



## **digital Competences** **Formal education** **Certification lab**

### **ini NATIONAL LABORATORY**

#### Motivation

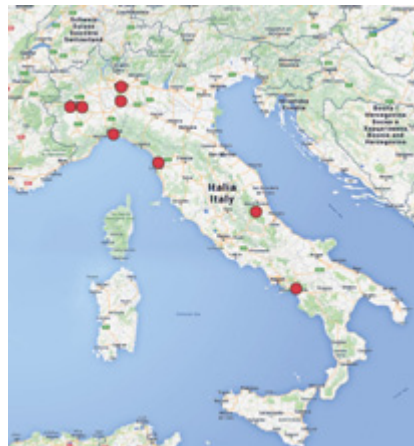
Digital competencies are at the core of any activity in almost all current and future sectors of society. Citizens, naive users, students, professionals, researchers are confronted with a wide spectrum of digitally based services and appliances. The laboratory tracks the formal definitions of "digital competencies" that are being developed to structure a consistent and shared usage of the notion of digital competence.

Formal training systems are also a target of the research activity in the laboratory: secondary school and university curricula are analyzed to propose a qualitative and quantitative assessment of the match between formal education and expected proficiency in digital skills in the IT market.

The diffusion of "certification" schemes in the IT market is also tracked; from vendor specific, product oriented certification, a new set of "competence-oriented" certifications is growing. The laboratory analyses current options and available "certification services", and strives to correctly locate such schemes with respect to formal diploma issued by schools and universities.

#### Mission

- Tracking international and national activities on the standards for classifying "digital competencies"
- Acting within the national system of formal education (University, secondary school, IFTS and ITS ) to foster the adoption of emerging EU standards on digital competencies
- Researching on new definitions of learning systems that explicitly adopt a digital competence approach
- Cooperating with both institutional bodies (AGID, MIUR, other Ministries, UNI) and professional societies (AICA) on the critical adoption of competence frameworks within the society
- Assessment of certification schemes for digital competences



#### Organization

The current set-up of the lab consists of the following units, which collect some 40 researches in Italian Universities:

- Università degli Studi dell'Aquila
- Università degli Studi di Genova
- Università degli Studi di Milano Bicocca
- Università degli Studi di Pavia
- Università degli Studi di Pisa
- Università degli Studi di Salerno
- Università degli Studi di Torino
- Politecnico di Torino

## Areas of activity

### Digital competencies

- ◉ Adoption of the EU eCF framework for defining digital competences
- ◉ The academic position for a communication channel between universities and the labor market
- ◉ Critical assessment both of eCF and of the EU e-Skills BoK (Body of Knowledge) in ICT
- ◉ "Digital competences for learning" in primary and secondary schools: an area to be developed
- ◉ Designing and launching of an "Observatory on Digital training"

### Formal training

- ◉ Mission: to highlight the cultural value of information technology and training
- ◉ Projects to promote ICT training of "trainers" and to spread the use of ICT in all educational disciplines
- ◉ Project to promote the "problem posing and solving" methodology for the implementation of the National Guidelines and the Guidelines relating to the teaching of mathematics and computer science from the new high schools, technical and vocational schools

### Certification

- ◉ Since a formal certification framework for ICT professionals is active in Italy since 2013, the laboratory tracks its deployment
- ◉ The role of certifications in ICT is a critical issue. The laboratory fosters a correct cooperation between market certification issuers and curricula designers

- ◉ A long lasting first example is the EUCIP project that has engaged CINI resources for over a decade, in cooperation with AICA
- ◉ New certification scheme in the ICT domain for non professional users, for measuring ICT competences in field domain

## Relationships with stakeholders

### AGID

- ◉ "Guidelines for National Programme for culture, education and skills"
- ◉ Specific contribution of CINI / GRIN / GII on the ECF schema
- ◉ "Best practices" in collaboration with the Association PROSPERA
- ◉ "National Coalition for digital Occupations (Grand Coalition for digital jobs)"

### AICA

- ◉ The EUCIP system in Italian ICT universities
- ◉ E-learning courses in ICT for the EUCIP project
- ◉ Cooperation on "eCFplus"

### UNINFO

- ◉ UNINFO is the branch of UNI, the Italian Standardization body, that tackles ICT activities. CINI/CFC laboratory is a member of this body
- ◉ CINI/CFC participates in the discussion leading to the design and deployment of the nationwide rules

## Governance

### Executive Director

Prof. Marco Ferretti  
Dipartimento di Ingegneria Industriale e dell'Informazione  
Università degli Studi di Pavia  
Tel +390382985365  
marco.ferretti@unipv.it

## Contacts

Dott.ssa Paola Ferrari  
segreteria.labcf@consorzio-cini.it  
paola.ferrari@consorzio-cini.it  
Dipartimento di Ingegneria Industriale e dell'Informazione  
Università degli Studi di Pavia  
Tel +390382985325



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