HK Unicorn Squad

Helena Kotka, Elisabeth Käosaar, Martha Mia Männik

www.unicornsquad.ee

# Why HK Unicorn Squad was founded?

It started with a heartbreak

When the 10-year-old daughter of Taavi and Kerstin Kotka, **Helena Kotka was kicked out from a robotics class due to biases and budget cuts**, it wasn't just a lost opportunity—it was a wake-up call. Girls shouldn't be excluded from technology education because of limited resources or misconceptions.

This personal experience sparked a **mission**: **to build a space where girls could explore technology, gain confidence, and prove that they belong in technology.**

What we have achieved so far:

+ Reaching **5000+ girls** across Estonia: This means almost 10% of all girls aged 8–14 in Estonia have joined the programme — a remarkable share in a country of just 1.3 million people. More than 1200 girls in the waiting list.

+ **Wide rural coverage**: efficient logistics system that delivers learning kits even to remote areas.
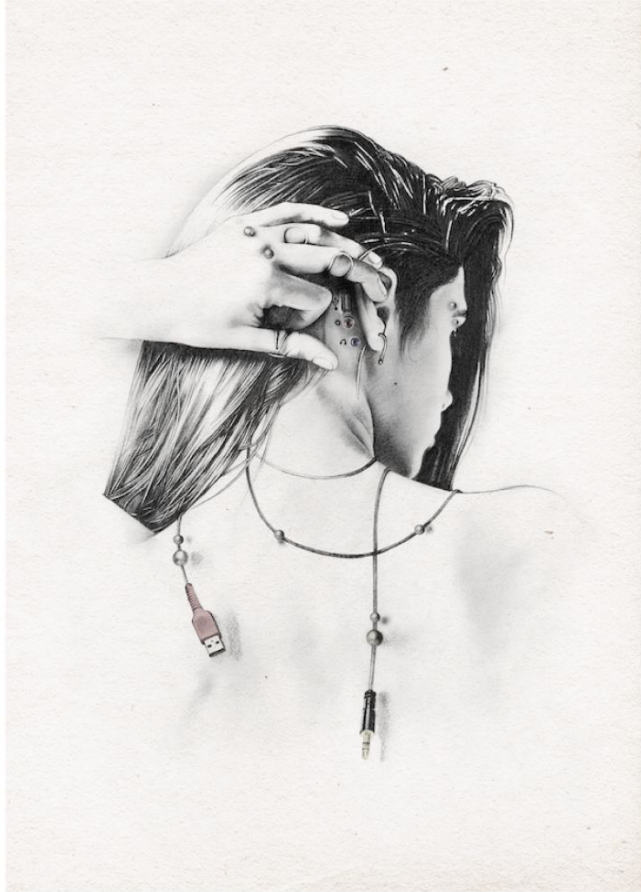
Grassroot STEM education programme for girls-only

Core Programme (Ages 8–14): A 3-year program focused on practical and real-life technology learning. The 6 courses consist of 10 lessons, each focusing on a distinct STEM area:

- Physics and Engineering
- Multimedia and Audiovisual
- Robotics and Programming
- Electricity and Electronics

PRO Programme (Ages 16–19): A 2-year advanced programme, developed in collaboration with **Tallinn University of Technology (TalTech)**, designed to sustain participants' interest in STEM and support their aspirations to pursue STEM fields at the university level.

HK Unicorn Squad is a safe space for girls to learn and experiment

+ HK Unicorn Squad provides a hands-on learning space where girls feel safe to experiment.

+ Competitive and discouraging elements (aka boys) are removed from the scene.

+ Learning is structured around curiosity, achievement and problem-solving.

+ No previous technical knowledge required – the focus is on learning through doing.

+ Mentorship & peer support help girls build confidence and STEM skills at their own pace.

No special training, equipment or environment needed

- Local volunteers (no technical background or special knowledge needed) lead 2-hour weekly sessions for girls aged 8–14.

- Sessions are held weekly across schools, youth centres, libraries etc throughout Estonia.

- All learning content is developed by HK Unicorn Squad and provided as complete teaching kits, which include:

  - Written and video tutorials for students and instructors.

  - Physical learning tools for experiments and challenges, delivered weekly to study groups.

Cost-efficient equipment sharing system

+ Centralized system to manage and distribute educational kits to ensure all groups have access to materials efficiently.

