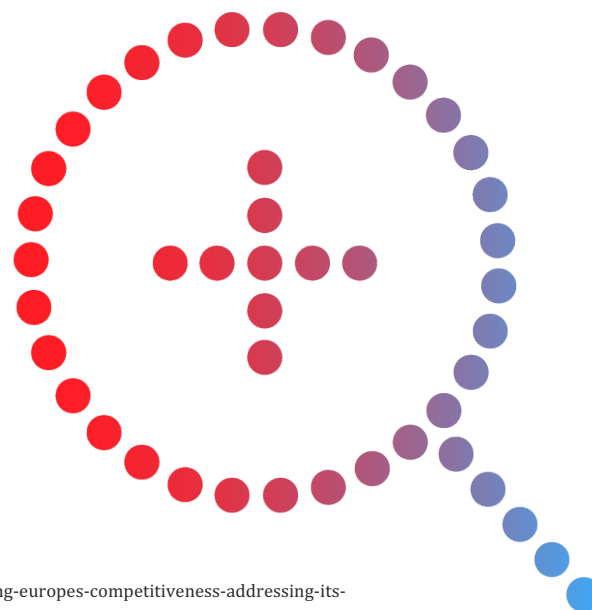
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## Introduction

The European technology industry, specifically in Switzerland, is facing multifaceted challenges that are impeding its global competitiveness, above all a pressing labor shortage<sup>1,2</sup>. Despite comprising 50% of the population, women remain significantly underrepresented in technology-related professions and companies. If this underrepresentation is addressed effectively, there is an opportunity to substantially reduce labor shortages and boost the economy. Currently, female representation in European technology jobs stands at a modest 22%<sup>3</sup>. The picture is similar in Switzerland, where women remain underrepresented in technology companies (25%) and particularly in senior leadership positions (18%)<sup>4</sup>.

This white paper aims to present solutions for solving the talent shortage in the technology sector by attracting a greater share of women to technology professions. It serves as strategic guidance for the executives, policymakers, and professionals in the technology industry who are navigating the challenges posed by this shortage, with a specific focus on Switzerland. The paper aims to address missed opportunities arising from the gender imbalance by equipping these stakeholders with actionable recommendations.

The content of this paper is derived from research conducted by McKinsey & Company, building in particular on “Women in tech: The best bet to solve Europe’s talent shortage”<sup>3</sup>, on insights from the Advance and Competence Center for Diversity and Inclusion (CCDI) Gender Intelligence Report’s technology sample<sup>4</sup>, as well as on contributions from the more than 70 subject matter experts and thought leaders who participated in the World Café hosted by digitalswitzerland at the World Economic Forum. The research insights are augmented with expert insights from leaders in the Swiss technology industry. The collaborative project builds on contributions from digitalswitzerland, McKinsey & Company, and the University of St. Gallen.



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<sup>1</sup> <https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/securing-europes-competitiveness-addressing-its-technology-gap>

<sup>2</sup> <https://www.stellenmarktmonitor.uzh.ch/de/indices/fachkraeftemangel.html>

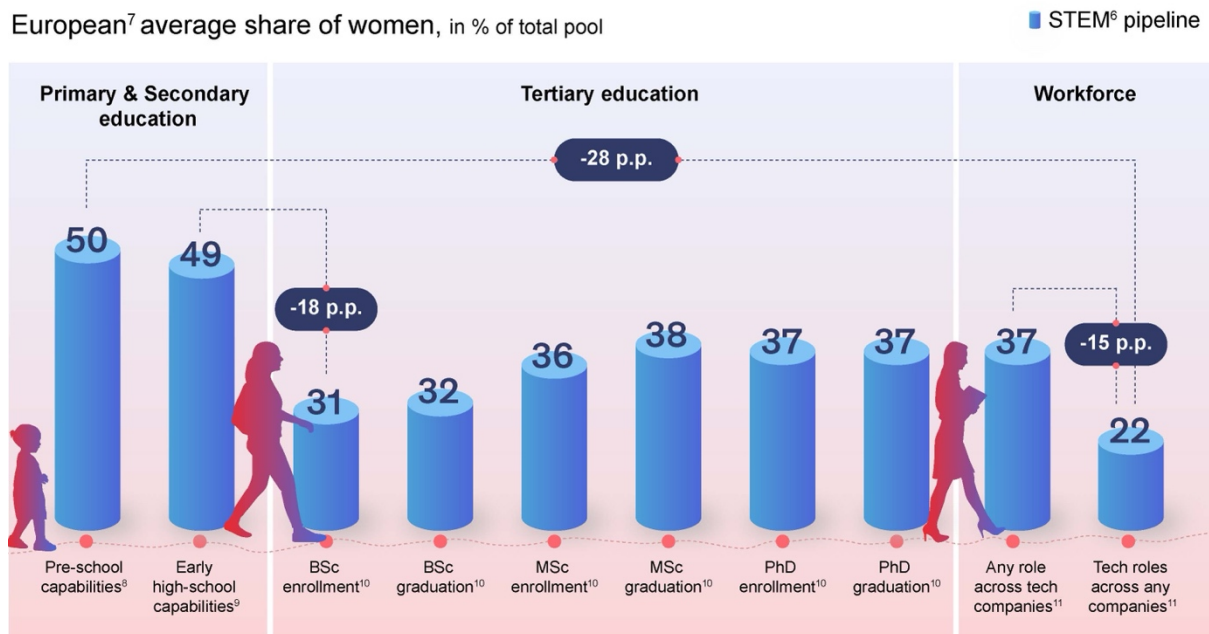
<sup>3</sup> <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/women-in-tech-the-best-bet-to-solve-europes-talent-shortage>

