

## Press Release Education 4.0

### **Collaborative robots: The intelligent ice cream machine**

**Even in times of crisis, ITQ GmbH relies on its proven Education 4.0 Training Concept to promote Young Talents.**

Garching near Munich, March 10th, 2022 – In the age of **Digitalization**, well-trained **Young Talents** are needed more than ever. In the past two years, how-ever, the training of young people has suffered greatly, and the weaknesses of our education system have come into focus. [ITQ GmbH](#) is trying to close this gap and enrich the qualification of many students with technical projects. The goal of the [Education 4.0 Projects](#) is to prepare young people for today's job market. ITQ's latest project "**Intelligent Fwip Ice Demonstrator**" focuses on the **intelligent col-laboration of robots**. The demonstrator built consists of a "**Rethink Sawyer Ro-bot**" by [Rethink Robotics](#) that automatically controls a "**Portobello**", the **IoT Ice Cream Machine** by [Fwip](#) with capsule system.

Two young students participated in the project supervised by ITQ Engineers. Their task was to equip **Fwip's Ice Cream Machine** with new motors and sensors, and to enable intelligent operation using the latest **robot technology and software**.

"The ITQ Training Concept appealed to us immediately. We were very happy to make our Sawyer available for this purpose. It is great to see how the young participants have worked on this project with enormous commitment," says **Adrian Mayer, Area Sales Manager, Rethink Robotics**.

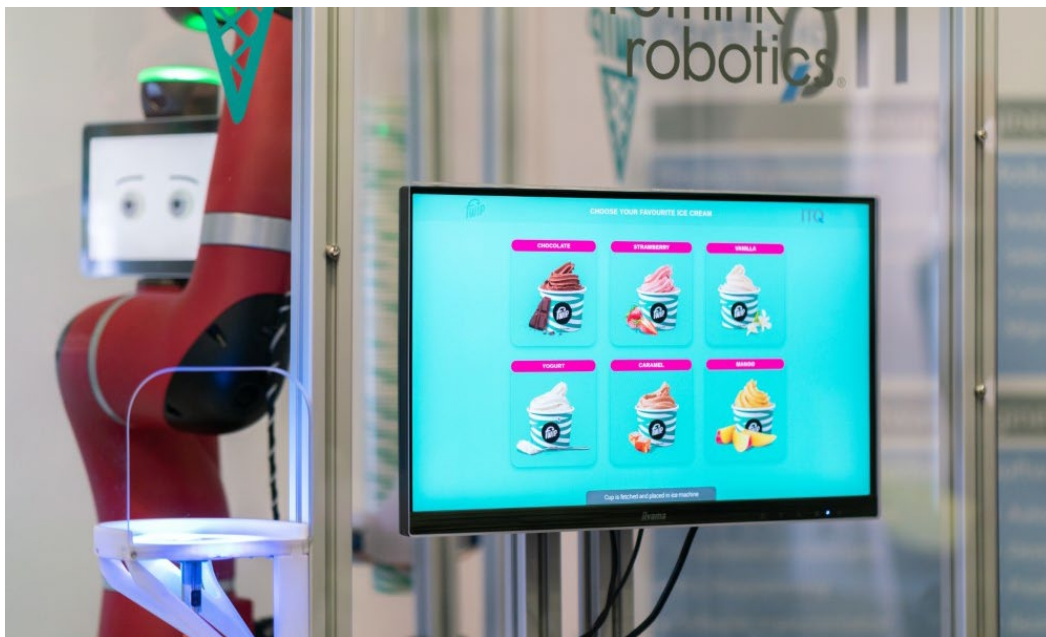


**Image 1: The intelligent ice cream machine – Fwip Ice Demonstrator**

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The budding engineers programmed the robot to operate the ice cream machine automatically. The user selects a type of ice cream via a **display**. The robot arm then starts moving and processes the order. It uses a gripper hand to take an ice cream cup from the device and places it in the ice cream machine. Then it uses a **Vacuum Gripper** to remove an ice cream cartridge from the specially made cooling armature and places it in the drawer of the ice cream machine. After the start, the Fwip ice cream machine prepares the ice cream, which the robot arm serves at the demonstrator's dispensing point.

"We have been impressed by the results and achievements of this training concept. Conceptualised and created with passion and full of engineering talent, this has been a great success for everyone involved - fwip, ITQ and the students alike! It has shown the tremendous power of technology when you combine human creativity with robotic accuracy. We will continue to work with ITQ and their team to explore ways to push the boundaries and change the world of food technology," explains **Colin Chapman, Chief Technology Officer, Fwip**.



*Image 2: Order Display – Fwip Ice Demonstrator*

With the help of **Neopixels and LEDs**, the movements are made visible to the viewer through light animation. The training project thus demonstrates the latest technological standards in the field of robot **automation and collaboration**. The students took on personal responsibility and gained important project management skills in addition to technical knowledge. ITQ GmbH plans to exhibit the demonstrator at future Trade Fairs.

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## Promoting new training concepts

In the age of **Industrie 4.0 and Education 4.0**, new innovative corporate and training concepts are needed. To meet the technological requirements of software intensive, mechatronic systems and products, companies need suitable structures, sophisticated development processes and motivated well-trained employees.

Recruiting and retaining them is one of the most important tasks of a company nowadays. **Industry-related projects with national and international universities and colleges** of all kinds are suitable for bringing industry and higher education closer together. If these are taught with a technologically very demanding, but at the same time also **"playful"** content, everyone will benefit from it.

In addition to practical training, students (Young Talents) can also benefit from gathering first experiences in project management and working across different disciplines. Companies benefit from the **enthusiasm** and **future orientation** of the **"Digital Natives"**. All in all: Recruitment and practical training during studies – a win-win situation for both sides.

## About ITQ GmbH

Founded in 1998, ITQ GmbH is an independent engineering and consulting company with a focus on automation, mechanical and plant engineering. The experienced team of experts specializes in interdisciplinary problem solving related to software and systems engineering. Its core competencies include software engineering (analysis, design, implementation, testing) and process improvement as well as project and crisis management as well as consulting and coaching.

A special concern of ITQ is both requirements-oriented and forward-looking training as well as continuing education concepts, which already start with the younger generations. Therefore, the company promotes young academics in practical study projects as well as technical workshops for children, pupils, and students through their Gerda Stetter Foundation – Technology is fun!

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[Education 4.0 Projects](#)

[Fwip Ice Demonstrator Imagevideo](#)

**Photo Material:**

[Fwip Ice Demonstrator](#)

**Press Contact:**

**ITQ GmbH**

Caroline Schiller

Parkring 4 | D-85748 Garching b. München

Phone: +49 (0) 89 321981-74

E-Mail: [schiller@itq.de](mailto:schiller@itq.de)

[www.itq.de](http://www.itq.de)