



Annual Report 2020 / 2021

Cover: **Josephine Cochran** (1839-1913) **invented the first practical dishwasher**. As a wealthy woman, she hosted many dinner parties at which she used valuable china. After the servants carelessly broke some of the plates, Josephine Cochran was prompted to find a better alternative. She also wanted to relieve the weary housewives of the obligation of washing the dishes after dinner. She is said to have run through the streets with blood in her eyes...screaming, «If no one invents a dishwasher, then I'll do it myself!» And she did. She constructed the first model in a shed behind her house in Shelbyville, Illinois. Her dishwasher was the first to clean dishes with water pressure, not scrubbers. Cochran's machine was a hand-operated mechanical dishwasher. In the year 1886, the dishwasher was patented in her name. She founded a company to manufacture of these dishwashers, which eventually became KitchenAid.

(Source: <https://www.thoughtco.com/josephine-cochran-dishwasher-4071171>)



# Annual Report 2020 / 2021

## Content

IngCH in the 2020 / 2021 financial year	4
Technology and IT Weeks	5
Girls Technology Days	6
MINT Service Centre	7
«Achtung Technik Los!» Roadshow	8
ETH-Industry Dialogue on the Future	9
Other IngCH activities and collaborations	10
Report on the trial day at Ergon	12
Generating enthusiasm for the engineering profession – the IngCH organisation	13
Members of IngCH	14
Partners of IngCH	14



Lea Hasler and Eduard Rikli

## With renewed momentum

Dear readers,

At IngCH, we thrive on direct contact with students, and our main purpose is to show young people their career and study options both live and in person, in a way they can relate to.

Many things were different in the July 2020 to June 2021 financial year. We were only able to implement just under half of our projects and had to try out new formats, continue developing our projects and shift our focus to other topics.

And the result is impressive – our new website is live, IngFlash is now an online magazine, we are more active on LinkedIn, and we have been able to implement many projects online and in a hybrid format. The new website and the optimisation of projects has given us strength, and we are excited about the upcoming financial year.

We would like to extend a big thank you to our members, schools and partners for their outstanding commitment!

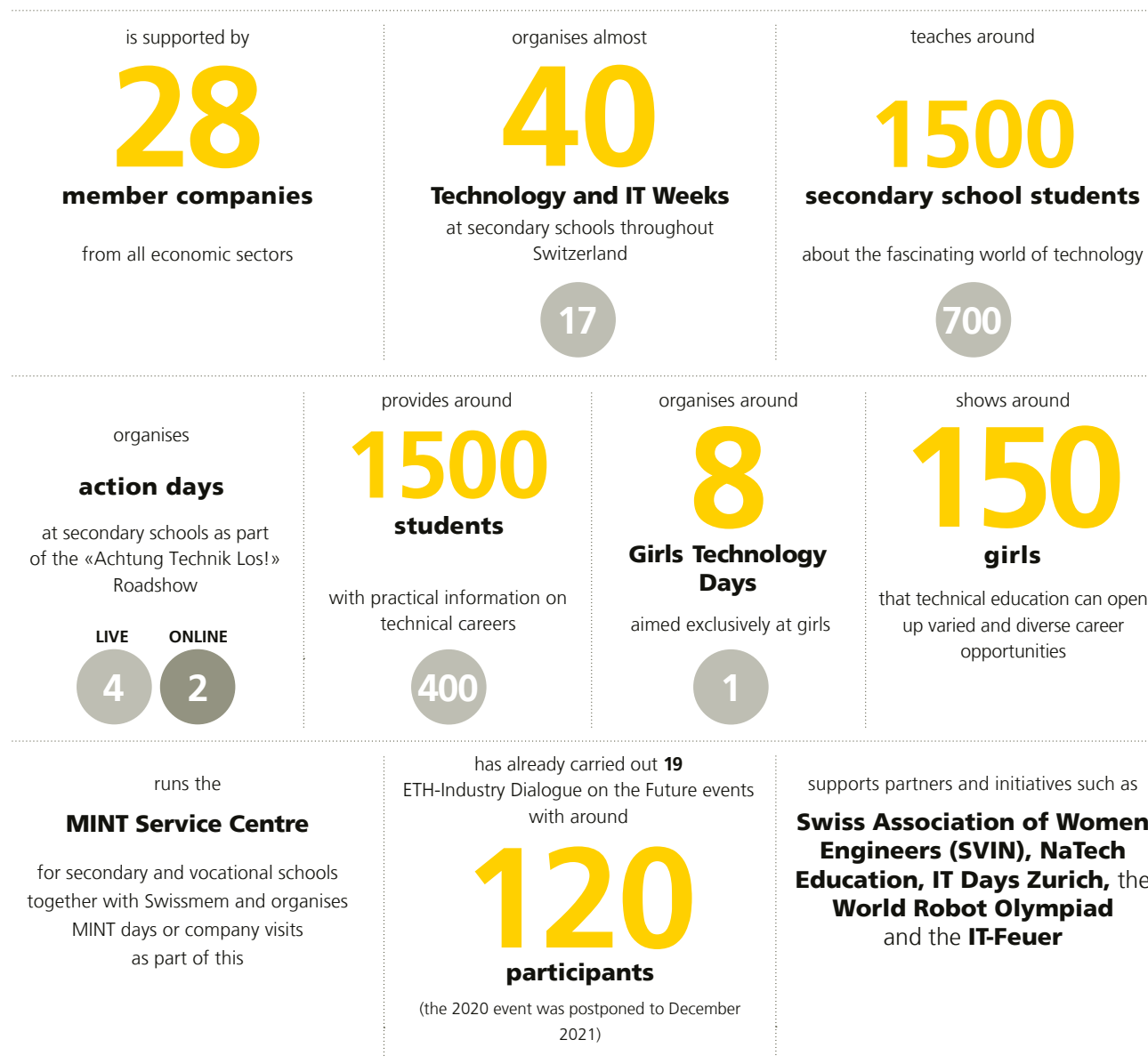
Dr Eduard Rikli, President of IngCH  
Lea Hasler, Managing Director of IngCH