<sup>4</sup> Gender Intelligence Report 2023 - Tech sector: 2023 Switzerland data from Advance and the Competence Center of Diversity and Inclusion (CCDI) at the University of St. Gallen (20 companies, total employees: 52'887, average company headcount: 2'644 employees, ranging from 290 to 16'101)

# Equity in excellence: Examining the tech talent landscape

Women currently account for less than a quarter of all technology roles in Europe. Amongst other things, a lack of encouragement and limited female role models in technology companies present hurdles when it comes to attracting a larger share of women to join the technology sector and stay there. Whilst primary education evinces gender parity in technical proficiency, a noticeable decline becomes apparent as individuals progress in their career. According to McKinsey’s “Women in tech” report, almost 30% of technology talent is lost along the science, technology, engineering, and mathematics (STEM) pipeline by the time women enter secondary education and subsequently the labor market.<sup>5</sup>

The same report found that in the fastest-rising technology roles – for example in software, core and data engineering, and computing – the share of women is even lower than the already limited averages within the respective role family<sup>5</sup>.



Source: Own illustration based on McKinsey Digital, Women in tech: The best bet to solve Europe’s talent shortage, 2023

<sup>5</sup> <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/women-in-tech-the-best-bet-to-solve-europes-talent-shortage>

<sup>6</sup> Defined as total across Natural Sciences, Mathematics, Statistics, ICT, Engineering, Manufacturing, and Construction

<sup>7</sup> Defined as EU-27 countries

<sup>8</sup> Calculated through average TIMSS Grade 4 test scores across Science and Math for EU27 participants, IEA TIMSS test scores 2019

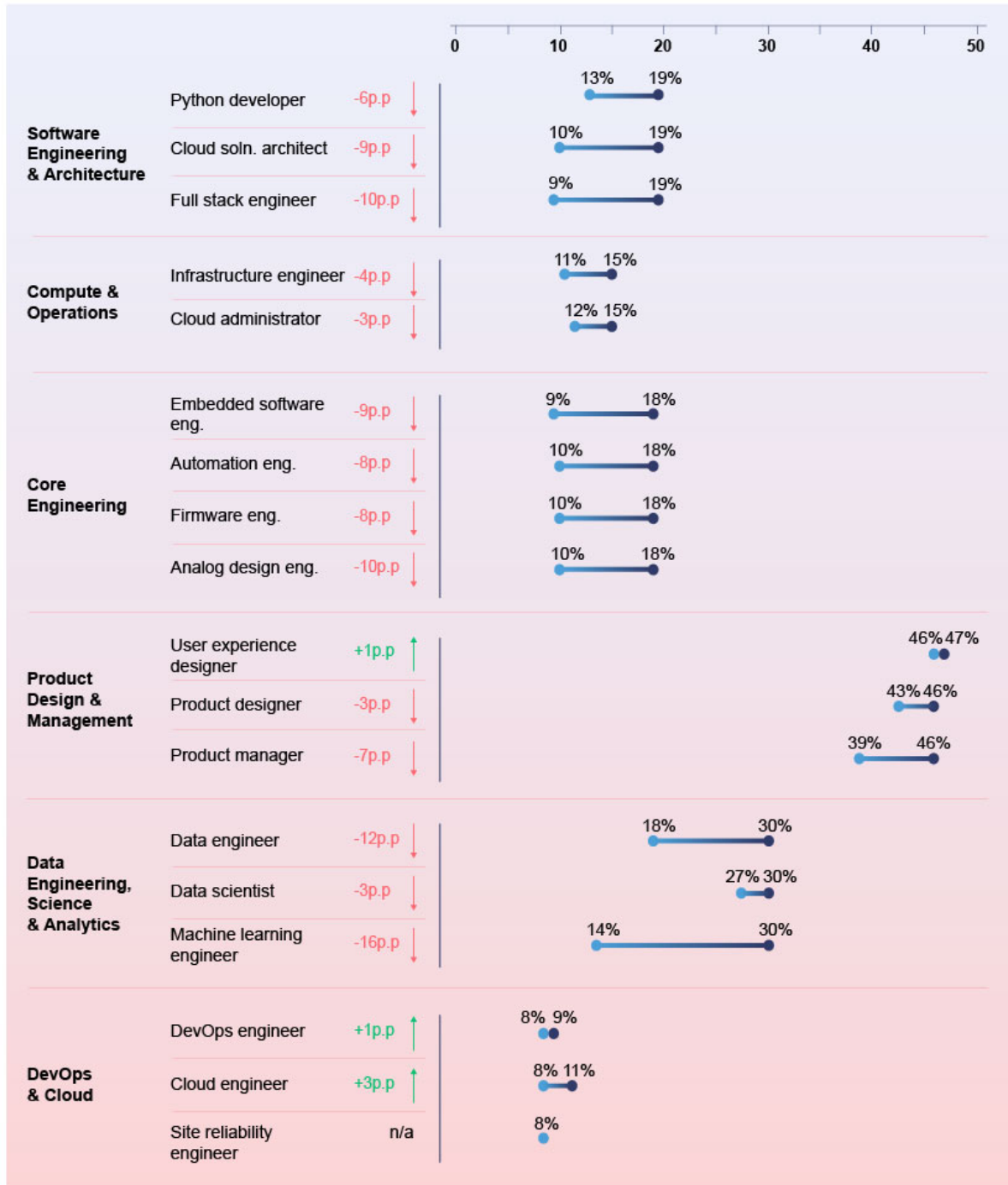
<sup>9</sup> Calculated through average PISA/TIMSS Grade 8 test scores across Science and Math for EU27 participants, OECD Program for International Student Assessment (PISA), 2019

<sup>10</sup> Eurostat data on students enrolled in tertiary education for EU-27 countries, 2020

<sup>11</sup> McKinsey and Eightfold AI research on state of European tech which draws on proprietary Eightfold AI data source on +60Mio European workforce profiles, 2022

Female share across fastest rising tech roles, In % of tech employees, for n = +1Mio profiles, 2022

● Female share ● Average female share within role family ↑ Higher than avg. ↓ Lower than avg.



