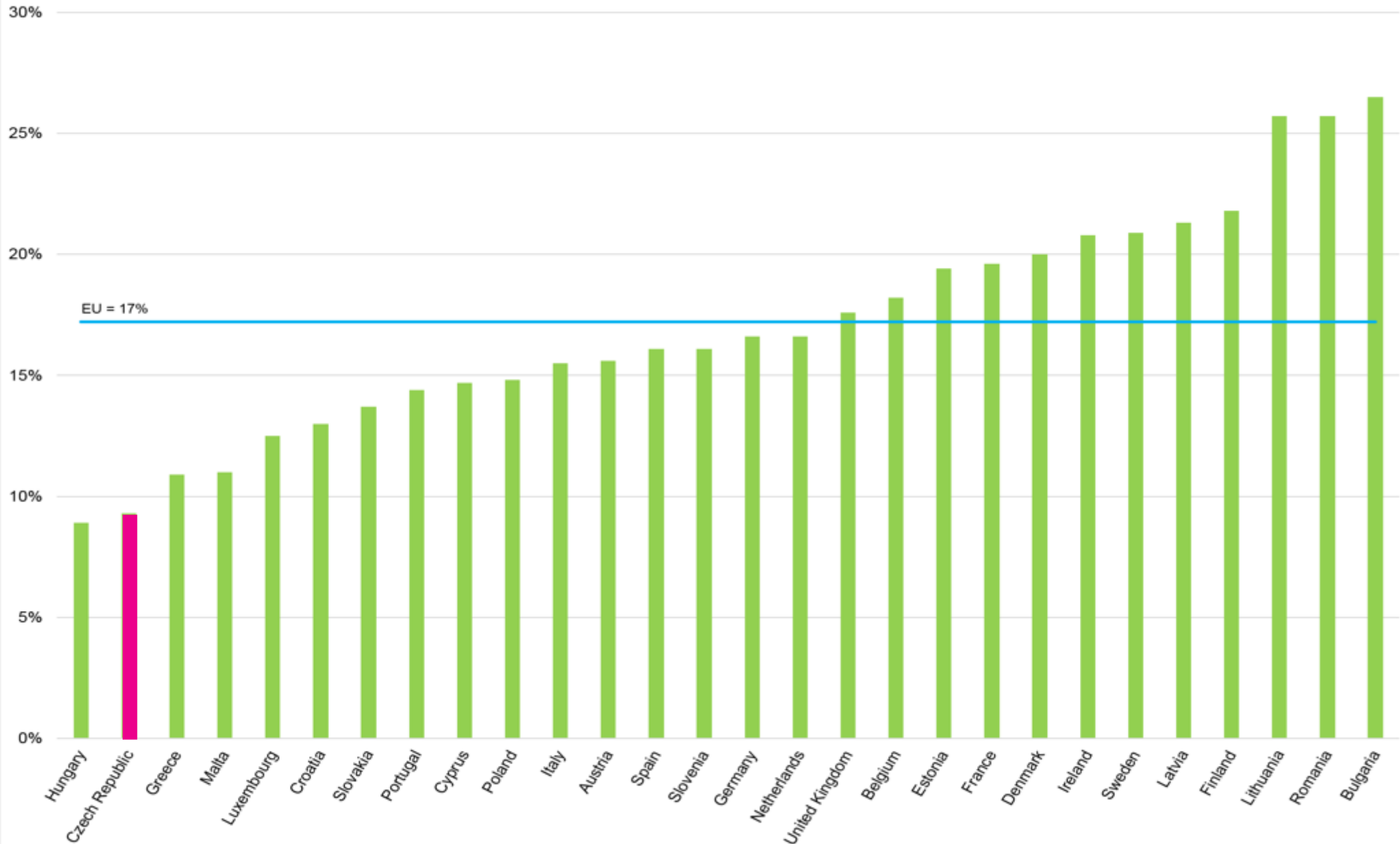


Girl-Friendly ICT Education Design Czechitas Summer School

Barbora Buhnova, Czechitas and Masaryk University
Session 2, WIRE workshop, Oct 28, 2020

Proportion of women among ICT specialists in employment, 2017



THE STORY OF CZECHITAS



We started with popularization of STEM among girls and women and their education towards ICT skills.



