

# **The New Paradigm for Education: From Accredited Qualification to Certified Skills**

*INTELLECT: Centre for Excellence in INternet TEchnologies and Innovation, Library SciEnces and Cultural HeriTage*

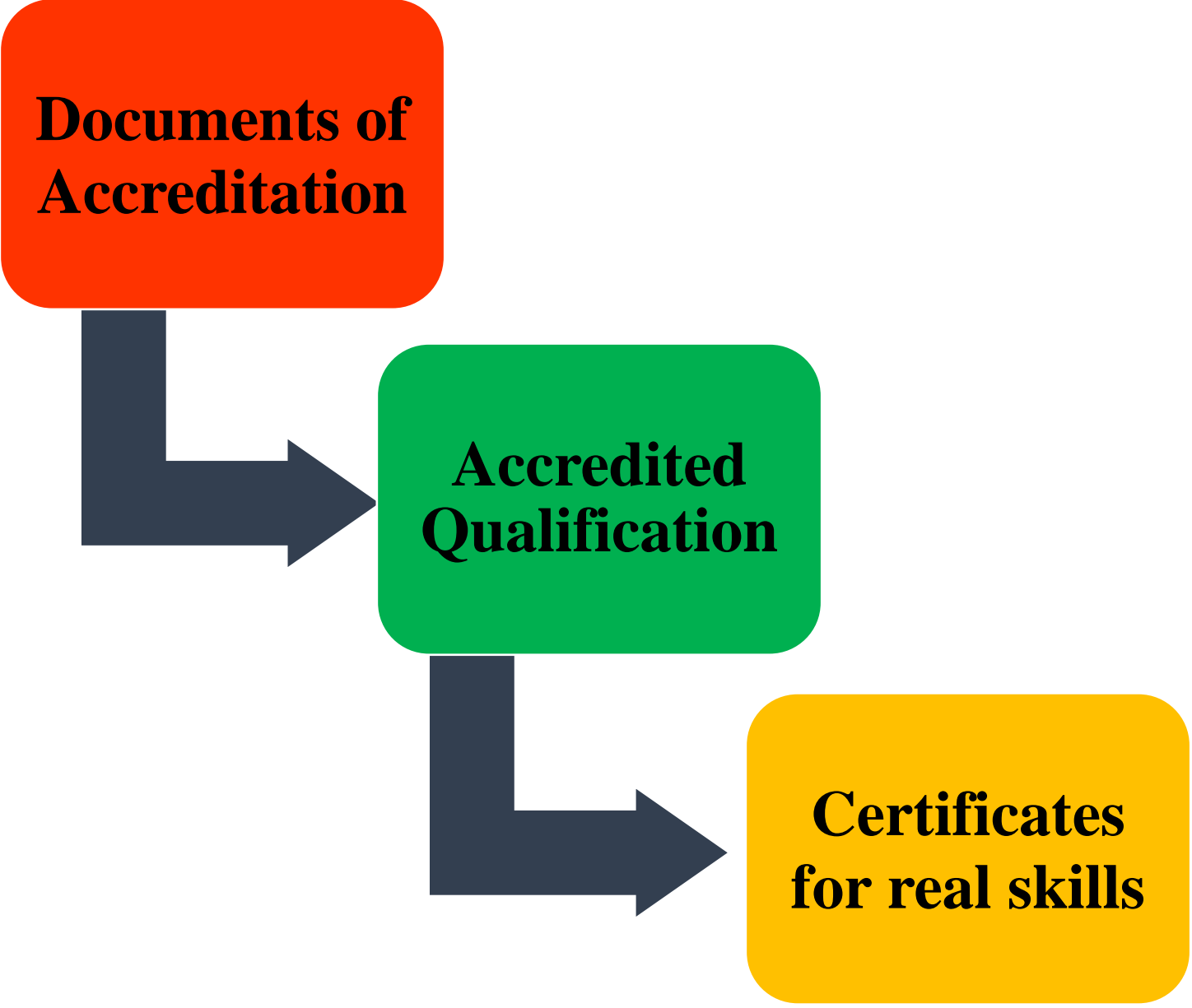
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# UNESCO

**From Accredited Qualification To Certified Skills**



**From Accredited Qualification To Certified Skills**

# ACCREDITED QUALIFICATION



**From Accredited Qualification To Certified Skills**

# CERTIFIED SKILLS



**We are the masters ready for the real world!**

**From Accredited Qualification To Certified Skills**

# B U L G A R I A

Capital: Sofia

Area: 110 993 km<sup>2</sup>

Population: 7 364 570

Official language: Bulgarian





# STATE UNIVERSITY OF LIBRARY STUDIES AND INFORMATION TECHNOLOGIES (SULSIT) - SOFIA









**THAT`S ME!!!**



## SULSIT is member of the following organizations:

- **IFLA** - International Federation of Library Associations;
- **LIBER** - Association of European research and academic libraries;
- **ICOM** - International Council of Museums;
- Union of Librarians and Information Services (**ULIS**) and etc.