Source: Own illustration based on McKinsey and Eightfold AI research on state of European tech which draws on proprietary Eightfold AI data source of +1Mio European tech workforce profiles, 2022

Beyond attracting talent, retaining women in technology roles is a critical factor in resolving the gender imbalance in the industry. Research shows that by the midpoint of their careers, over half of women in technology leave the industry, a rate more than double that of men. As a result, women's career ladder towards leadership positions is disrupted and companies lose promising talent along the way<sup>12</sup>.

Harnessing the untapped potential of female talent in the European technology industry is therefore not just a route to addressing the current labor shortage, but an investment in a more resilient and inclusive workforce to drive innovation and economic growth for generations to come. Data derived from McKinsey's "Women in tech" report suggests that boosting the representation of female technology professionals to roughly 45% by 2027 would bridge the talent disparity effectively and result in a GDP upswing of as much as EUR 260 to EUR 600 billion within Europe alone<sup>12</sup>.

## Deep dive into Switzerland's tech talent

The situation in Switzerland is similarly concerning, with women accounting for an overall average of 25% of the workforce in Swiss technology companies<sup>13</sup>. Whilst there is an upward trend in women's participation in STEM fields, evidenced by a slightly growing percentage of female students embarking on studies in ICT and engineering, manufacturing and construction<sup>14</sup>, the country still faces challenges in achieving gender parity in technology professions compared to other OECD nations, where Switzerland ranks third last when it comes to the share of women with a STEM degree<sup>15</sup>. These challenges differ across Swiss cantons, with varying proportions of female students opting for STEM studies<sup>15</sup> in different parts of the country.

The Swiss technology sector sample in the Gender Intelligence Report 2023 reveals that non-management female representation in technology companies stands at just around the level of critical mass (30%)<sup>16</sup>. However, there is a significant disparity in promotion rates to junior management roles, which shows a drop of 7 percentage points compared to representation in non-management positions. The influx of new hires into junior management positions counterbalances this deficiency, hinting at a potential retention and/or promotion issue within the industry. Further, despite the significant efforts directed towards senior management in terms of promotions and new hires, the representation of women in senior management roles remains lower than in junior management roles.<sup>16</sup>

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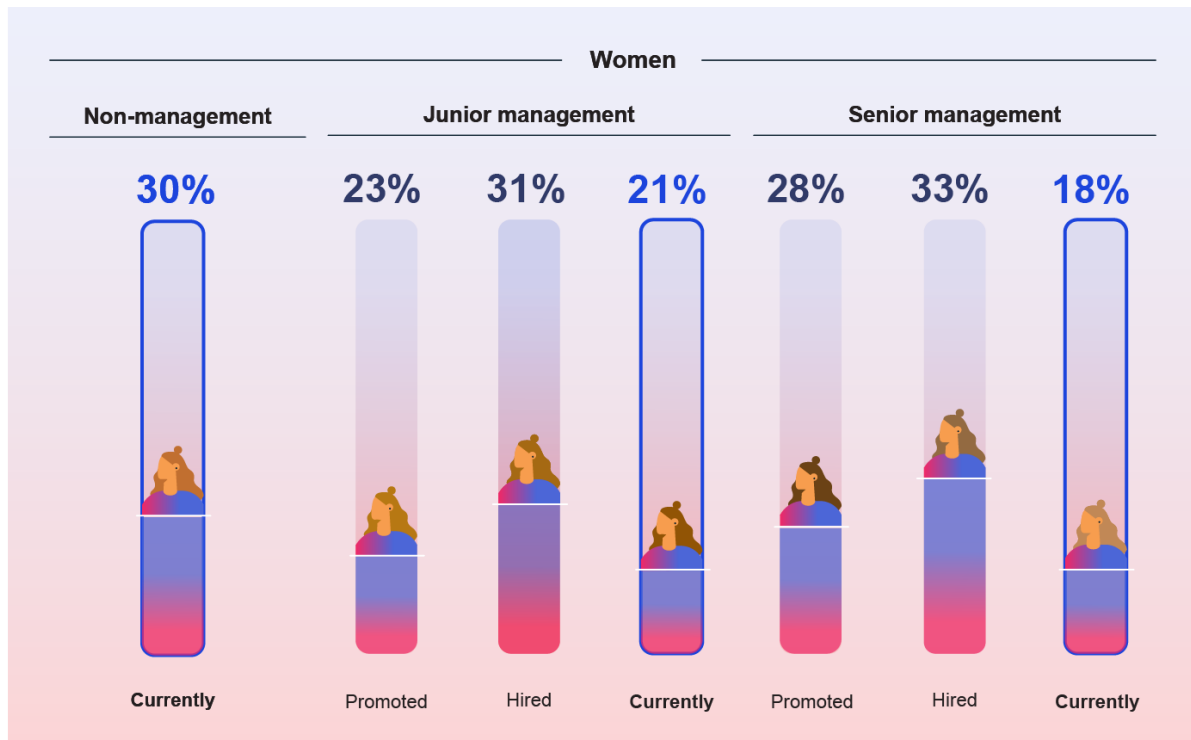
<sup>12</sup> <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/women-in-tech-the-best-bet-to-solve-europes-talent-shortage>

