

# Informatics Europe Awards Ceremony 2022

## Best Practices in Education Award

**Award Committee Chair**

**Ismael Garcia-Varea**

*Universidad Castilla-La Mancha, Spain*

**Award Presenter**

**Jean-Marc Jézéquel**

*IRISA / University of Rennes, France*

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# Best Practices in Education Award

## “Educating the Workforce for the Digital Transformation”

### Award Committee:

**Ismael García-Varea**, Universidad Castilla-La Mancha, Spain (Chair)

**Letizia Jaccheri**, Norwegian University of Science and Technology, Norway

**Jean-Marc Jézéquel**, IRISA/University of Rennes, France

**Kim Mens**, Université Catholique de Louvain, Belgium

**Lili Nemec Zlatolas**, University of Maribor, Slovenia

**Violetta Lonati**, University of Milan, Italy

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# **Informatics Europe 2022 Best Practices in Education Award**

*Presented to*

## **Technocamps**

*in recognition of the outstanding educational initiative on  
Educating the Workforce for the Digital Transformation*





Swansea University  
Prifysgol Abertawe

# technocamps

30 Years of Digital Education and Professional Development throughout Wales

A school, business, and community outreach programme, based at Swansea University but with a hub in every University in Wales



Professor Faron Moller  
Director of  
Technocamps

• **i.t.wales** (Industry, 1993-2018)

• **technocamps** (Secondary, 2003-)

• **technocamps Playground computing** (Primary, 2011-)

• **technoteach** (Teachers, 2012-)

• **institute of CODING in wales** (Industry, 2018-)

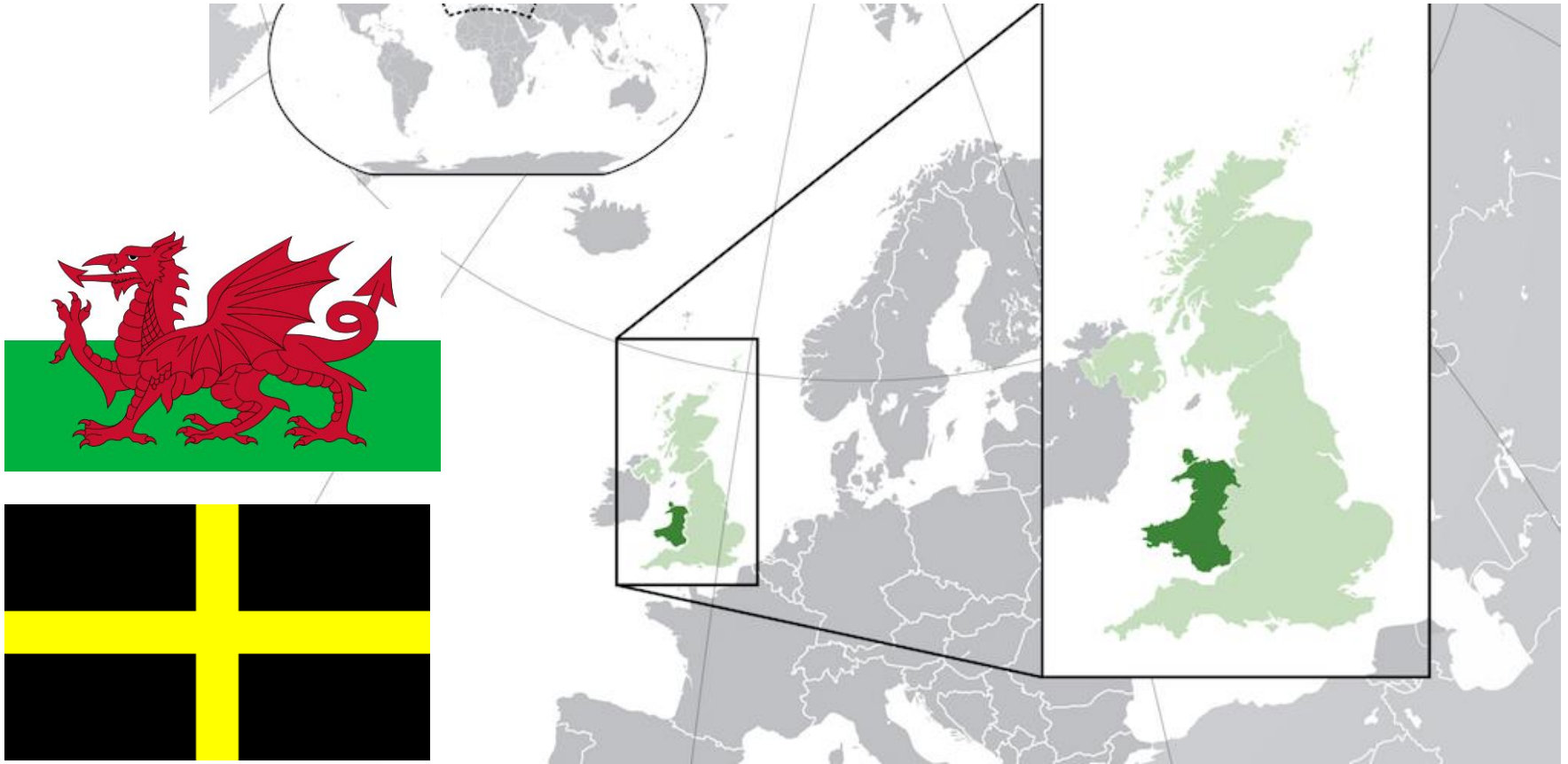
technocamps  
**INEHP**  
Education | History | Philosophy