# SULSIT is the guardian of knowledge



# Science Parks - A Strategic

Educational Priority

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# Science Park Definition

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## GENERAL

*“A Science (technologic) park is a space (physical or cybernetic), managed by a specialized professional team that provides added value services, the main aim being to increase competitiveness of the region through stimulating quality culture of innovations between associated firms and institutions based on knowledge through organizing knowledge and technologies transfer towards companies and the market but also by active stimulation of the creation of new sustainable innovative companies through a process of incubating and establishment of spin-offs” (2001).*

**Luis Sanz, General Director of the International Association of Science Parks (IASP)**

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# Science Park Definition (IASP)

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**Science park**: an organization managed by **professionals**, whose main aim is to increase the wealth of the local community by supporting and developing a **culture of innovations and competitiveness** among the associated academic and business institutions;

To achieve these aims a science park should **stimulate and manage the flow of knowledge and technologies** among universities, research institutions, companies and the market;

The science park **supports the establishment and growth of innovative firms** through a process of incubating and establishing of spin-offs;

The science park **offers added value services**, office space and infrastructure;

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# COOPERATION BETWEEN UNIVERSITIES AND BUSINESSES

## Science parks:

Help in implementing **the 3<sup>rd</sup> mission of universities** – to serve society

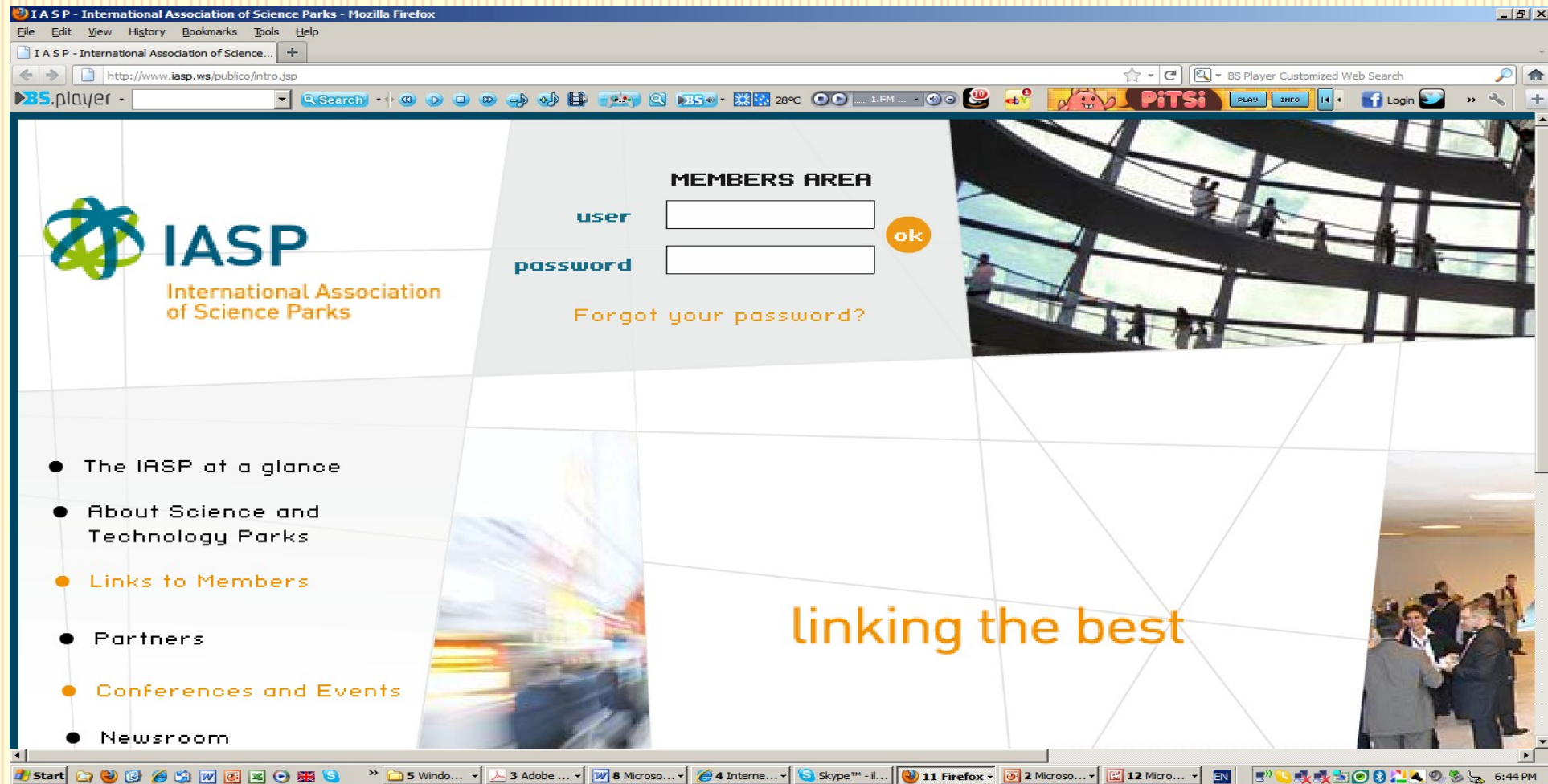
They create **partnerships** between tutors, companies and researchers;

