



THE EUROPEAN CODING INITIATIVE



- > PROMOTING CODING IN EUROPE
- > EQUIPPING YOUNG PEOPLE WITH THE SKILLS TO SUCCEED

all you need is
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European Coding Initiative

THE EUROPEAN CODING INITIATIVE

seeks to promote coding and computational thinking at all levels of education, as well as in more informal settings. Founded in July 2014, the Initiative includes European Schoolnet, Facebook, Liberty Global, Microsoft, and SAP. These organisations have come together in recognition of the vital need to empower young people to understand the role and application of coding. Whether analysing healthcare data, designing security software or creating special effects for movies, coding is the red thread that run through European future professions. Neelie Kroes, former Vice President of the European Commission, launched the initiative officially in October 2014 in Brussels, while the campaign has also been endorsed by Vice-President Andrus Ansip and Commissioner Günther Oettinger.

BUILDING THE ROAD TO CODE

OUR FOCUS

1 Providing high quality multi-lingual resources to young people and learners from all paths of life

2 Teacher training and the development and promotion of teaching resources

3 Advocacy for a higher profile for coding in Europe's national curricula



It's not a matter of 'are you in favour, yes or no?' it (coding) is a fact of life. And that good reason is why it needs to be put in the curriculum, made part of children's' education.

former European Commission Vice-President **Neelie Kroes**, calls for increased recognition of code during EU Code Week in October 2014

It (coding) does feel to them like playing... We should have a learning environment where we are not forcing what the output or outcome needs to be because children will create amazing and wonderful things in their own environment.

Mary Moloney, CEO of CoderDojo, a volunteer-led free coding club that has taught 20,000 children across Europe how to code



Knowledge of coding broadens career options in a world where technology touches everything.

ACTIVITY GLIMPSE



- Translation, creation, dissemination of coding resources (online activities, lesson plans, virtual training sessions, videos...) for pupils, teacher and parents in English, French, German, Spanish, Dutch and Polish
- Provision of a roadmap of resources from beginners to expert programmers
- Collaboration with Code.org to deliver online training sessions to young Europeans
- 2.000 teachers briefed on the advantage of coding and/or trained online to teach coding

- A collective policy advocacy strand to engage Ministries of education in their journey to educational curricula reform
- [“Computing our future: Computer programming and coding – priorities, school curricula and initiatives across Europe”](#), October 2014 (Research publication)
- [Open letter](#) to EU Ministries for Education, October 2014
- Numerous coding and mentor sessions during EU Code Week, 11-17 October 2014
- Our [“All you need is code”](#) video is raising awareness of the Initiative on social media

The world is going digital and so is the labour market... Skills like coding are the new literacy. Whether you want to be an engineer or a designer, a teacher, nurse or web entrepreneur, you'll need digital skills.

European e-Skills Manifesto, 2014

Information and communication technologies are at the heart of economic change.

DECODE THE FACTS

- > The number of **unfilled ICT vacancies** in Europe is expected to reach **825,000** by 2020¹ – the ability to code is essential.
- > **ICT related employment** is much higher than just the sector as digital skills are needed throughout the workforce. By 2015, **90%** of jobs will need **basic computer skills**.²

Technology skills – of which code is king – are a key pillar of the knowledge economy.

- > **The app economy needs coders:** the EU's app-developer workforce will grow from **one million** in 2013 to **2.6 million** in **2019**.

Additional support and marketing staff will take that figure to **4.8 million** by **2018**.⁵

- > Only **20%** of **Europe's school children** are in schools that have adopted over-arching formal policies covering the use of **ICT** across all subjects.

We owe it to Europe's youth to help equip them with the skills they will need to succeed.

- > Despite the economic downturn, **digitization provided US\$193 billion** to world economic output and created **6 million jobs** globally in **2011**.³
- > It is predicted there will be nearly **26 billion** devices on the 'Internet of Things' by **2020**.⁴ **Who** is going to code them?
- > **Half of all ICT graduates in Europe** come from 3 countries: **UK (17%), France (18%)** and **Germany (15%)** while **60%** of all ICT vacancies are the **UK, Germany and Italy**.
- > A survey of Britain's boardrooms revealed that **nearly 94% all senior executives** view digital skills as **very important** to their business.⁶
- > Among those **EU citizens** in the active labour market, only **53%** are confident their digital skills are sufficient to **change jobs** in a year.⁷

¹ EC, 2013 | ² Microsoft, 2009 | ³ BOOZ&Co, 2012 | ⁴ Gartner 2013

⁵ <http://ec.europa.eu/digital-agenda/en/news/sizing-eu-app-economy>

⁶ Management Consultancies Association, June 2014 | ⁷ Eurostat, 2012

CODING IN THE CLASSROOM

12 countries responding to the European Schoolnet survey had coding as part of their curriculum



Only **3 countries** have compulsory coding lessons from primary school onwards



5 countries offer a course dedicated to coding



8 countries offer teacher training in coding



Fostering logical thinking



Fostering problem solving



Fostering coding skills



Attracting students to computer science



Fostering employability in ICT sector

The main reasoning behind coding in the curriculum was that it fosters logical thinking and problem solving skills. Surprising, only half of the countries in the survey cited fostering employability in ICT as a reason for including coding in the curriculum.

Coding builds analytical and problem solving skills. It helps us understand our world.

I started at my blog eight years ago because it seemed fun – and because I liked coding. It was something I wanted to do for myself.⁸

Susanna Lau, successful author of the fashion blog stylebubble.co.uk

⁸ Financial Times, 22/8/14

A deep understanding of coding principles and knowledge of a number of programming languages may well become the most important dialect for Europeans of all ages in the digital era.

Professor Klaus Schwab, Founder and Executive Chairman,
World Economic Forum

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