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Case Study
A gamified, real-world approach to learning programming

Co-presented by: Junior Olympiad in Informatics, High School XIV
Industry: Education
Location: Warsaw, Poland
Size: <10 employees

Challenges:

- Engage young people in programming from an early age
- Identify and train the future ICT talents and IT leaders

Solution:

The Olympic Computer Club (Olimpijskie Koło Informatyczne - OKI) invites **young polish people**, aged 9-19, to **learn programming, algorithmics and artificial intelligence** — regardless of their background, initial knowledge, or location.

Teachers from high schools and universities offer training activities free of charge to enable equal access to education. OKI students follow live, online classes and receive daily guidance and support. They can also take part in weekly physical **training for beginner, experienced, or advanced level** at the High School XIV.

During those online classes, students are taught and asked to **solve concrete cases using a tailored-made system for programming competitions**, run by Warsaw University. Working on these cases, students can not only reinforce their knowledge but also boost their **soft skills** such as creativity and critical thinking skills while self-exploring, testing, and seeking solutions.

OKI also adds a **gamified and competitive element to the learning path** — the preparations for participation in the National "Olympiad in Informatics" where

students can compete, propose solutions, and get rewarded for their outstanding achievements.

Results:

The **programming competition** "Olympiad in Informatics" is an excellent platform for students to apply their knowledge to real-world challenges offered by organisations and prove to be a good practice example for **engaging young people in programming**. National winners get the chance to compete in the International "Olympiad in Informatics" and, so far, have returned with medals.

The online, live classes hosted on YouTube gather about **500 students**, mostly from primary schools.

Key benefits:

- The gamified learning programme is attractive for young people
- Young pupils can develop both hard and soft skills that are essentials for pursuing a career in tech
- Encourages the mobility of young people at the local, national, and European levels

Key resources:

- A system that runs and tests students' programmes and computer applications for competitions
- Availability of the teaching staff at high schools and universities

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