They generate **visible benefits** of scientific work and improve public support and university financing



© Charles W. Wessner

# International association of Science Parks (IASP)



The screenshot shows the IASP website interface. At the top left is the IASP logo, a stylized atom with green and blue spheres, followed by the text "IASP International Association of Science Parks". To the right is a "MEMBERS AREA" login form with fields for "user" and "password", an "ok" button, and a link for "Forgot your password?". Below the logo is a navigation menu with the following items:

- The IASP at a glance
- About Science and Technology Parks
- **Links to Members**
- Partners
- **Conferences and Events**
- Newsroom

The main content area features a large image of a modern building interior with a curved walkway and people. The text "linking the best" is overlaid on the image. The browser window shows the URL "http://www.iasp.ws/publico/intro.jsp" and the system tray at the bottom indicates the time is 6:44 PM.

From Accredited Qualification To Certified Skills



# ASSOCIATION OF UNIVERSITY RESEARCH PARKS (AURP)

The screenshot shows the AURP website in a Mozilla Firefox browser. The browser's address bar displays "http://www.aurp.net/". The website's header includes a search bar, a "LOGIN" button, and a navigation menu with the following items: "About AURP", "About Research Parks", "Events", "Professional Development", "Newsroom", "For Members", and "Home".

The main content area features the AURP logo, which consists of a red square with a white grid pattern, and the text "ASSOCIATION OF UNIVERSITY RESEARCH PARKS" and "Creating Communities of Innovation". To the right of the logo is a large aerial photograph of a university campus.

The main content area is divided into two columns. The left column has the heading "Innovation Key to Job Creation" and the sub-heading "Research, science and technology parks creating high-wage jobs". Below this is a paragraph: "Research, science and technology parks are catalysts for job creation. As communities look for ways to create jobs and drive economic growth, many are finding innovation to be a key element." Below the paragraph is a small image of a building with the text "PURDUE RESEARCH PARK" and "Helping Drive a New Economy". To the right of the image is a quote: "Research and science parks help grow local, high-tech companies while attracting new ones to the region," said Harold Strong, Jr., Association of University Research Parks (AURP) President and Director of Discovery Park and Technology Transfer at the University of North Texas. "These parks are impacting their communities in a big way – with high-wage jobs." Below the quote is another paragraph: "One example of this is the Purdue Research Park Network. According to a recent [economic impact study](#), the park network is responsible for a \$1.3 billion annual impact for the State of

The right column has the heading "Corporate Sponsors" and features the logo for "Biologics Modular". Below the logo is a red button that says "Become a Sponsor" and "Sponsor AURP". Below that is another red button that says "Join AURP" and "Become a Member".

The browser's taskbar at the bottom shows several open applications, including "3 Windows", "3 Adobe...", "8 Microsoft...", "3 Internet...", "Skype™ - il...", "15 Firefox", "9 Microsoft...", and "Microsoft...". The system clock in the bottom right corner shows "2:45 PM".

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# The First Science Park

## Stanford Research Park (1951)

Today – **140 companies** in the field of electronics, software, bio-technologies, etc. with more than