<sup>13</sup> Gender Intelligence Report 2023 - Tech sector: 2023 Switzerland data from Advance and the Competence Center of Diversity and Inclusion (CCDI) at the University of St. Gallen (20 companies, total employees: 52'887, average company headcount: 2'644 employees, ranging from 290 to 16'101)

<sup>14</sup> Federal Statistical Office - Statistics on pupils and students (SDL). Swiss higher education information FSO 2023 system (SHIS)

<sup>15</sup> ETH-KOF- Frauenanteil in MINT-Fächern: Grosse Unterschiede zwischen den Kantonen, 2020

<sup>16</sup> Joecks, J.; Pull, K.; Vetter, K. Gender Diversity in the Boardroom and Firm Performance: What Exactly Constitutes a "Critical Mass?". *J. Bus. Ethics* 2013, *118*, 61–72.



*Source: Own illustration based on Gender Intelligence Report 2023 – Tech sector: 2023 Switzerland data from Advance and the Competence Center of Diversity and Inclusion (CCDI) at the University of St. Gallen (20 companies, total employees: 52'887, average company headcount: 2'644 employees, ranging from 290 to 16'101)*

Additionally, the promotion data in the Swiss technology sector sample reveals a strong age disparity. While both genders start with similar promotion rates in their twenties, women experience a significant decline in promotions as they age. Notably, women see a surge in promotions up to their thirties, but this drops to a mere fraction by their fifties, in contrast to men who enjoy more consistent promotion rates as they age. This data highlights a potential bias in the Swiss technology industry's promotion practices, which disadvantage women over the course of their careers<sup>17</sup>.

Further, research shows that the part-time penalty hinders women's advancement given the correlation between full-time employment and progression to top management levels<sup>18</sup>. Promotions predominantly favor full-time employees, suggesting that part-time work may impede career advancement opportunities for women in the technology sector<sup>19</sup>.

<sup>17</sup> <https://websummit.com/blog/women-tech-workplace-gender-bias-leadership-survey-report-2023>

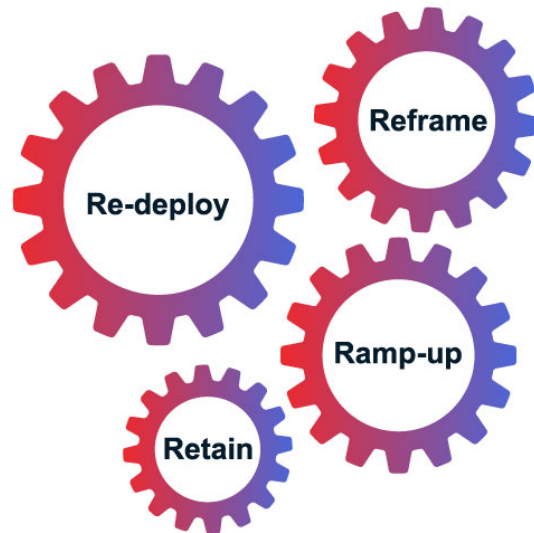
<sup>18</sup> <https://www.advance-hsg-report.ch/en/>

<sup>19</sup> Gender Intelligence Report 2023 - Tech sector: 2023 Switzerland data from Advance and the Competence Center of Diversity and Inclusion (CCDI) at the University of St. Gallen (20 companies, total employees: 52'887, average company headcount: 2'644 employees, ranging from 290 to 16'101)

# Implementing improvement levers: Strategies for corporates and beyond

Based on McKinsey's "Women in tech" report<sup>20</sup>, we see four levers that corporates can activate to increase female representation:

1. Reframe the culture
2. Retain women in technology
3. Re-deploy from non-technology to technology
4. Ramp up the education pipeline to attract more women to technology



We have elaborated a series of practical examples below outlining what companies can do to boost the participation of female talent in the technology sector.

## Reframe the culture

According to Web Summit's 2023 report "The State of Gender Equity in Tech", over 75% of women in the technology industry still perceive a need to exert extra effort and demonstrate their capabilities due to their gender, 75% count unconscious bias as one of the top challenges, and 54% have experienced sexism at work<sup>21</sup>.

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<sup>20</sup> <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/women-in-tech-the-best-bet-to-solve-europes-talent-shortage>

<sup>21</sup> <https://websummit.com/blog/women-tech-workplace-gender-bias-leadership-survey-report-2023>

**“I still hear shocking stories of female leaders in tech companies who are treated below their value simply due to their gender. For example, a female Head of Innovation in an SMB recently told me that she is frequently sent to bring coffee to leadership boards – just because she’s the only woman in the room.”** – Technology industry expert based in Switzerland who wants to remain anonymous

Large technology multinationals tend to be more advanced in fostering gender equality in their working culture, while traditional, male-dominated technology SMUs tend to struggle more with creating an inclusive environment. Consequently, the reporting of gender equality in the Swiss technology industry might be unbalanced, since most media primarily cover large corporates rather than traditional SMUs, despite the important role the latter play as Swiss employers. To hire and retain more female technology talent, employers need to reframe their working culture to make women feel welcomed and valued. This includes initiatives to encourage a mindset shift within technology and its leadership:

