Girls as Engineers and Girls Go Science!

Motivation and support for girls in IT and STEM

Poland 2001 – ongoing

Supporting work–life balance and addressing women's underrepresentation in the labour market — approaches and good practices in the ICT sector

Summary

A key aim of the initiatives Girls as Engineers! and Girls Go Science! is to introduce technical and engineering studies to high-school girls and to promote the attractions and long-term potential benefits of a career in one of the tech professions. Another important goal is to show that technical studies can address a recognised need in business and industry: to attract highly trained workers with a wide range of skills. The initiatives are managed under the auspices of the ministries of Science and Higher Education, National Education, Administration and Digitisation, and Labour and Social Policy; the Government Plenipotentiary for Equal Treatment, the Patent Office and the Ombudsman.

1. Country information — policy in context

The ICT sector in Poland is one of the fastest growing in Eastern Europe — similar to the ICT sector in Bulgaria. According to the most recent Eurostat data, there were 431 800 ICT specialists employed in Poland in 2016, and the ICT industry contributed around 8% of the country's GDP. With the number of ICT companies increasing (24.5% between 2011 and 2014), the number people working in the sector is increasing annually at a rate of around 6%.

The need to attract larger numbers of women into the ICT sector is a familiar issue for the majority of the major international IT companies with branches in Poland — Cisco, Intel, Accenture, Nokia — and in other European countries where the growing ICT sector is trying to recruit and retain the most talented employees. In response, these ICT companies are currently implementing relevant measures developed at their respective global headquarters and replicated internationally throughout most branches, including in Poland. Measures reported in some of Poland's offices to reconcile work and family life included the following:

- Flexible working hours and teleworking, which allow employees to combine work with family responsibilities
- Grants for childcare
- Programmes that (kids@work) allow employees to bring children to the office if there is an unforeseen problem with their usual childcare
- Summer camps for kids
- Health packages with options to insure family members.

A number of other measures are directed to younger, recently graduated women or women rethinking their professional career. These include special webinars for potential new employees, women's training programmes, free expert-led training and internships that can lead to opportunities for a paid job.

In Poland, a large number of highly active self-organising grassroots women's communities are working on a range of gender-equality measures: promoting women in IT, providing women with education and inspiration to follow their interests, and motivating women to run their own projects and establish new tech-related companies. Geek Girls Carrots is such a community, bringing together women administrators, analysts, application architects, developers, graphic designers, IT managers, programmers, social media specialists, system architects, start-up innovators, computer science students and many more. Since Geek Girls Carrots started in 2011, 190 meet-ups have been organised involving more than 400 speakers at 93 tech events and 79 programming workshops.

2. Boosting the number of women in ICT: good practice

Established in 1998, Perspektywy Education Foundation is a private non-profit foundation that for the past 20 years has been helping girls to choose technical and scientific options via a range of initiatives such as *"Girls' School for Technology!"* and *"Girls to the Strict!"*. The foundation also runs a number of inspirational activities for young women already in science and technology: "Lean in STEM" , "Girls Go Start-Up! Academy", "Girls to Learn!", "IT for She", and, with Intel, a scholarship programme for IT students, "New Technologies for Girls". For the last 11years, the larger national campaigns, Girls as Engineers! (*Dziewczyny na politechniki!*) and Girls Go Science! (*Dziewczyny do ścisłych!*), were organised in Poland by the Perspektywy Education Foundation and the Conference of Rectors of Polish Technical Universities. These initiatives have been highly successful: the proportion of girls involved in STEM education in Poland increased during this period from 29 to 37%; more than 70,000 girls have participated in the campaigns.

Every spring, Poland's public and private technical universities and STEM faculties are invited to take part in the *National Girls Open Day*. A wide variety of events offers young women the opportunity to learn about academic life at the technical institutions and make useful connections. The universities involved open their laboratories, workshops and offices, and organise meetings with women professors to show the girls concrete examples of how interesting and exciting it can be to study at a university of technology.

Some of the main elements of the IT for She programme — launched 2017:

- Women in Tech Camp — a yearly IT camp for girls, one of the largest in Europe
- A mentoring programme run by representatives of Poland's leading tech companies
- Voluntary campaigns encouraging girls to learn programming — primarily living in small towns.