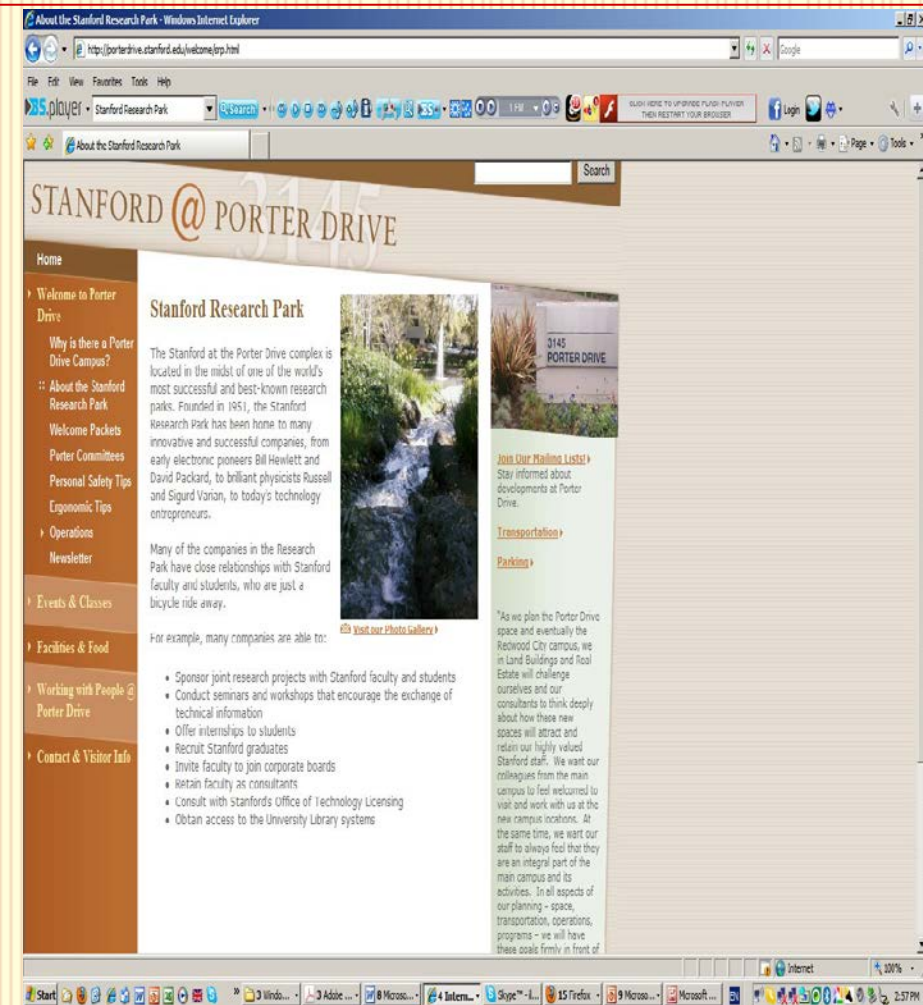
**23 000 employees;**

So far – established

**2,454 companies by  
2,325 members of Stanford;**

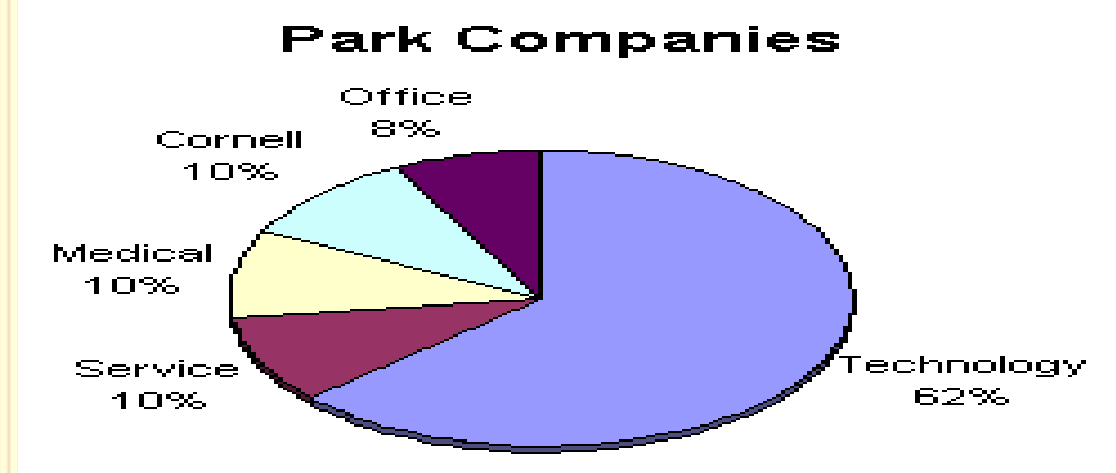
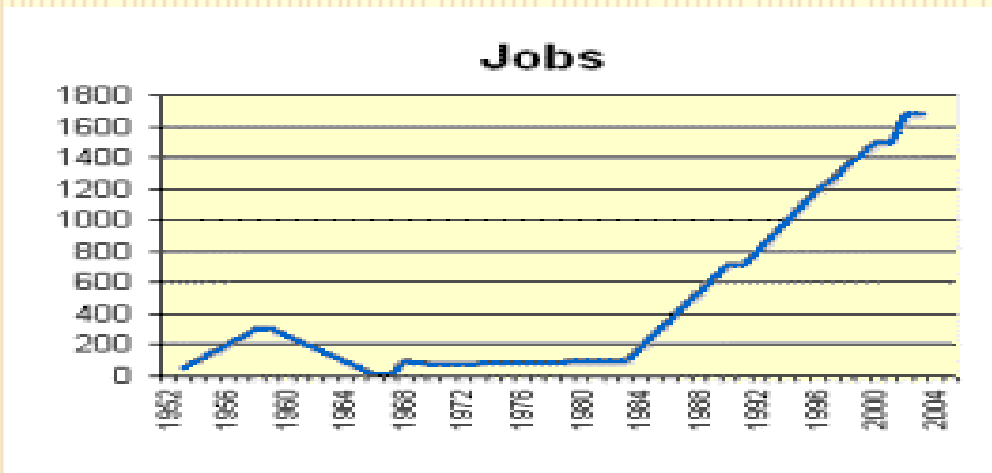
Students and tutors of Stanford have started