- **Recognize and minimize biases in people and career management:** While eliminating biases is nearly impossible, the goal of inclusive workplaces should be to acknowledge their presence and strive to minimize their impact. Initiatives to mitigate biases should be implemented at every stage of the talent pipeline, such as (tech-driven) bias checks in recruiting and review processes – for example, by renaming job titles and ads to become gender-neutral<sup>22</sup> or including a “bias challenger” in evaluation committees<sup>23</sup>.
- **Diversity, equity, and inclusion (DE&I) tracking and leadership accountability:** Introducing DE&I tracking and assigning responsibilities at leadership levels helps to prioritize DE&I goals and track progress. Swisscom introduced regular, tailor-made DE&I tracking for each business unit, dependent on their starting points (e.g., number of women for certain levels and job types). Such individual tracking supports top management and business unit ownership<sup>24</sup>. Another example is Warner, where 10% of leaders’ bonuses are tied to DE&I targets<sup>25</sup>.
- **Community:** Affinity groups such as “Women in tech” formally acknowledge underrepresented groups in organizations and provide a platform for discussing shared experiences, issues, and life events. These community networks are not only valuable for individuals but also for companies thanks to their contribution to fostering psychological safety at the workplace. While the existence of these groups is widespread, they require senior leadership support to actively shape the organizational culture<sup>26</sup>. One popular example in the technology industry is “Women@Microsoft”<sup>27</sup>, an

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<sup>22</sup> Federal Commission on Women's Issues promoted re-naming job titles to become gender-neutral (<https://www.nzz.ch/schweiz/gleichstellung-bei-der-berufswahl-werden-frauen-diskriminiert-ld.1783014>)

<sup>23</sup> [https://weadvance.ch/wp-content/uploads/2023/04/Advance\\_Whitepaper\\_Climbing\\_Higher\\_1\\_2023.pdf](https://weadvance.ch/wp-content/uploads/2023/04/Advance_Whitepaper_Climbing_Higher_1_2023.pdf)

<sup>24</sup> <https://www.advance-hsg-report.ch/en/best-practices/new-ownership-of-targets-drives-success/>

<sup>25</sup> <https://hbr.org/2020/01/5-strategies-for-creating-an-inclusive-workplace>

<sup>26</sup> [https://weadvance.ch/wp-content/uploads/2023/03/Gender-Intelligence-Report\\_2022\\_Break-the-Glass-Ceiling.pdf](https://weadvance.ch/wp-content/uploads/2023/03/Gender-Intelligence-Report_2022_Break-the-Glass-Ceiling.pdf)

<sup>27</sup> <https://news.microsoft.com/de-ch/2021/03/08/international-womens-day-bei-microsoft-wenn-alle-geschlechter-gleichberechtigt-sind-profitieren-wir-alle/>



affinity group that offers women networking and mentoring opportunities with Microsoft leaders in their local Swiss offices as well as professional development for female IT talent.

- **Selected DE&I trainings:** Our research finds that mandatory DE&I trainings not only fail to make a difference but can also provoke resentment among participants, thus decreasing psychological safety for others involved<sup>28</sup>. However, thoughtfully selected DE&I training programs can educate effectively on inclusivity, and hands-on practical sessions may enhance interpersonal dynamics among colleagues and leaders (e.g., trainings with “opt-out” registration processes). One innovative example is Advance’s virtual reality simulation, where leaders of all genders experienced the typical challenges faced by women in the business world (e.g., being the only woman in the boardroom). Such experiences foster discussion and open the eyes of male peers<sup>29</sup>.

## Retain women in tech

In addition to the low representation of women in the technology sector, women also experience significantly higher attrition rates than their male counterparts. Reasons for women leaving the technology industry include a lack of senior-level support, wage disparity, fewer career development opportunities, and work-life balance issues<sup>30</sup>. The perception of senior-level support varies greatly depending on perspective. A recent study conducted by the Integrating Women Leaders (IWL) Foundation revealed that while 77% of male respondents at C-suite level claim to be active inclusion allies, only 45% of female respondents expressed confidence that the male executives in their companies are truly “active allies” or “public advocates”<sup>31</sup>. Improving retention includes initiatives that establish equity, development opportunities and adequate support systems for female technology talent:

- **Equal pay:** Implementation of statistical equal pay without compromises, e.g., by applying the scientifically recognized, reliable, and legally compliant tool for equal pay analysis by the Swiss Confederation “Logib”<sup>32</sup>. The CCDI of the University of St.Gallen awards companies a “we pay fair” label if the unexplained difference in pay between women and men is below 5%. Companies currently certified include AXA, Helvetia, Migros Bank, M&S software engineering and CSL Behring<sup>33</sup>.
- **Female role models:** Visibility of (more) female leadership and increased advertising of successful female examples, e.g., communication of promotions and other “win” stories to inspire female talent. AXA, Cognizant, Novartis, and Siemens joined forces in the “Role models in tech” campaign<sup>34</sup> to promote female technology role models

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<sup>28</sup> <https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/the-organization-blog/dont-train-your-employees-on-de-and-i-build-their-capabilities>

<sup>29</sup> <https://weadvance.ch/advance-ceo-breakfast-2022-virtual-reality-empowers-inclusive-leadership/>

<sup>30</sup> <https://www.mckinsey.com/~media/mckinsey/business-functions/mckinsey-digital/our-insights/women-in-tech-the-best-bet-to-solve-europes-talent-shortage/women-in-tech-the-best-bet-to-solve-europes-talent-shortage.pdf>

<sup>31</sup> Integrating Women Leaders Foundation (IWL) 2022 State of Allyship-in-Action Benchmark Study

<sup>32</sup> <https://www.ebg.admin.ch/de/lohngleichheit-analysieren-mit-logib>

<sup>33</sup> <https://www.we-pay-fair.ch/en/>

<sup>34</sup> <https://rolemodelsin.tech/rolemodels/>

internally and externally. Additionally, they committed to improving gender diversity in their technology teams, for example by introducing job-sharing positions or bias trainings.

