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Developing a smart university in a smart city

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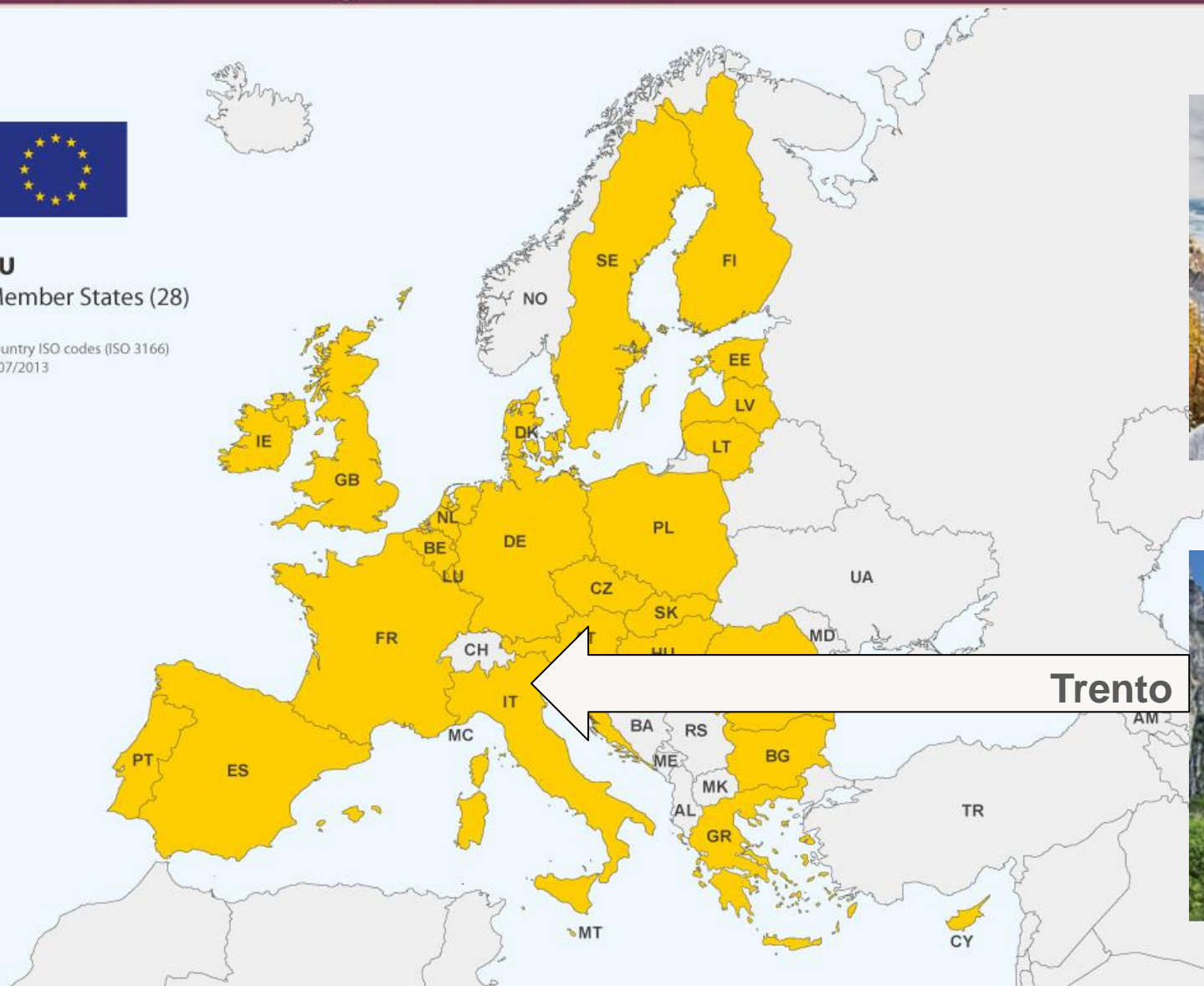
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EU
Member States (28)

Country ISO codes (ISO 3166)
1/07/2013

Trento

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Trento and Trentino
in the heart of the Alps

In spite of being a small city (117.000 inhabitants), Trento is still nowadays an important cross road between the Mediterranean and the Alpine areas and a place of cultural dialogue. Trento is county seat of Trentino, an autonomous province in the North east of Italy.