**Hewlett-Packard, Su  
Microsystems, Cisco**



# The Second Science Park

Cornell Business & Technology Park (1951)



# The UK

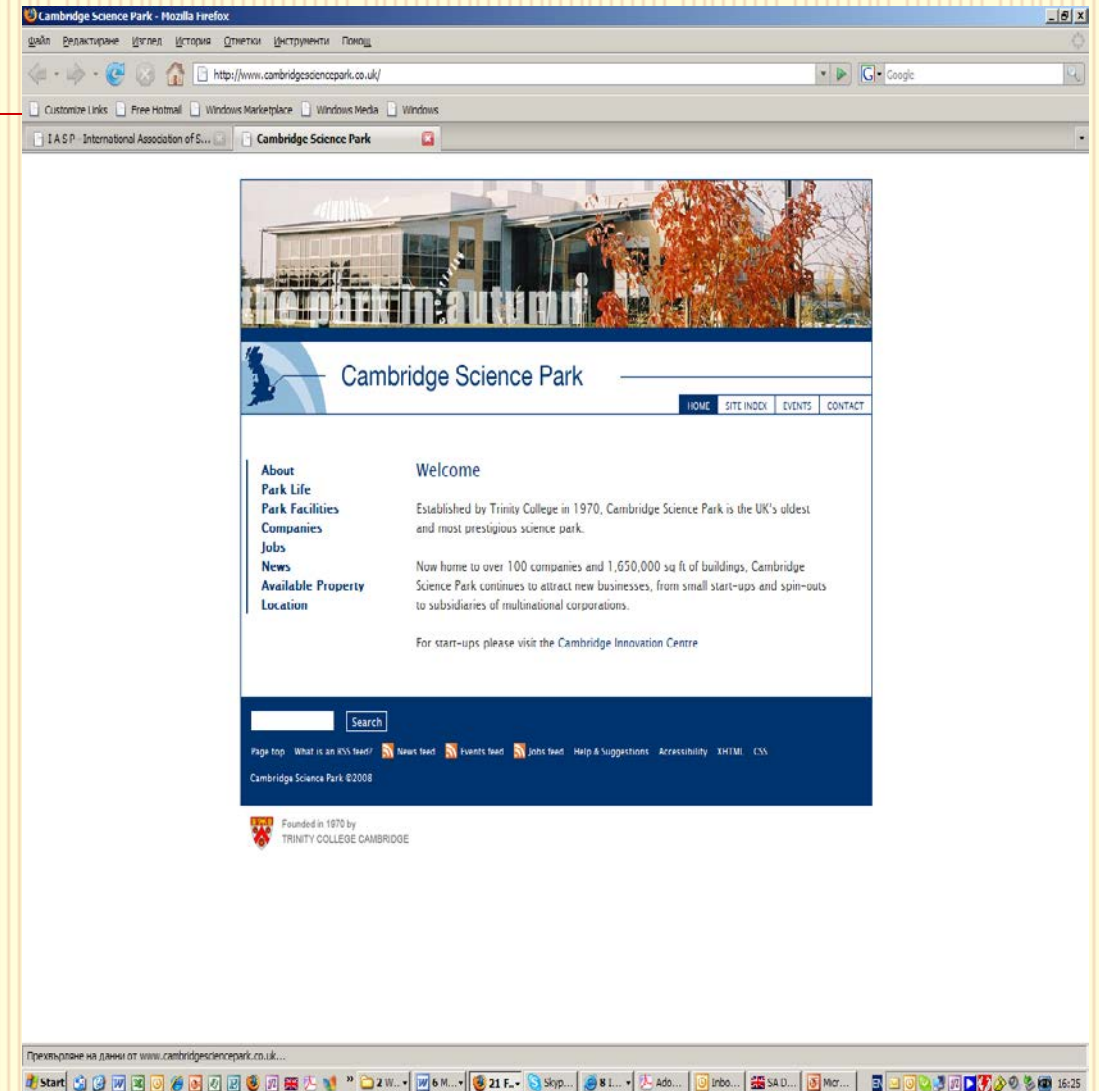
## Cambridge Science Park

Established in 1970

More than 100 firms occupying an office area of 160,000 m<sup>2</sup>;

Over 5 000 employees

New businesses, large multi-national companies;



# Germany

## Science City Ulm

*Daimler-Benz Research Center* is the main partner in Science City.