- **Development:** Ensuring transparency of development paths and programs along the talent pipeline, such as clearly defined targets and requirements at each level from onboarding to leadership, as well as inclusive support enabling female technology talent to focus on long-term positions with leadership prospects. For example, MSD Switzerland built a Women's Network leadership academy that focuses on women early in their careers, connects them with coaches and inspirational leaders, and trains them on topics such as self-marketing, work-life balance, and career empowerment<sup>35</sup>. Addressing the fact that women in male-dominated industries tend to downgrade their skills and achievements compared to their male peers<sup>36</sup>, the provider "Rmrkblty" offers an #IAMRemarkable program for employees on self-reflection and self-promotion.

**"To retain women, overcoming gender modesty norms can play a significant role. By supporting women to articulate and present their achievements, we can create better equal access to growth opportunities for female talent. This also benefits retention issues as it increases visibility and chances for promising career progression."**  
– Christine Antlanger-Winter, Country Director Switzerland, Regional Lead Alpine (Switzerland & Austria) & Site Lead Google Zurich

- **Purposeful sponsoring of female talent by (male and female) leaders:** Active sponsorship, involving not only mentoring but also advocating for women and providing access to influential networks, significantly enhances the likelihood of women achieving impact in business. If a man endorses a woman's idea, it is 70% more likely to be heard and 200% more likely to be implemented<sup>37</sup>. Syngenta launched a sponsorship program supporting female technology talents in middle management on potential advancement to the IT & Digital Leadership team. As part of the program, these women were matched with current leadership members outside their immediate sphere of influence who would advocate their advancement based on their achievements. Within a year of the program, more than 50% of the participants had positively changed their roles, thus strengthening the talent pipeline<sup>38</sup>. Elsewhere, IBM Consulting launched a ten-month pilot of an allyship program in which male leaders were paired up with female leaders. The pairs took part in exercises and discussions together to deepen the male's understanding of allyship and what it really means to advocate for women<sup>39</sup>.

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<sup>35</sup> <https://www.advance-hsg-report.ch/en/best-practices/empowering-women-leaders-pf-tomorrow/>

<sup>36</sup> <https://www.rmrkblty.org/iamremarkable>

<sup>37</sup> Sylvia Ann Hewlett and Laura Sherbin, Athena Factor 2.0: Accelerating female talent in science, engineering, and technology, Center for Talent Innovation, 2014

<sup>38</sup> <https://www.advance-hsg-report.ch/en/best-practices/targeted-female-sponsorship-grows-tech-leadership/>

<sup>39</sup> <https://www.ibm.com/downloads/cas/8VNKABWP>

- **Lifecycle support:** Lifecycle-dependent support during critical phases (e.g., location and time-flexible working; job-sharing options; support for (child)care; (longer) parental leave; alumni and “family leave” communities for staying in touch with female talent; and return-to-work programs). ABB is a pioneer in the field of childcare, offering its own subsidized kindergartens with a guaranteed place for employees. This promotes retention, especially among young women<sup>40</sup>, by making it easier for parents to combine children and a career.

## Re-deploy from non-tech to tech

Even if companies are willing to invest in recruiting female talent, the technology industry is challenged by the shallow hiring pools of female STEM majors considering jobs in tech<sup>41</sup>. In the long term, targeting unconventional talent pools might be a competitive USP for employers in need of technology skills. Initiatives for re-deploying female talent include upskilling women who do not have a traditional technology background as well as upskilling women who already have a technology background to take on more demanding roles.

- **Reskilling programs for people with no technology background:** Create new entry points for talents who have not followed a traditional academic technology path. Microsoft’s 16-week LEAP program<sup>42</sup> allows participants to reskill through classroom or virtual learning and hands-on engineering apprenticeship projects. They offer different pathways such as Software Engineering, Technical Program Management, User Experience Design, Support Engineering, and Business Program Management. The initiative targets a wide range of people, such as stay-at-home mothers who wish to re-enter the workforce or those who are looking to change career.

“As a self-confessed geek and technology enthusiast currently leveraging AI to transform legal work, I know what it’s like to feel your gender is a barrier to success. When coding, I used to hide my gender with a cartoon to gain more acceptance of my code [...] Thankfully, the next generation of technologists don’t have to have technical backgrounds [...] Skills like emotional intelligence, critical thinking and creativity are all vital to applying AI for good and delivering the future of AI that we know is possible.” – Kriti Sharma, Chief Product Officer Legal Tech at Thomson Reuters

- **Upskilling programs for technology returners:** Develop programs to allow female technology talent to return to technology roles. IBM designed its “Tech Re-entry<sup>43</sup>”

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<sup>40</sup> <https://www.abbkinderkrippen.ch/>

<sup>41</sup> <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/women-in-tech-the-best-bet-to-solve-europes-talent-shortage>

<sup>42</sup> <https://leap.microsoft.com/case-study.pdf>

<sup>43</sup> <https://www.ibm.com/blogs/jobs/return-to-the-workforce-with-the-ibm-tech-re-entry-program/>

program specifically for women who have taken more than a one-year break from their career and technology role and are interested in re-entering the workforce in an IBM technology position. The participants receive hands-on training and mentorship, working alongside multidisciplinary teams in various technical areas such as software development, cybersecurity and data science. The program bridges the gap between participants' previous experience and the skills needed in an IBM technology role, while providing an inclusive and collaborative learning environment. Similarly, Salesforce's 12-month "Bring women back to work" program in Switzerland reskills women for a new industry and helps them find employment in the program's partner companies<sup>44</sup>.