technocamps  
**History of Computing Collection**

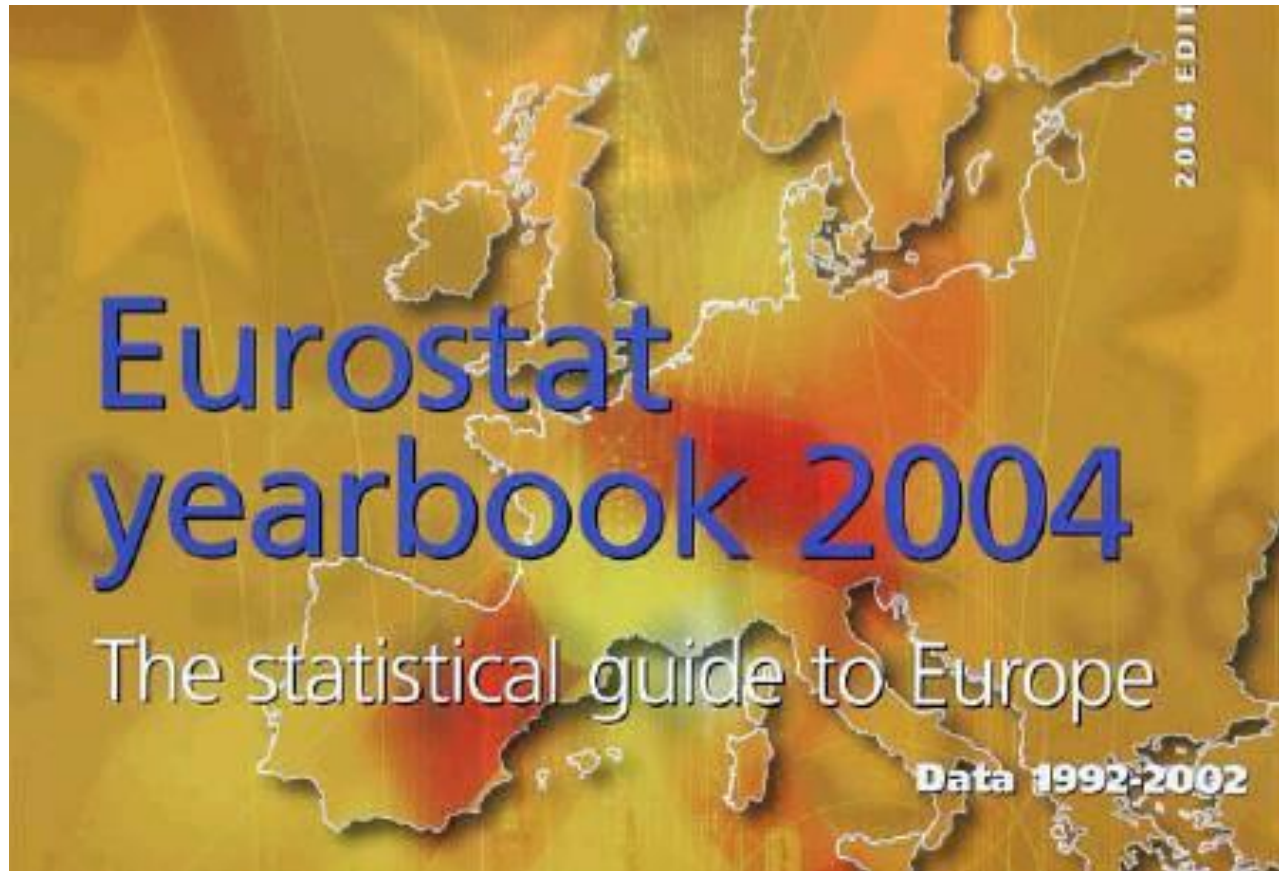
**GIST Cymru**  
Girls in Science and Technology  
Merched mewn Gwyddoniaeth a Thechnoleg

