

UKRAINE: Research and Development in the Field of Information and Communication Technologies

GEOGRAPHICAL LOCATION: Central East Europe

AREA: 603 700 square km

POPULATION: 45, 962, 900 people (as for 01 January 2010)

CAPITAL: Kyiv

BORDERING COUNTRIES/REGIONS: Moldova, Romania, Hungary, Slovakia, Poland, Belarus and Russia – land border; Bulgaria, Turkey and Georgia – sea border. The total length of the border 6992 km.

Research and Development (R&D) in Ukraine is mainly carried out by research organizations and universities.

Ukraine has developed a strong tradition in the fields of cybernetics, mathematics and computer science which brought up several scientific schools in Ukraine. It is one of few countries of the world to produce space stations, global radio, microwave and satellite communication systems and aircrafts, and it has more achievements in modern engineering. In addition, Ukrainian engineers and scientists have been involved in large-scale complex projects for forty years, cutting across various technology fields.

Following this tradition, over the past few years Ukraine has rapidly become a strong player in software engineering and IT business services, having as major advantages the up-to-date technical skills and education of its workforce. Because of the national efforts towards technology development, Ukraine is a society with a national focus on research and development.

Thus, there is a strong collaboration potential between Ukrainian and EU ICT actors, mainly due to the well established educational system, the availability of a large pool of highly qualified human resource as well as the existence of significant ICT infrastructures which are established in several Ukrainian institutions.

The national **ICT policy development** is mainly focused on the following areas:

- improving the implementation and performance of projects within the National Programme of Informatization;
- creating a favourable investment climate for ICT developments;
- supporting the advanced basic and applied research and knowledge based technologies;
- supporting development of the domestic software industry and ICT manufacturing industry;
- developing national, branch and regional information systems, networks and e-resources, information analytical systems of executive authorities and local government institutions.

MAIN ICT R&D INSTITUTIONS:

- V.M. Glushkov Institute of Cybernetics (<http://www.icyb.kiev.ua>)
- National Technical University of Ukraine "Kyiv Polytechnic Institute" (<http://www.ntu-kpi.kiev.ua>)

- Lviv Polytechnic National University (<http://www.lp.edu.ua>)
- National Technical University "Kharkiv Polytechnical Institute" (<http://www.kpi.kharkov.ua>)
- International Research and Training Center for Information Technologies and Systems (<http://www.irtc.org.ua>)
- Taras Shevchenko National University of Kyiv (<http://www.univ.kiev.ua>)
- State University of Informatics and Artificial Intelligence (<http://www.iai.edu.ua>)

ICT Priorities¹:

- Computing systems (Objective 3.6)
- Microsystems and smart miniaturised systems (Objective 3.9)
- Internet of services, software & virtualization (Objective 1.2)
- Cognitive systems and robotics (Objective 2.1)
- Technology enhanced learning (Objective 4.2)
- Intelligent information management (Objective 4.3)
- ICT for environmental services (Objective 6.4)

ICT International Cooperation:

- Projects of **the EU Seventh Framework Programme**
 - “Extending ICT research co-operation between the European Union, Eastern Europe and the Southern Caucasus – EXTEND” (*National Information Centre for Ukraine-EU S&T Cooperation*)
 - “Strategic Cooperation in Ukraine, Belarus and EU in Information and Communication Technologies - SCUBE-ICT” (*V.M. Glushkov Institute of Cybernetics of National Academy of Sciences of Ukraine; L'viv Centre for S&T and Economic Information; Institute of Artificial Intelligence Problems*)
 - “Information Society Technologies to Open Knowledge for Eastern Europe and Central Asia - ISTOK-SOYUZ” (*Technology Business Incubator "Kharkov technologies"*)
 - “Spin-thermo-electronics – STELE” (*Institute of Low Temperature Physics and Engineering*)
- The Science and Technology Centre of Ukraine (STCU) funded projects
 - “Computer monitoring technology for operational state and accidental risk of poison-fluid and petroleum depots” (*State Enterprise "Design office "Youzhnoe", Institute of applied machine building*)
 - “Creation of unique information environment in GUAM community for remote training and technical and scientific cooperation” (*State Enterprise "Design office "Youzhnoe", National Space Agency, Academic and Research Network of Ukraine UARNET*)
- Ukrainian R&D teams have several bilateral projects with Italy, Latvia and Poland

¹ National ICT Priorities are presented in accordance with the ICT objectives of the EU 7th Framework Programme for Research and Technological Development following the results of the Consultation Workshop