+ Materials are shared and rotated between learning groups. Cost of drones, robots etc comes down more than 20x because of the sharing-model.

+ This model allows widespread implementation without significant infrastructure costs.

3-day summer camp with 700+ girls

+ Girls from tech squads across the country gather for teamwork, technology, maths and physics challenges, sports competitions, cultural visits, and meetings with inspiring female leaders.

+ 3-days summer-camps are fully booked with less than 3 hours after registration is opened.

The challenge we are solving

The gender gap in tech: a global issue

+ Women are significantly underrepresented in the technology sector worldwide.

+ Girls are intellectually highly competitive but rarely find their way into the most highly paid employment areas.

+ Only 19,4% of ICT specialists in the EU are women, despite growing demand for tech professionals.*

+ By 2030, the EU will need over 10 million new ICT specialists to meet industry needs.**

+ Without intervention, these disparities will persist, impacting innovation and economic growth.

+ * Eurostat 2024
   ** The European Commission's Digital Decade Initiative, 2024
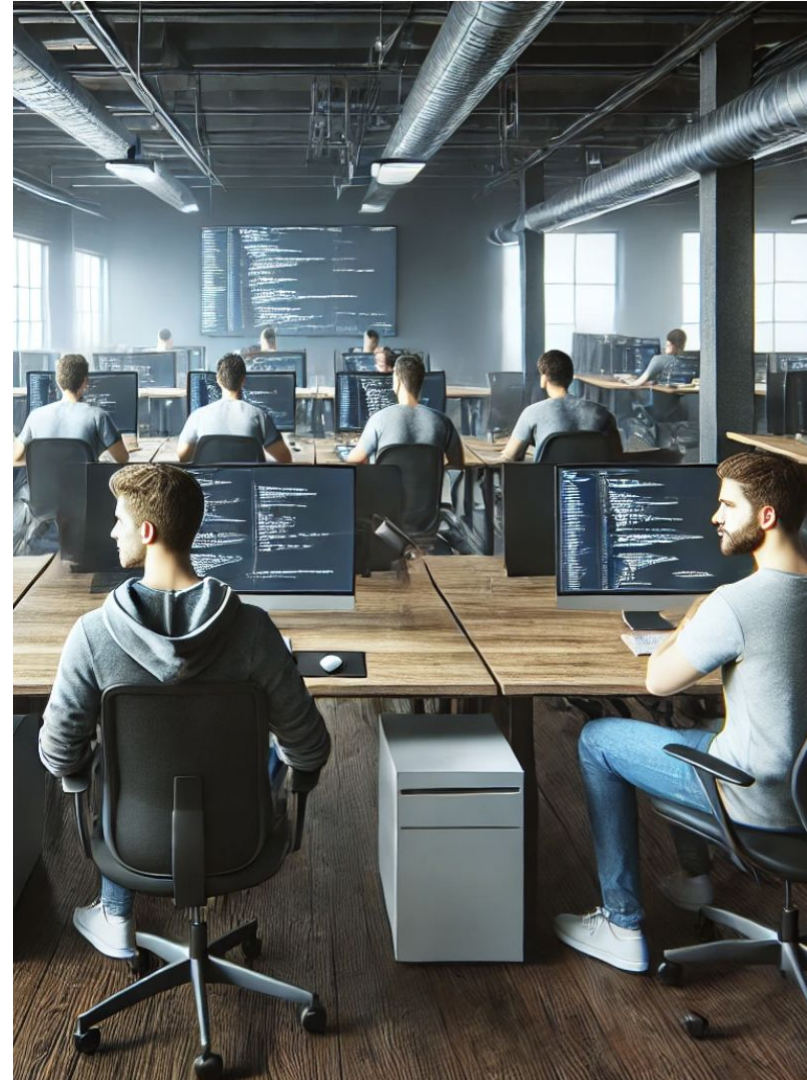
Changing the Narrative

+ Now, in Estonia more girls than boys study STEM (age 8-12)

+ "Do you think that your career could be STEM related?" -> "Yes" from 10% in the beginning to 86% when graduated.

We are changing perceptions about girls in tech

Myth: Girls are not interested in technology.

Reality: Girls thrive in STEM when given a supportive, engaging environment.

THANK YOU!