## IngCH in the 2020 / 2021 financial year

Since its foundation in 1987, IngCH Engineers Shape our Future has sought to get young people excited about technology and IT and to spark their interest in a career in engineering. The association uses a variety of activities to raise awareness among the public about the importance of technology and IT in business, society and the environment. It also enhances the image of the engineering profession in the public domain.

### Facts & Figures: IngCH ...

● Number in the 2020 / 2021 financial year



# Technology and IT Weeks

The Technology and IT Weeks are IngCH's largest and most important project. The direct exchange between companies, research institutes and universities and secondary school students who are in the process of deciding what to study is an enriching experience for all.

## Why?

- Lots of young people are unfamiliar with fields of study in technology and IT.
- There is a lack of insight into companies and contact with the professional world in everyday school life.
- Practical experience with technology is inspiring.
- Everyone is talking about the skills shortage, and this project actively seeks to counteract it.

## How?

- Project weeks around a year before graduating from secondary school.
- Programme led by IngCH in close coordination with schools.
- 17 weeks organised in the 2020 / 2021 financial year, 686 students reached (about half compared to a normal year).
- Active throughout German-speaking Switzerland, in Western Switzerland and in Ticino.

## Weekly programme

- Introduction with talks about technology, mini workshop.
- Tours of the ETH or university of applied science.
- All-day workshop.
- Company visit, including contact with engineers/developers.
- Talks about technology.
- Programming workshop.
- Films as documentation.
- Oral and written evaluation.

## Coronavirus impacts the Technology and IT Weeks

While many Technology Weeks were still possible because schools continued to have classroom teaching, some company and university tours were cancelled in autumn. Students showed little enthusiasm for the online talks offered as an alternative.

Ahead of the weeks in spring, IngCH's project managers therefore filmed engineers at work and posted the videos on YouTube to show the students. Combined with a new career choice workshop, this led to interesting conversations among students about choosing a course of study. These new formats will certainly also be used in the future as an additional puzzle piece in the programme alongside the company and university tours, which will be resumed as soon as possible.

Overall, it was possible to hold 17 weeks in the 2020 / 2021 financial year, which is almost half as many as usual.



The Technology and IT Weeks are generously supported by

**HASLERSTIFTUNG**



**satw** it's all about technology



## Girls Technology Days

Despite efforts on many sides, women are significantly underrepresented in almost all STEM professions in companies. significantly underrepresented. IngCH is generally committed to promoting young talent irrespective of gender, however, it has been organising Girls Technology Days at our members' premises for eleven years.