**Industrial and Research Centers** cover research areas like: laser applications in medicine, bio-medic applications, Artificial Intelligence, mobile systems, car industry, modern semi-conductor devices, etc.

**To the students in Ulm, the scientific park is the direct link to industry and applied research**

science park II - Mozilla Firefox  
http://www.2.stadtentwicklungsverband.ulm.de/english/g1.htm

**Ulm**  
**Science-Park II**

The Science Park is at the heart of the Ulm Science City Network, offering innovative businesses, direct and personal contact within a unique research environment with competence in important future fields.

After office and laboratory space was offered on a rental basis as a first step, priority is now given to business land plots, which are selling at quite competitive prices.

**See actual pictures from Science Park II with our webcam.**

**Facts and Figures**

**Location:**  
In the North West of Ulm within the Science City (Wissenschaftsstadt)  
Access to A7, A 8 and B 10.  
Excellent connections on the Public Transportation Network, attractive Scenery.

**Resident companies:**  
Daimler Chrysler  
Siemens  
Takata

**Area available:**  
around 2,5 hectares

**Spectrum of use:**  
Research and development utilizing synergy-effects within the Science City.

**Land plot sizes:**  
Various offers, expansion possibilities.

**Building parameters:**  
Maximum building height: 3 full stories,  
Ground surface figure: 0,8.

**Office sizes:**  
from 20 m<sup>2</sup> to 3000 m<sup>2</sup>.

**Availability:**

**The advantages**

- A creative atmosphere, emphasized by a research environment, imbedded in an abundance of greenery, all facilities within easy access of each other.
- New and young Polytechnic/University and research institutes, eager for innovations with an informal character and working without inhibiting prejudices.
- A multitude of informal talks, seminars, symposia, meetings, discussion-groups, colloquia and symposia giving an opportunity for

# Finland

## Otaniemi Science Park

A leading scientific park in northern Europe;

Services to more than

14 000 students and

8 000 professionals;

The screenshot shows a web browser window displaying the Otaniemi Science Park website. The browser's address bar shows the URL: <http://english.espool.fi/default.asp?path=32373;37337;45340;37411;37126>. The website header includes navigation links for 'Suomeksi', 'Service index', 'På svenska', and 'Contact information', along with a search bar and 'Advanced search' button. The main content area features the 'english ESPOO.FI' logo and a navigation menu under 'Our services' listing various institutions like Helsinki University of Technology TKK, VTT - Technical Research Centre of Finland, KCL, Geological Survey of Finland GTK, CSC, Innopoli, Culminatium, and Foundation for Finnish Inventions. A section titled 'Otaniemi Science Park' contains a paragraph: 'During the last 50 years an extraordinary complex has sprung up in Otaniemi, Espoo. This green peninsula, reaching into the glittering Gulf of Finland, has become a cradle for world-class technology, research and innovation.' Below this, another paragraph states: 'Otaniemi Science Park nurtures both individuals and businesses alike, delivering diverse opportunities to develop and grow. It is no wonder that many Finnish companies operating internationally have built their headquarters in the surroundings of inspiring Otaniemi.' A third paragraph describes the park as a hub for 14,000 students and 8,000 professionals. At the bottom of the page, there is a footer with 'City of Espoo' contact information and a 'Back to Top' link. The Windows taskbar at the bottom shows the Start button and several open applications.

# Estonia

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## Technopol

150 firms

160 firms providing services

9.5 hectares

About 32,000 m<sup>2</sup> office and other area

A number of services

The largest software firm incubator in Estonia

2 universities - over 12,000 students and 1,300 researchers

5 active R&D centers

# Romania

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A network of science  
technologic parks;  
Software Park – Bakau;  
Science and Technology Park  
“Technopolis” – Iasi





# International Association of Science Parks (IASP)

The screenshot shows the IASP website interface. At the top left, there is a login form with fields for 'user' and 'password', an 'ok' button, and a link for 'Forgot your password?'. To the right, a banner for the '29th IASP World Conference 2012 - Tallinn' is visible. Below the login form is a green decorative bar. The main content area features a world map and a section titled 'Links to Members - By Country'. A list of countries is displayed in three columns, with an arrow pointing to the location of Bulgaria on the map. The text 'Bulgaria not on the map' is overlaid in large red font across the map area.