Distance from Trento to:

Verona	98 km
Milan	220 km
Venice	157 km
Innsbruck (Austria)	173 km

Trento was founded in the first century B.C. by the Romans, with the Latin name of "**Tridentum**". Trento's artistic and historical heritage is to be found in its monuments, which embody the centuries of history written under the dual influences of northern European and Italian cultures, still evident today in the variety of architectural styles.

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The University of Trento is a small/middle-size, comprehensive University.

Founded about 50 years ago, from its very beginning, it has always been protective towards its academic freedom and it has always been engaged in the development of the local community which hosts and supports the University itself.

10 Departments
- Civil, Environmental and Mechanical Engineering
- Economics and Management
- Faculty of Law
- Humanities
- Industrial Engineering
- Information Engineering and Computer Science
- Mathematics
- Physics
- Psychology And Cognitive Science
- Sociology And Social Research

3+1 Centres
- Centre for Integrative Biology (CiBIO)
- Centre for Mind/Brain Sciences (CiMeC)
- School of International Studies
- Agri-food & Enviroment (to be approved on Sept. 22, 2015 by the Board!)

60 Research Laboratories
1 Language Centre
5   Main Libraries

A Comprehensive small/medium size research intensive university with a strong focus on science and technology (and no medical school)

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People

590   Professors and Researchers

690   Technical and Administrative Staff

500   Ph.D students

400   Post Docs

16.164   Total enrolled Students (about 3.300   undergraduate intake – 1.800   graduate intake)

1.600+   Foreign enrolled students (EU/non EU) in 2013/14

The University of Trento currently holds outstanding positions both in **national** and in **international rankings**.

In the best known **national classification** annually drawn up by the **Censis**, UniTrento is always ranked among the top universities. In 2014-2015 Trento was ranked **2nd** among the medium-sized Italian universities (between 10 and 20 thousand students)

In the last report drawn up in 2013 by **ANVUR** (the Italian National Agency for the Evaluation of the University System and Research), Trento was ranked **1st** for **scientific production** in the category of medium-sized Italian universities.

According to **Il Sole 24 Ore**, the most important among Italian financial newspapers, UniTrento is in the **2nd position** among the best Italian public universities.

In the **international classification** drawn up by **THE- Times Higher Education** 2014-2015 the University of Trento ranked first among Italian Universities**. In QS ranking** UniTrento is ranked **in the 400-450 range.**

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Horizon 2020
European Union Funding
for Research & Innovation

Taking advantage of programs of the European
Commission that **foster interdisciplinary and
innovative research**:

23 projects financed under the new Horizon 2020
116 financed under FP7

19 total ERC GRANTS

August 2014: Trento, together with Guadalajara (Messico) and Wuxi (Cina) is selected by IEEE (Institute of Electrical and Electronic Engineers) among the best 10 Smart Cities in the world.

The goal: to offer a model of development in the field of ICT integrated to everyday life.

Benefits for cities:

- ❑ workshops to develop **white papers** on which future work will be based

- ❑ **education resources**, including support for Masters and PhD students

- ❑ development of smart cities-related courses with a focus on **MOOCs**

- ❑ organization of an **international conference** on smart cities

- ❑ **knowledge base/repository** to serve as a source of lessons learned

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urban mobility

environment

health & wellbeing

reduction of GHG

TRENTO
smart city

energy efficiency

Trento x Kyoto

security

covenant of mayors

General Programmatic Plan (GPP)
Executive Management Plan
Budget Plan

UniTrento benefits from the surrounding knowledge-intensive Trentino region which is traditionally devoted to **innovation**.

Trento is the **only south-European node** of the European Institute of Innovation and Technology (EIT).

EIT-Digital (former ICT-Labs): renew Higher Education and Technology Transfer in ICT by **cross-fertilizing technical education** with robust innovation and **entrepreneurship** education.