With the Girls Technology Days, girls are shown the possibilities of support for technical apprenticeships. Experience has shown that technical professions are often not on the career radar for girls - we would like to change this. In cooperation with our member companies, we organise one or two-day Girls Technology Days, where the girls are offered an exciting programme with lectures, workshops and visits to a company. The aim is to get more girls into technical professions. The project is aimed at girls in the first or second year of lower secondary school.

Since 2020 and probably until 2023, the project has been supported by the Federal Office for Gender Equality (FOGE) with financial aid in accordance with the Gender Equality Act.

### Support



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

**Federal Office for Gender Equality**

### Why?

- Shortage of skilled workers in technical professions and in information technology.
- Quota inequality: Women are far underrepresented in the technical field - only just under 7 per cent of all apprenticeship graduates in this field are female.
- Lack of information: Many girls do not even know about the wide range of apprenticeships available in the technical field.

### How?

- Normally 4 to 8 Girls Technology Days per year in different companies. Thanks to the financial support from the EBG, IngCH would like to hold 10-12 days. The days will now also take place in French-speaking Switzerland and Ticino.
- Varied and interactive programme, created in cooperation between IngCH and member companies. The project will now also be extended to non-members.

- Through contact with apprentices, the girls have a direct insight into what a technical apprenticeship can look like.
- In the companies, professional women talk about their everyday lives and thus serve as role models for the girls.

### Where?

ABB 8 June 2021

Unfortunately, no physical Girls Technology Day could take place in 2020 / 2021. In June, however, the first virtual Girls Technology Day was held at ABB with around 45 participants. The feedback was consistently positive, as shown by this excerpt of comments:

«I thought it was great that this Girls Technology Day was held in spite of Corona.»

«It was good that we still got information from the teachers and that we got every question answered.»

«Thank you for this insight, I have learned a lot about the different professions and now know which ones would suit me. I would like to do a trial apprenticeship in such a field next year.»

### Result

The offer is well received by the young women.

Around

**60%**

can imagine doing an apprenticeship in the technical field after taking part!

# MINT Service Centre

The MINT Service Centre for secondary and vocational schools was established in 2015 by IngCH and Swissmem. If they have any questions about the MINT fields (mathematics, IT, science and technology), the schools have access to a counselling centre that evaluates the most suitable services for the specific and individual needs of the institution in question. Interested companies receive support at all times when it comes to developing programmes or offers for students.

## Where

.....  
Cantonal school Im Lee, Winterthur, ZH  
.....  
Cantonal school Büelrain Winterthur, ZH  
.....  
Hofwil secondary school, BE  
.....  
Cantonal school Limmattal, ZH  
.....  
Cantonal school Stadelhofen, ZH  
.....  
Münsterplatz secondary school, BS  
.....

Some events had to be cancelled or postponed due to the pandemic. Individual MINT days, such as the MINT day in Lee (Winterthur) and the Find Your Number Day at Münsterplatz secondary school, (Basel) took place virtually.

## Why?

- The Federal Government and Cantons call for MINT promotion.
- School administrations have little experience with services offered outside the classroom.
- Experiences outside the classroom are inspiring.
- There is a large range of offers, but making a choice is often difficult.

## How?

- Tailor-made, free consultations for school administrations at secondary and vocational schools.
- Selection or development of projects and programmes.
- Consultations for companies that host school classes.
- Support for the organisation of individual company tours, trial days or tours of universities.

## Programme examples

- MINT day with lectures by university students and professionals.
- Trial day for individual school students.
- Evaluation of existing MINT programmes at schools combined with direct contact with the corporate world.

## Partner





## «Achtung Technik Los!» Roadshow

«Achtung Technik Los!» (ATL) is an interactive roadshow for the promotion of young people in apprenticeships in information and communication technology (ICT) and with a technical focus. It is aimed at students at the secondary I level and supports Switzerland's dual education system.

The goal of the roadshow is to get as many young people as possible who are at an age where they are ready to choose a career excited about technology and ICT. In workshops and interactive demonstrations, professionals, university students and teachers show them the diversity, creativity and prospects offered by these careers.

ATL was launched in 2009 by IngCH and NaTech Education, started in 2010 in Northwestern Switzerland and has also been active in the canton of Zurich since 2012. During this period, the project team carried out 88 action days at 40 schools, and more than 12,000 district and secondary school students benefited from the project.