## Ramp up the education pipeline

Although studies on European students report the same STEM interests and skills during primary and secondary education, societal biases reduce the female share of Bachelor enrolments by 18 percentage points, which means on average only 32% of BSc enrollers are female<sup>45</sup>. The share of female tertiary graduations in STEM subjects is even lower, resulting in a significant loss in the female tech talent available. A similar picture emerges with regard to the Swiss vocational training, where female apprentices are still in the minority at only 13%<sup>46</sup>. Initiatives to increase the talent pipeline include raising awareness from a young age, adapting communication channels, and appealing programs to kickstart a technology career.

Selected bottom-of-the-talent-funnel initiatives:

- **Early touchpoints:** Providing early inspiration to young women in primary and secondary education through cooperations with schools that show female role models and exciting activities (e.g., coding, hackathons) in the technology space. IngCH organizes several "Girl tech days" each year during which girls in secondary school visit its partner companies (e.g., UBS, MAN, ABB, IBM) for an engaging program of workshops and presentations that showcase STEM jobs<sup>47</sup>. In Switzerland, such programs would need to consider regional differences in the education system in order to identify the most suitable touchpoints for female students and technology companies.
- **Broad communication:** Diversified communication channels (e.g., social media, talk shows) to reach different audiences and awake an interest in technology positions. ABB's "Unstoppable" film series tells the inspiring stories of three female leaders in the mining, pulp and paper, and metals industries, to raise awareness of diversity and inclusion in these industries and encourage other women to follow in their footsteps<sup>48</sup>. Similarly, the Vodafone Foundation's #girlscanSTEMit campaign encourages girls in Europe to enroll in STEM courses with a video on social media highlighting the

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<sup>44</sup> <https://www.bringwomenbacktowork.com/post/bring-women-back-to-work-initiative-led-by-salesforce-switzerland>

<sup>45</sup> <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/women-in-tech-the-best-bet-to-solve-europes-talent-shortage>

<sup>46</sup> [https://www.ict-berufsbildung.ch/resources/ICTswitzerland-Positionspapier-Mehr-Frauen-in-die-Informatik\\_2020\\_03.pdf](https://www.ict-berufsbildung.ch/resources/ICTswitzerland-Positionspapier-Mehr-Frauen-in-die-Informatik_2020_03.pdf)

<sup>47</sup> <https://ingch.ch/projekt/meitli-technik-tage/>

<sup>48</sup> <https://new.abb.com/news/detail/100947/abb-unveils-unstoppable-film-series-to-underline-the-lives-of-women-in-industry-and-advocate-for-diversity>

importance of women in STEM jobs and how the foundation's offering of coding programs and workshops supports their development<sup>49</sup>.

Selected top-of-the-talent-funnel initiatives:

- **Adjusted recruiting:** Adjust recruiting strategy to the female target group through measures such as non-biased job advertisements, job titles that avoid gender-associations<sup>50</sup>, female employee ambassadors, exclusive safe-space events, and individual conversations with promising candidates. Several companies, including consultancies like Deloitte<sup>51</sup> or McKinsey<sup>52</sup>, offer targeted recruiting events where female technology talent can connect with female (tech) leaders and learn about potential career paths. Companies can learn from the education sector on the female-targeted naming of roles.
- **Entry-level attractiveness:** Create appealing entry-level jobs and graduate programs (e.g., with job rotations). ABB has created a training module to teach women in its graduate programs to fully embrace their potential, showcase their strengths and expand their network in the company<sup>53</sup>.
- **Strengthening vocational training:** Vocational training is the largest provider of technology professionals in Switzerland. To address the skills shortage, it is essential for employers to increase the average offered apprenticeship positions from 6% to 8% in relation to its technology professionals<sup>54</sup>. To address more female apprentices, "ICT-Berufsbildung Schweiz" has developed a concept for companies to gradually implement career marketing measures for females, including target-group communication, role model visibility and information events for interested talents<sup>55</sup>.

## Measures beyond corporate boundaries

In addition to employers, it is imperative that other stakeholders also actively participate in efforts to increase female representation in the technology industry. The following are examples of structural support and initiatives that could be provided outside of corporate circles:

- **Primary and secondary education:** The early introduction of STEM subjects that shape the professions of the future, teachers who foster students regardless of their gender in these subjects, and practical supplementary programs to boost interest and promote diverse STEM talents. Countries such as Australia, Japan, and Singapore have already incorporated coding into their primary school curricula<sup>56</sup>.

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<sup>49</sup> <https://www.vodafone-stiftung.de/internationaler-tag-der-frauen-und-maedchen-in-der-wissenschaft-kampagne-girlscanstemit-ermutig-maedchen-zu-mint-faechern-2024/>

<sup>50</sup> See levers for universities below on re-naming degrees as inspiration for gender-neutral job titles

<sup>51</sup> <https://deloitteuk.avature.net/WomenInTech?jobId=15003>

<sup>52</sup> <https://ethcareer.ch/de/veranstaltungen/detail/?id=325b4e60-b0fe-ea11-80ec-e5cc59d714af>

<sup>53</sup> <https://weadvance.ch/best-practices/empowering-female-trainees-to-foster-their-strengths-and-unleash-their-potential/>

<sup>54</sup> <https://static1.squarespace.com/static/5109428de4b04ea0ec18ef88/t/63870c9fd4b94b69f7cb8841/1669794977458/thesis-2022-Thought%20A0Leader+Statement.pdf>

<sup>55</sup> [https://www.ict-berufsbildung.ch/resources/ICTswitzerland-Positionspapier-Mehr-Frauen-in-die-Informatik\\_2020\\_03.pdf](https://www.ict-berufsbildung.ch/resources/ICTswitzerland-Positionspapier-Mehr-Frauen-in-die-Informatik_2020_03.pdf)