***STEM**: Science, Technology, Engineering and Mathematics
***ICT**: Information and Communication Technologies

Continued with outreach towards children and their ICT/STEM teachers.



Not forgetting alumni programs, career development and consultancy for companies.



THE CONCEPT GREW VERY POPULAR





CZECHITAS is a **community** connecting people who want to **learn IT** with those who want to **share** their IT knowledge. We connect *companies, municipalities, universities, IT experts* and *non-profit organizations* under a common goal of making IT skills more accessible to general public.



FORMAT OF EVENTS

- One-day workshops
- Long-term courses
- Upskilling academies
- Hackathons
- Coding clubs
- Internships

... AND FOR YOUTH AND CHILDREN

- Summer schools for high-school girls
- Summer camps for kids
- Programs for schools
- Programs for teachers and headmasters
- EU Code Week, Hour of Code events
- Family days





Summer School for High School Girls

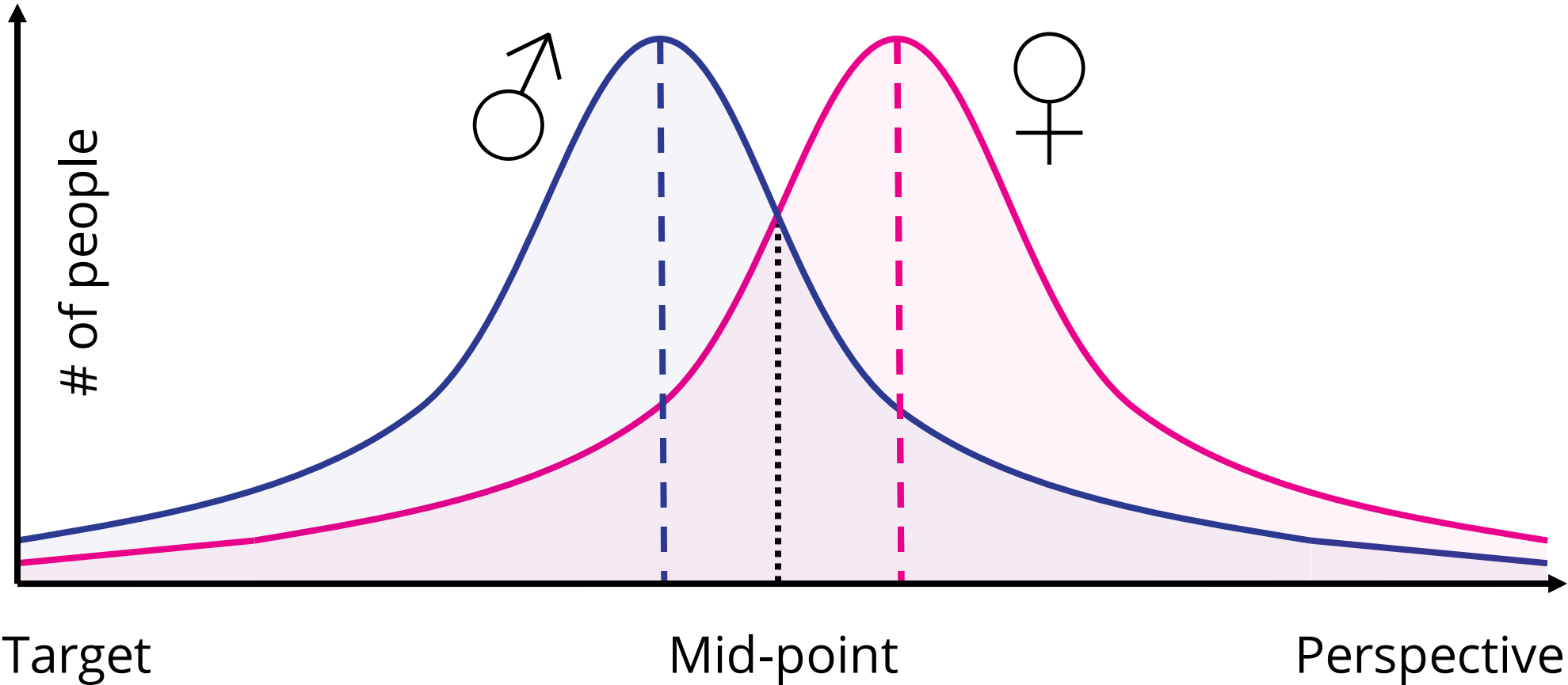