IT for She was conceived as a systematic and collaborative, long-term activity that aims to mobilise the potential of women in IT. Recruitment to mentoring programme starts every 8 March, International Women's Day. The organisers invite students and graduates from Polish technical universities and IT faculties, who can select a mentor and register on the official website. During the programme, women are provided with opportunities to develop skills in programming, new technologies, project management, career planning and leadership. The focus is on individual relationships with high-profile experts at leading IT companies.

Each summer, organisers invite women studying IT to volunteer for a programme in which they share programming and technological knowledge with people living in small villages. In September, the programme invites around 120 girls from across Poland to a five-day Women in Tech Camp, a veritable feast of inspiration, activities and networking The Foundation together with the Polish Innovation Coalition and tech companies, Cisco, Ericsson, Intel, Citi, Goldman Sachs, Roche and IGT, the 2017 camp

hosted 130 female students; some 150 socially engaged employees of high-tech companies served as mentors. Publicised widely in the media locally and nationally, and at international conferences and events, the programme raised awareness among tech-company employees, university staff, teachers and broader society of the importance of women's participation in technology.

Within the IT for She programme, the Foundation also organises an initiative called 1000 Kids in IT, a campaign encouraging young women in IT to volunteer as teachers of programming and IT for children in small towns and villages. In the summer of 2017, 50 women IT students from 19 Polish technical universities spent five days as volunteer teachers of programming and IT to primary school children from small towns and villages. The children learned basic coding, how to use 3D printers, programming (with Arduino software) and building robotics (with LEGO) and more. An outstanding element here was the fact that kids from small communities and their parents and teachers were able to observe and learn from the young female students as *experts* in the field of IT — living inspiration for young girls inventing their own professional future in technology.

The book *Lean in* by Sheryl Sandberg inspired the Foundation's 2014–2017 Lean In project, which contributed to the creation of a women's networking culture in the tech industry and STEM. The following elements combined in the project to promote a technical and/or scientific education and a career in the tech industry or other STEM-related fields among young women:

- Lean in High Tech (mentoring)
- Women in Tech Summit (conference)
- Inspiration Academy Girls go STEM! (virtual meetings)
- Lean in STEM Technological Teatime (face-to-face meetings with tech companies)
- leaninstem.pl and Active Circle – Lean in STEM Poland (Internet networking platforms)

Project partners are the United States of America Embassy in Poland, the Polish–US Fulbright Commission and the Polish Ministry of Administration and Digitisation. The project's technology partners were Bosch, IBM, SAP, Siemens, 3M, BCG, Cemex and Intel.

The Girls Go Start-Up! is an academy of innovation for women students and graduates in STEM. The initiative was rolled out jointly by the Foundation and Poland's Association of Top 500 Innovators. Financially supported by the Ministry of Science and Higher Education under the name "DIALOG" in the years 2017 - 2019, awarded to the Top 500 Innovators, its goal was to help women studying technical and medical degrees to learn the practicalities as well as the theory behind creating a start-up business. Aside from interdisciplinary projects, the academy also focused on IT, bio- and nanotechnology, energy and creative industries. The Girls Go Start-Up! academy provides structured mentoring with women Innovators — the nexus between science and business in Poland. Representatives from innovative enterprises in California's Silicon Valley share their knowledge and experience with younger colleagues at universities, such as the University of California, Berkeley, and notable start-up entrepreneurs from the USA and Poland are invited to join the mentors. In the first edition, the mentoring programme was supported by the Expertise Hub — experts of both genders in law, intellectual property rights, patents, innovation, commercialisation of research findings, business planning, product formatting and marketing, financing, fundraising (including at the European and global levels), presenting business projects, and design thinking providing consulting to programme participants.

Contact person:

Bianka Siwińska

e-mail: b.siwinska@perspektywy.pl
mobile: +48 501 535 785
telephone: +48 22 628 58 62

Further information:

www.dziewczynynapolitechniki.pl
www.itforshe.pl
http://girls-startup.pl/
A short film about IT for She: https://youtu.be/3NwJslS-SIs
http://girls-startup.pl

References:

- Eng. *Women in IT, 2016,* http://kobietywit.pl/