All other information on the project can be found at

[www.achtungtechniklos.ch](http://www.achtungtechniklos.ch)



Students in the workshop by Siemens

### Stations in the business year 2020 / 2021

Nänikon-Greifensee secondary school,  
September  
Wohlen district school, AG,  
Oktober  
Egg secondary school, Rüti, ZH,  
Oktober  
Niederglatt secondary school  
community, ZH, Oktober

#### Funding



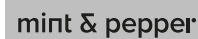
#### Partner institutions



Fachhochschule Nordwestschweiz  
Hochschule für Technik



#### Support



#### Sponsors

Bildungsdirektion Kanton Zürich



Kanton Zürich  
Bildungsdirektion  
Berufsbildungsfonds



#### Management





## ETH-Industry Dialogue on the Future



The ETH-Industry Dialogue on the Future offers participants an ideal opportunity to exchange ideas.

The ETH Industry Dialogue on the Future is organised annually by IngCH in close cooperation with EPFL and ETH Zurich. The Advisory Board, which is chaired by the ETH Zurich President Joël Mesot, decides which topic the dialogue is dedicated to.

The goal of the event is to serve as an exchange between decision-makers from the business world and professors at ETH Zurich. This private event takes place with around 120 participants and offers them an optimal opportunity to exchange ideas with one another without restrictions, establish new contacts and hear exciting lectures.

Because of the coronavirus pandemic, no event was held in 2020.

**The 20th ETH Industry Dialogue on the Future on the topic of «Understanding Sustainability» will be held on 3 December 2021 in Rüschlikon at the Swiss Re Centre for Global Dialogue.**

Many thanks to Swiss Re for hosting!

## Other IngCH activities and collaborations



Home page of the newly launched IngCH website



«IngFLASH» is now an online magazine

### Web, Newsletter and Social Media

Our website was relaunched in August 2021: at [www.ingch.ch](http://www.ingch.ch), you can find information about us, our activities and our members. On the new website, in place of our print studies, you will find a dashboard with an overview of graduate numbers, proportions of women, etc. in courses of study in engineering – take a look. We also continuously share updates on LinkedIn and in our newsletter. Follow us and subscribe to the newsletter so that you don't miss anything.

### «IngFLASH»

IngCH published the IngFLASH newsletter twice a year until 2021. It had a circulation of 3,000 copies and was aimed at engineers, technical professionals, educators and trainers, as well as interested parties in development, research and politics. As of summer 2021, IngFLASH is now an online magazine and continues to offer current topics, exciting articles and opinions.

[www.ingch.ch/ingflash](http://www.ingch.ch/ingflash)

### Member and general meeting

Twice a year, IngCH members meet to hear from the Executive Board and agency about the association's activities. The event takes place at an IngCH company. In the 2020/2021 financial year, the general meeting was held in August with a written vote and no member meeting took place.

### Further training for career advisors

Together with member companies, IngCH organises further training on a specific topic for career advisors. The 2020 training events at Meggitt in Fribourg and at Siemens in Zug were postponed to autumn 2022.

We collaborate with a large number of actors who pursue common objectives. These include:

### **The Swiss Association of Women Engineers (SVIN)**

The SVIN is a Swiss association that serves as a versatile platform for exchanging experiences and networking for female engineers and women in general in scientific and technical professions and companies. Since its founding in 1991, the SVIN has advocated for the concerns of women in the engineering profession and worked to get young women motivated for a career as an engineer. Today, the professional association has around 300 members and 42 supporting members, companies and educational institutions. In addition to many other projects, the SVIN organises the «Culture Guidepost Stimulus Programme», which provides input to companies to help them recognise, break down and change obstructive gender dimensions in their corporate culture.

[www.svin.ch](http://www.svin.ch)

### **IT-Feuer / IT tout feu tout flamme / La fiamma IT**

In the spring of 2021, the European Girls' Olympiad in Informatics (EGOI) took place for the first time. With the IT-Feuer, 27 organisations raised awareness for the promotion of young IT professionals and, in particular, women in IT ahead of the EGOI. IngCH is one of the sponsor organisations.

[www.it-feuer.ch](http://www.it-feuer.ch)

### **World Robot Olympiad (WRO) Switzerland**

The WRO is a global competition for young people who are enthusiastic about technology, combining sporting thrills with scholastic challenges. Young people design and build a LEGO MINDSTORMS robot, program it and use it to take on other teams in an exciting competition. Guido Santner, project manager of the Technology and IT Weeks, is a member of the jury.