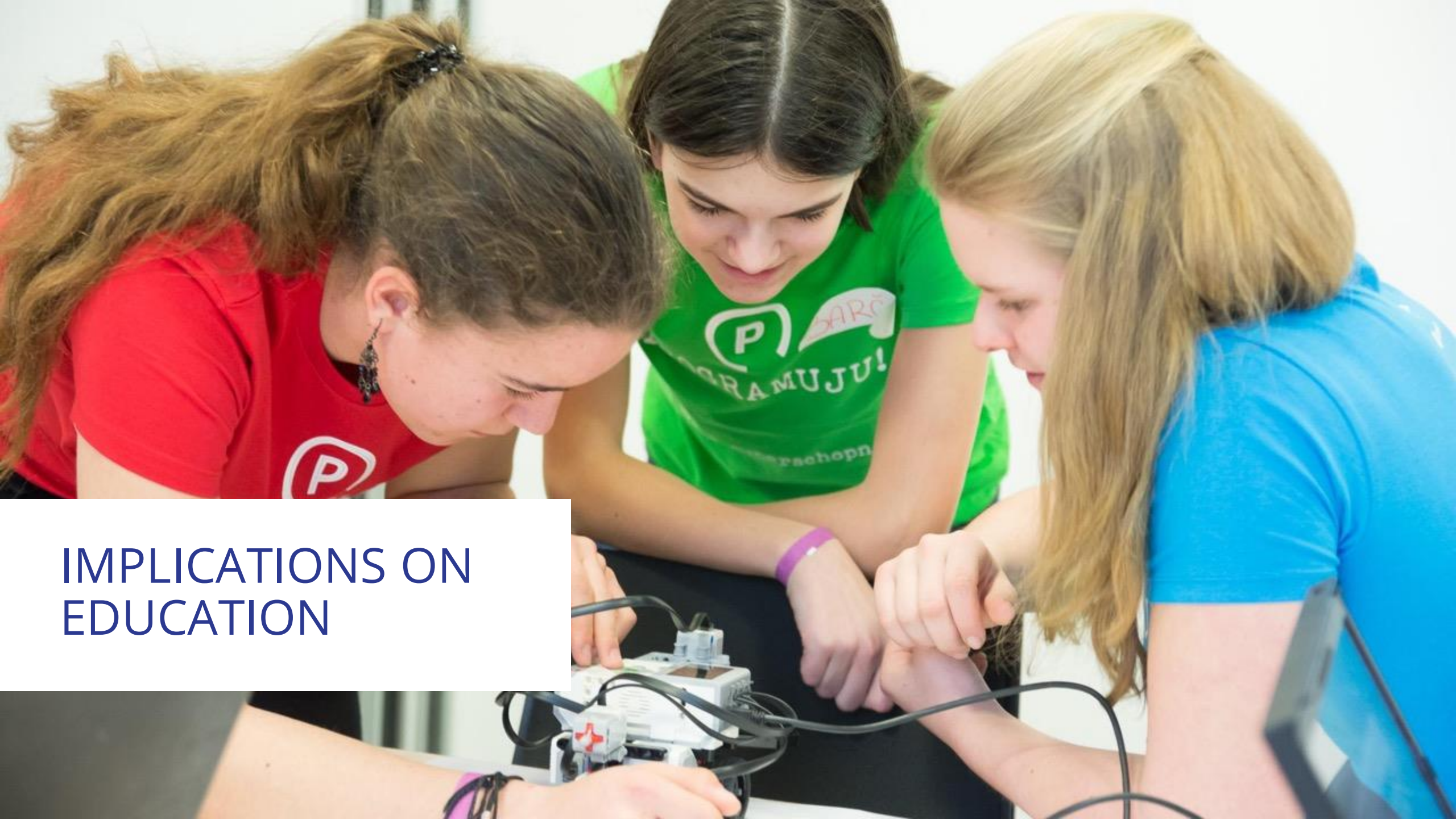
LESSONS ON WOMEN IN TECH

FRUSTRATIONS STEERING WOMEN AWAY FROM TECH

- **Access** (to engaging education, supportive teacher, supportive family environment, guidance)
- **Stereotypes** (by girls about CS engineer/field, by their close environment about CS engineer/field/girls in CS)
- **Confidence** (self-efficacy)
- **Belonging** (boys club, missing networking, mentors)
- **Feeling valued** (defensive culture, the fact that the women feel they need to keep proving their value, flawed meritocracy)

THE BELL CURVE OF GENDER TENDENCIES

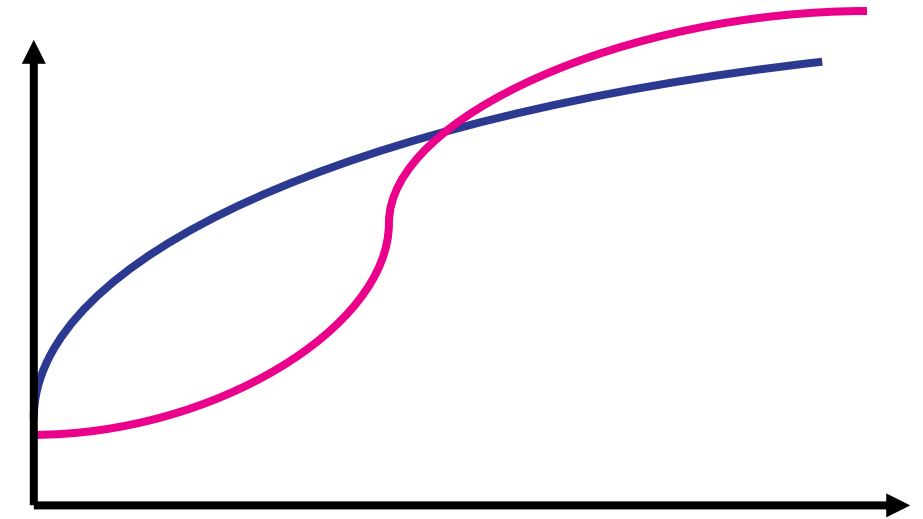




IMPLICATIONS ON EDUCATION

HOW WE ARE LEAVING THE GIRLS OUT

- Young girls have different way of interaction with technology
 - Boys – playfulness – white box exploration, challenging the limits
 - Girls – purpose – black box utilization for a goal
 - girls are later technology adopters
- Target vs. perspective
 - They need to build their context map first
 - they are slower learners at the beginning
 - but great integrators and multitaskers later
 - they feel anxiety from their context map never being complete
- Perfection vs. bravery



We need more "perspective"
individuals in the field

ELEMENTS OF GENDER-SENSITIVE PEDAGOGY

- Strategies that combat wrong stereotypes
- Strategies that motivate and spark initial interest
- Strategies that provide suitable first contact
- Strategies that make learning environment less hostile
- Strategies that build self-confidence
- Strategies for sustaining long-term interest

COMMUNITY
EDUCATION

SAFE ENVIRONMENT
AND ENCOURAGEMENT



czechitas

PRACTICAL AND
MEANINGFUL EDUCATION

ROLE MODELS
CAREER GUIDANCE
COMPANIES ENGAGEMENT



Thank you for your attention.

Read the paper: B. Buhnova and L. Happe. Girl-Friendly Computer Science Classroom: Czechitas Experience Report. In Proc. of ECSA 2020. Springer, 2020.

Join us at womENCourage 2021 in Prague!

Barbora Bührenová

*Co-founding & Gov. Board, Czechitas
Vice-dean, Masaryk University*