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Technology is not enough

Innovation should not remain abstract:
citizens must **take part in it**, and **drive it**

UniTrento role:

shape this new thinking, also with:

aggregation and *contamination* of
different knowledge:

sociology, art, literature, psychology, economy
meet

engineering, science, and ICT

UNIVERSITY AS A LIVING LAB

Today's students are tomorrow's citizens

They must live **first-hand** the new smart city culture

Bottom-up knowledge creation

Labs, **theses**, **teaching projects** related to smart cities

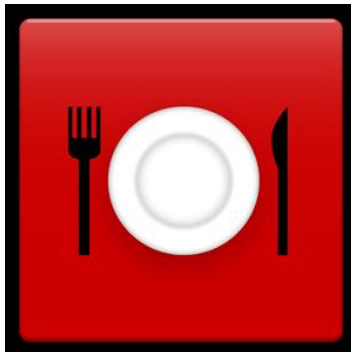**Students** are in the front run to **test, try, shape the smart city**

SmartCampus: supporting the campus with its students

Apps made **from students for students**

iFame

Check the **queue** at the **canteen**
in different locations
Check the daily **menu** and the
composition of the meal

Viaggia Trento

Plan your trips
Check the **train and bus timetable**
Check the nearest **car park**

The role of UNIVERSITY as innovation promoter

- **Innovation HUB** taking into the same «organizational place» the main research institutions and the local public innovation agency

- Projects with technical high schools taking advantage from the diversity of specializations (design, fashion, applied technical capabilities

- Integrating professional education with university education (dual programs)

- **THE ROLE OF C.LAB in the community**
  - C.LAB mixing students from different areas of studies
  - C.LAB taking young students from local schools (8-11) to deal with technology in ICT
  - C.LAB as an arena for entrepreneurs, students, scholars in sharing ideas

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University sport events are promoted through the new university network of sport services and facilities called UNI.Sport.

The project originates from the idea that practicing sports at university is not just considered a way to feel good and have fun, but it's also an occasion to learn and develop research activities.

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Projects funded under the call **"smart cities 2014"** financed by the **Italian Ministry of Education, University and Research**:

INF@NZIA DIGI.tales 3.6
Exploiting **technologies** for new active and creative **learning experiences** focused on children (3-6 years)

SMARTOUR
Integrated platform of **innovative services** for the management of **tourist experiences**

SmartGATEpluS
Improving the effectiveness and **efficiency** of the system of **Administrative Justice** (AJ) in Italy

Ministero
Istruzione
Università
Ricerca

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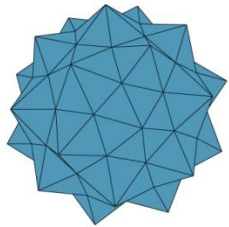
INTELLEG i t
Turning science into intelligence

managing the **risks** associated with **security**,
including **geopolitical** risks

KKAM

infomobility services
digital menu
services for **visually impaired**

I K U B E D

INTELLIGENT
INFRASTRUCTURE
INNOVATION

increasing safety thanks to the objective
knowledge of the structural behavior

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Investing in new ideas and **technologies for renewable energies and clean tech**

Improved **Human-Computer Interaction** through **computer vision**

Customizing software solutions for the **management of surface and subsurface water resources**

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Prevention of **hydrogeological risk**

Detecting and measuring the concentration of **Radon**

Robotics and Automation
Sensing via Mechanical Measurement
Systems and Computer Vision

**Being in a smart city means also to develop smart relations: industrial community**

Fostering innovative production through interaction between companies and the university as a community of citizens.

Industrial Problem Solving with Physics

3 companies and **30 students and young researchers**

A week to find a solution to the problems set by the

companies through focus groups and problem solving strat[e]

The Evaluation Committee gives an award to the most inno[v]
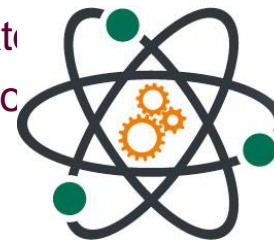
INDUSTRIAL PROBLEM SOLVING WITH PHYSICS
20-25 luglio, 2015
Trento (Italia)

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Our smartness for our Smart City:

- **connect** knowledge

- citizen-focused highly innovative **research projects**

- **Student community** as a **living lab** for innovation

- earn how to be a smart citizen through **higher education**

- develop **intellectual property** and **services** for the smart citizens of today and tomorrow

GRAZIE!