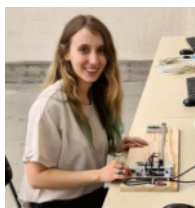
[www.worldrobotolympiad.ch](http://www.worldrobotolympiad.ch)

### **NaTech Education – for better incorporation of science and technology in educational concepts**

The NaTech Education association undertakes to promote interest and curiosity in children and young people with regard to scientific and technological developments and to achieve better incorporation of science and technology into Switzerland's educational concepts.

[www.natech-education.ch](http://www.natech-education.ch)

In the past financial year, we also supported the **IT Days** in Zurich, **Engineers' Day** and **Science on the Move**.



**Yasmine Antille**

Studies Computer Science at the ZHAW  
**«Everyone who invests a lot of time in their field and is well versed in it is, so to speak, a nerd in their field, right?»**



**Esther Hänggi**

Lecturer, Lucerne University of Applied Sciences and Arts  
**«Computer science is everywhere today: We write on computers, communicate via the Internet and pay our bills via online banking.»**

## Report on the trial day at Ergon

Every year, IngCH arranges within the framework of the MINT service centre, trial days at member companies for some students from the Stadelhofen cantonal school so that they can learn about technical careers. Fynn and Jade visited Ergon Informatik in October and told us about their experience:



**Fynn**

«The trial day started at 9 am in front of the entrance to the company's office. About ten to fifteen young people were invited to the trial day. After we were picked up, we were introduced to the topic of «IT with a focus on application development» and to the free program «Scratch». This allows you to program games, scenes and a lot of other things using building blocks. The blocks have different functions and can be combined in any number of ways to carry out the project you have in mind. After this introduction, we took a break and were served croissants and drinks. After this short break, we individually worked on a project that was presented at the end of the day, with a small prize up for grabs.

The important thing for me is that Ergon offers both apprenticeships and internships. All in all, the day was pretty informative and provided a lot of insight into the world of IT careers. I'm still not sure whether I want to dive into this world in the future. But I was able to take something home and get a clearer picture of what I'd like to do after secondary school.»



**Jade**

«I really liked the career insights and trial day at Ergon Informatik. It was mainly intended to help you choose a potential apprenticeship, which I thought was a shame, even though I was told this in advance. Luckily, we had the chance to talk to an employee who studied IT at ETH and ask him questions.

The work atmosphere at the company really appealed to me. The common rooms make the office organisation really flexible. Even though Ergon Informatik is quite a small company, it has excellent organisation. Everyone is kind and understanding, giving the company a totally pleasant and welcoming atmosphere.

I think the possibility of getting insight into a potential future work environment of your choice is a great offer. I really appreciate this, especially during this coronavirus pandemic. This experience has shown me that I might well want to study IT, and that I'm open to MINT studies. This day strengthened my resolve to pursue a career involving mathematics. I'm convinced this is a field that will really suit me.»



# Generating enthusiasm for the engineering profession – the IngCH organisation

## Board

Dr. Eduard Rikli, President  
 Stefan Arn, UBS  
 Hansjörg Buchser, Accenture AG  
 David Gisler, Siemens Switzerland  
 Thomas Hauser, Nestlé  
 Dr. Matthias Kaiserswerth, Hasler Stiftung

Ulrich Jakob Looser, BLR & Partners  
 Anja Röder, ABB Schweiz AG  
 Reto von Salis, SBB  
 Martin Schürz, Swiss Re  
 Philipp Spaeti, IBM Schweiz  
 Dominique Vez, Meggitt

## Agency



**Lea Hasler**  
 Managing Director



**Myriam Hofmann**  
 Project Manager for  
 Girls Technology Days,  
 MINT Service Centre and  
 Communication



**Guido Santner**  
 Project Manager for  
 Technology and IT  
 Weeks



**Maggie Winter**  
 Project Manager for  
 «Achtung Technik Los!»

## Implementation of Technology and IT Weeks in 2020 / 2021



**Céline Bernasconi**



**Helena Kordic**



**Anja Kroll**



**Flavia Leonardi**



**Richard Staub**



**Michelle Wirz**

## Members of IngCH

IngCH Engineers Shape our Future is supported by 28 companies from a wide range of industries, thus demonstrating that engineering expertise plays a key role in competitiveness in all parts of the economy.

Good Food, Good Life

## Partners of IngCH

IngCH Engineers Shape our Future receives both financial and other support from important Swiss institutions.

## Impressum

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