**Links to Members - By Country**

Argentina	Taiwan	Singapore
Australia	Tanzania	Slovakia
Austria	Turkey	Slovenia
Belgium	Kenya	South Africa
Botswana	Korea	Spain
Brazil	Latvia	Sweden
Canada	Lithuania	Switzerland
China	Luxembourg	Syria
Colombia	Malaysia	Taiwan (China)
Costa Rica	Mexico	Thailand
Croatia	Namibia	The Netherlands
Cuba	New Zealand	Trinidad & Tobago
Cyprus	Nigeria	Tunisia

# Questions????

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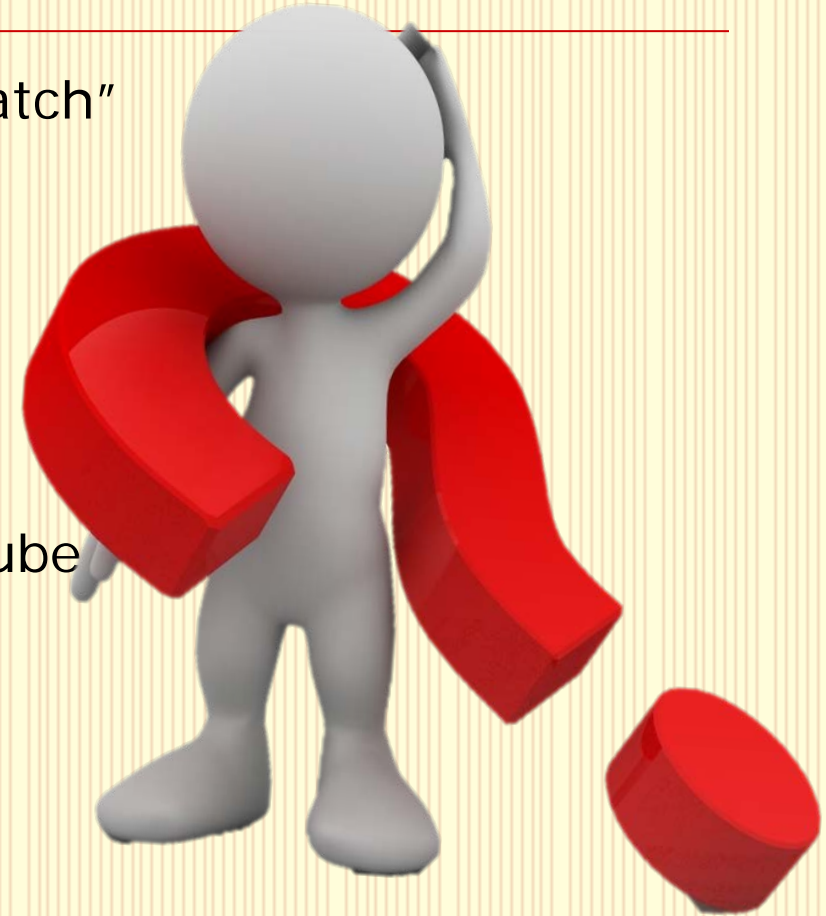
How should we build the first technologic park? From “scratch” or having the infrastructure (albeit partial);

Top-down (5-7 years);

Down-up (1-3 years);

By all means supported by UNESCO; State or private initiative?;

Funding (Structural funds, private funds, risk capital, Danube strategy, 7<sup>th</sup> Framework program, Competitiveness and Innovation Program, the new program Horizon2020, European Investment Bank, others);



**INTELLECT: CENTRE OF EXCELLENCE IN INTERNET  
TECHNOLOGIES AND INNOVATION, LIBRARY  
SCIENCES AND CULTURAL HERITAGE**

# OBJECTIVES

- to **establish a new Centre of Excellence (CoE)** based on the capacity of SULSIT and its partners;
- to **further develop its research and innovation potential** in order to position it as a **strong research and innovation hub** at national, European and international level;
- to qualify as an **Associated Partner of the EIT ICT Lab** (<https://www.eitictlabs.eu/>) for **South-Eastern Europe and Western Balkans**

# CoE INTELLECT – Research & Innovation Arm of the UNESCO Chair at SULSIT

- UNESCO Interfaculty Chair **ICT in Library Studies, Education and Cultural Heritage;**
- UNESCO Chair Main Objectives:
  - to develop - educational and training programs (e-learning and lifelong learning programs);
  - focus on **research** and preparation of PhD students
  - support **innovations and technology transfer**

# Main Areas of CoE INTELLECT

- **Research and innovation in internet technologies, library sciences and cultural heritage** – areas where the SULSIT has already demonstrated solid competitive advantage both at national and international level;
- Special attention will be paid on the area of **Future Internet and Web** – area which has transformational impact on society and all industries and provides enormous opportunities for economic growth.
- According to a study of Cisco, the overall Value at Stake of the so called **Internet of Everything** in Bulgaria (both in the public and private sector) is estimated at \$10.4B. The opportunity only for the Capital City Sofia is estimated at \$0.81B.