<sup>56</sup> <https://www.boboskey.com/2022/10/7/countries-that-have-adopted-coding-as.html>

- **Events, bootcamps and mentoring for young STEM talent:** Technical universities like ETH and EPFL can spark enthusiasm for STEM subjects<sup>57</sup> among students by offering activities such as summer camps. Tailored programs for females, such as EPFL's STEM program on coding or robotics for 9 to 16-year-old girls, foster a supportive group dynamic and create a safe space free from gender biases and stereotypes<sup>58</sup>. Mentoring programs matching female technology professionals with interested girls<sup>59</sup> can also provide inspiration.
- **Technical education programs:** Special motivation is required to inspire female students to pursue technical education programs, despite the fact that professionals who hold these trainings are generally sought after. Individual career counseling, support during training, and attractive programs motivate talented young women to feel valued in their future profession, which might still be male-dominated. Possible measures include the trial days in the above-mentioned "Girl Tech Day" example or internship programs with low entry barriers.
- **Universities:** As female representation still lags behind male representation in STEM subjects, universities need to take measures to promote a diverse talent pool. These could include increasing the number of inspiring (female) professors, establishing cooperations with modern and diverse industry associations and corporates, as well as organizing visitor days for female students. The Technical University of Denmark identified that the names of its classes had a gender bias and achieved a more than 50% increase in the number of female students enrolling in STEM classes by renaming them<sup>60</sup>. The Fachhochschule Hagenberg in Austria provided an inspiring example for the German-speaking region by introducing a STEM degree tailored specifically to female students. From collaborative development involving numerous female professors to an inclusive class structure and the adoption of gender-neutral titles ("Design of Digital Products"), the program aims to attract more women to pursue IT-related subjects<sup>61</sup>. These efforts have boosted the representation of women in Hagenberg's IT faculty, which, with female enrollment of over 30%, far exceeds Austria's average of 18%<sup>62</sup>. This initiative also offers valuable inspiration to employers when it comes to job titles and required qualifications (see chapter above).

"I see big potential in re-naming university degrees. I personally studied "Media Engineering and Design" and I would probably never have signed up for the class if it had been named "Computer Science". Even though my chosen degree had just as many STEM classes as Computer Science, it had around 50% females, while only around 2% females studied Computer Science." – Christine Antlanger-Winter, Country Director Switzerland, Regional Lead Alpine (Switzerland & Austria) & Site Lead Google Zurich

<sup>57</sup> <https://www.sciena.ch/de/teaching/more-girls-in-stem-disciplines-but-how.html>

<sup>58</sup> <https://www.epfl.ch/education/education-and-science-outreach/de/wissenschaftsfoerderung/mint-programm-fur-madchen/#:~:text=Ein%20kostenloser%20Club%20f%C3%BCr%20junge,in%20den%20ITC%20Branchen%20steigert>

<sup>59</sup> E.g., <https://www.tecladies.ch/de/>

<sup>60</sup> <https://innovationsfonden.dk/sites/default/files/2018-10/gender-diversity-in-denmark.pdf>

<sup>61</sup> <https://www.fh-ooe.at/campus-hagenberg/die-fakultaet/aktuelles/news/news/fuer-mehr-vielfalt-in-der-informatik/>

<sup>62</sup> <https://science.apa.at/power-search/9832906596727658592>

- **Scholarships:** The provision of scholarships and financial support could also boost the number of female students in STEM subjects. The UniBE foundation at the University of Bern addresses the gender gap<sup>63</sup> by offering two female masters students full scholarships in their ARTOG Center for Biomedical Engineering Research and Center for Artificial Intelligence.
- **Multi-channel campaigns:** A new standard of diversity could be achieved by running multi-channel campaigns to enhance the acceptance and desirability of women in the technology sector. A regional example is the “Women in Tech” campaign by the Canton of Zurich in collaboration with digitalswitzerland and “ICT-Berufsbildung Schweiz”<sup>64</sup>. The use of a diverse range of channels, from traditional newspapers to social media platforms like TikTok, is crucial for reaching a wide audience.
- **Female technology awards and events:** Awards and events specifically tailored to women in the technology sector encourage female talent and inspire outsiders to enter the industry. Examples include #herHack<sup>65</sup>, a female-led hackathon, and the Hidden Figures Award<sup>66</sup>, which honors female talent in technology categories. Involving women who are currently on (family) leave in community events in the technology industry creates a sense of belonging and motivates the women to return to their profession.
- **Breaking the barriers for parents:** Further supportive measures for increasing female talent include optimizing parental leave for both mothers and fathers, as well as improving childcare systems to support families, particularly women, in balancing their family responsibilities and their career aspirations.

## Conclusion

Addressing the gender disparity in the Swiss technology sector is not only a matter of equality but an urgent necessity to alleviate the pressing labor shortage in the industry. By reframing workplace culture, implementing retention strategies, facilitating re-deployment to technology roles, and ramping up the educational pipeline, we can unlock the full potential of female talent in tech. To accomplish this, it is imperative that stakeholders at all levels take decisive action and press ahead with the initiatives required.

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<sup>63</sup> <https://unibefoundation.ch/wp-content/uploads/2023/11/factsheet-women-in-bme-and-aim-scholarships.pdf>

<sup>64</sup> <https://www.zh.ch/de/news-uebersicht/medienmitteilungen/2022/12/anteil-der-frauen-in-tech-berufen-erhoehen.html>

<sup>65</sup> <https://herhack.ch/>

<sup>66</sup> <https://techface.ch/hidden-figures-award/>