**technocamps WiST**

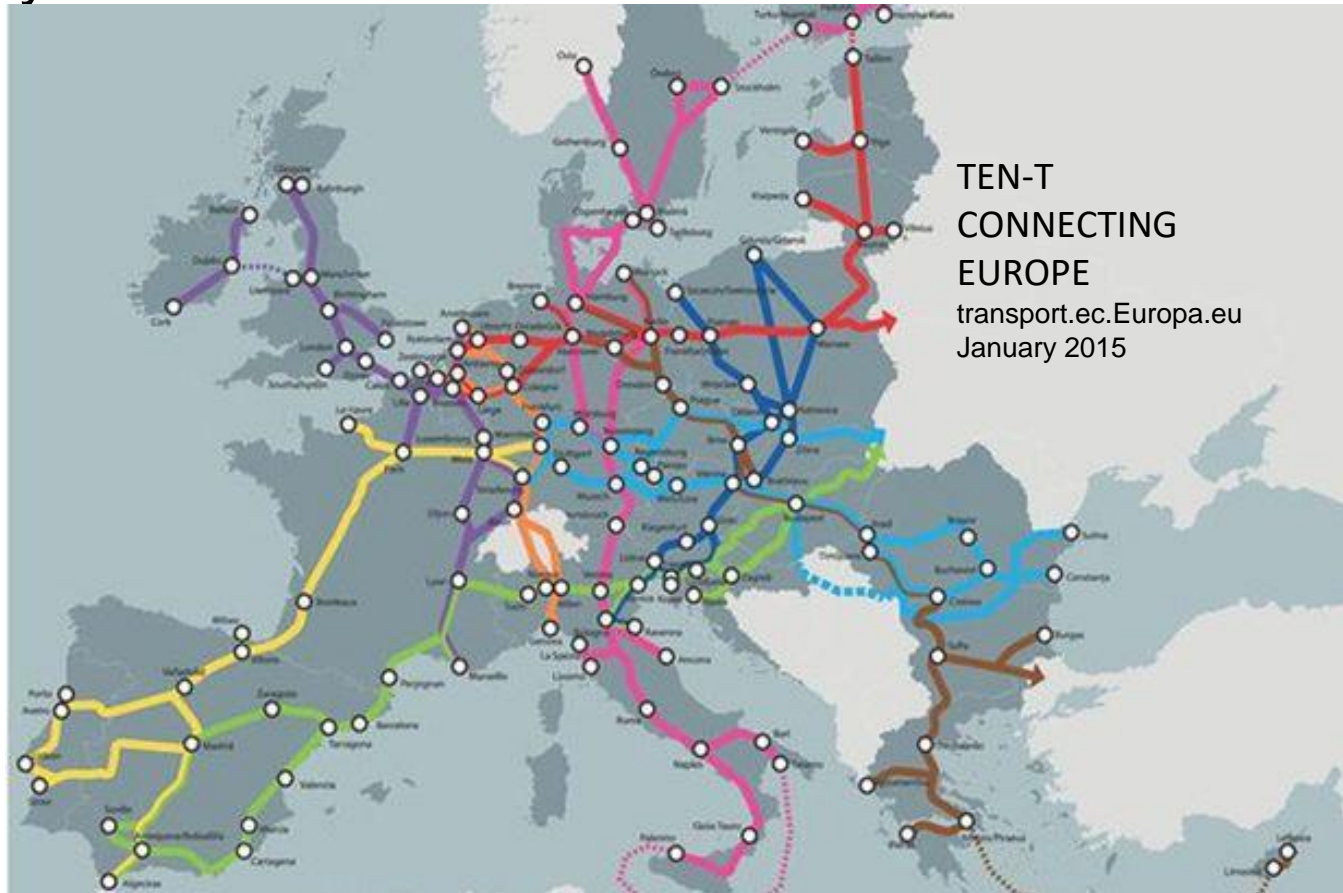
# Where is Wales?



No, Really – Where is Wales?



# No, Really – Where is Wales?





# Technocamps in Numbers

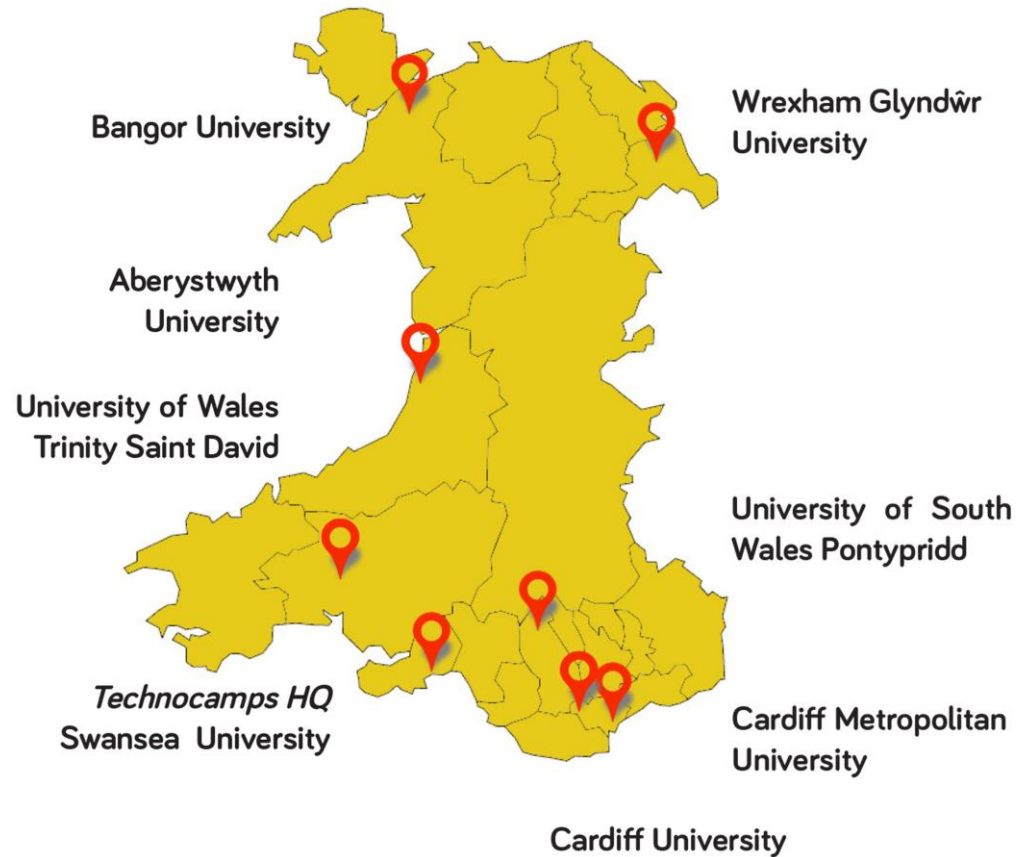
Since 2011, we have engaged with

- **70,000** young people
  - 9% of 5- to 24-year-olds
- in **3000** workshops
- in and from **500** schools.

Recorded engagement is direct,  
small-group, and lengthy.

Our main target is the uninitiated.

- 43% of our participants are girls.
- Girls are 25% more likely than boys to return for more voluntary activity.



*The 8 Universities (Technocamps Hubs) in Wales*



# The Problem with Wales (Why Technocamps is Needed)

- There are 3 million people in Wales, spread out over an area literally the size of Wales.
- In comparison,
  - London: **60 x density** (300% of the population in 5% of the area).
  - Birmingham: **27 x density** (40% of the population in 1.5% of the area).
  - ***“Regions of England other than London and the Northwest are proportionally very undersupplied for the number of young people living there.”*** [NESTA 2015]
- Wales has a rugged geography and few fast roads.
- Secondary Schools have an average catchment area of 100 sq km.
- Schools / teachers are isolated, in terms of geography and, thus, subject support.
- Only 25% of Computing / ICT teachers have a qualification in Computing / ICT.
- 30% of the Schools are Welsh medium and lack Welsh-medium computing resources.

# Problems in Digital Education Get Worse! (At least in England)

BBC News Technology

## Computing in schools in 'steep decline'

Rory Cellan-Jones  
Technology correspondent  
@BBCRoryCJ

9 hours ago



GETTY IMAGES

An annual study by the University of Roehampton has found that fewer 16-year-olds in England are getting a computing qualification.

It also said schools have cut back on the hours spent teaching the subject.

In 2018, 130,000 students got a GCSE in either computer science or ICT (information and communications technology), down from 140,000 the previous year.

This year, the ICT exam is not an option.

The fall in exam passes follows the phasing out of the ICT GCSE from the national curriculum in England and its replacement by the more challenging computer science.

- ICT **dropped** from English schools as “*not fit for purpose*”.
  - Computing is now the only digital subject taught in schools.
- Numbers studying a digital subject dropping.
  - Schools are ranked on results.
  - Good results on ICT replaced by bad results in Computing.
  - 8.2% of schools have now dropped Computing/ICT.
  - 19% of all-girl schools have dropped Computing/ICT.
- Technocamps introduced a **Digital Competence Framework (DCF)** which is mandatory for all years and all subjects in Wales.
- Technocamps introduced **Digital Technology** as a new subject for 14-18-year-olds in Wales, and is providing resources and teacher training to teach this (alongside similar support for teachers teaching Computing).

Could your nation / region / city use a **technocamps** ?