<http://www.cisco.com/web/strategy/docs/iot-opportunities-for-bulgaria.pdf>

# SPECIFIC AREAS

- **Future Internet and Web;**
- **Smart Cities and Communities** (Sofia – Smart City);
- **Smart X:** Culture, Libraries, Education, Energy, Transport, Health, Production, Security, Agriculture, Environment, ..... Society;
- **Open Innovation and Web Entrepreneurship**

# PARTNERS

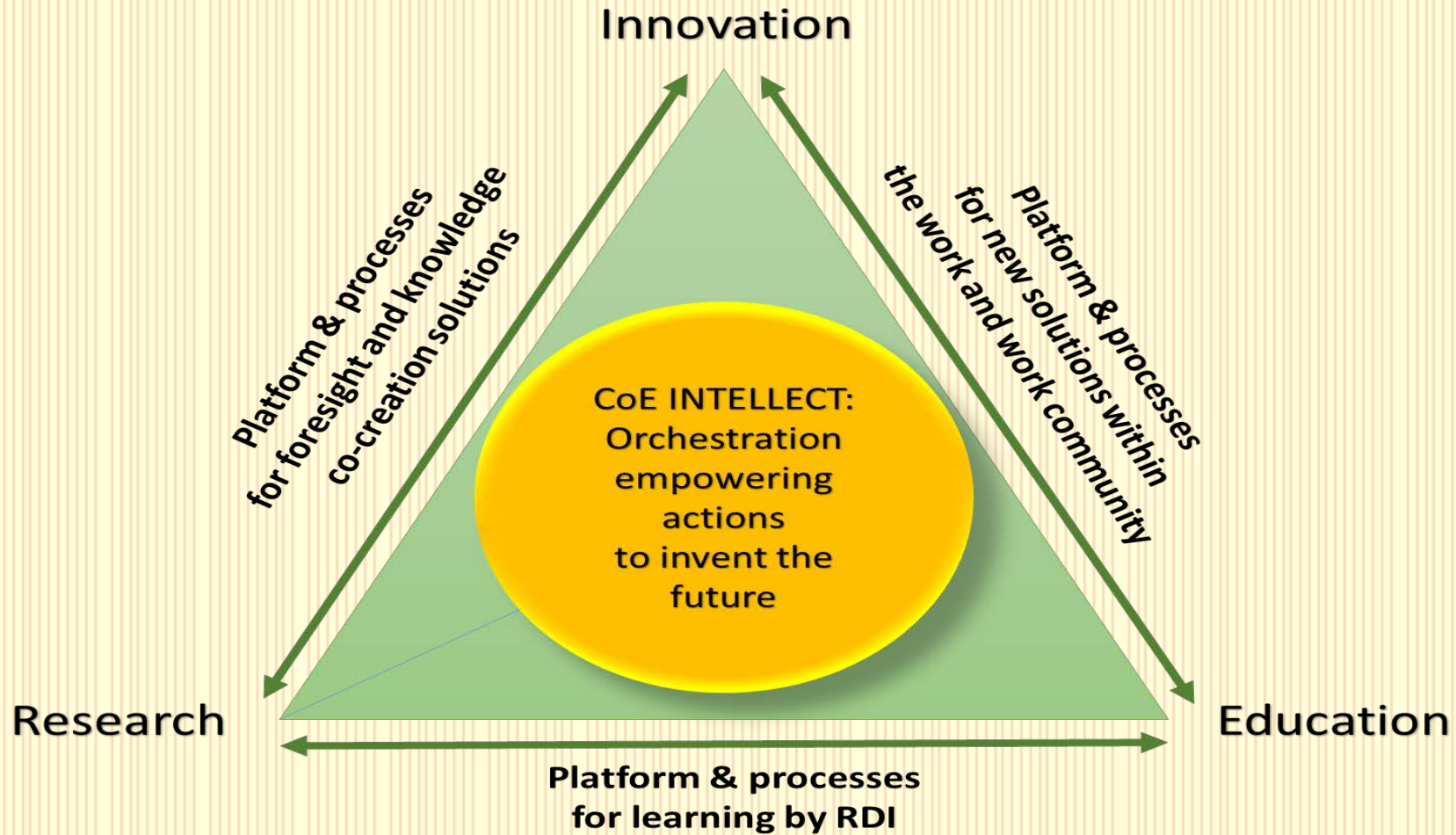
- **Main partners:**

- Sofia Development Association (SDA)
- Centre of Technology and Innovation Management GMBH, Munich, Germany (CeTIM)
- ICT Cluster (ICTC)
- Cluster Innovation and Culture (CIC)

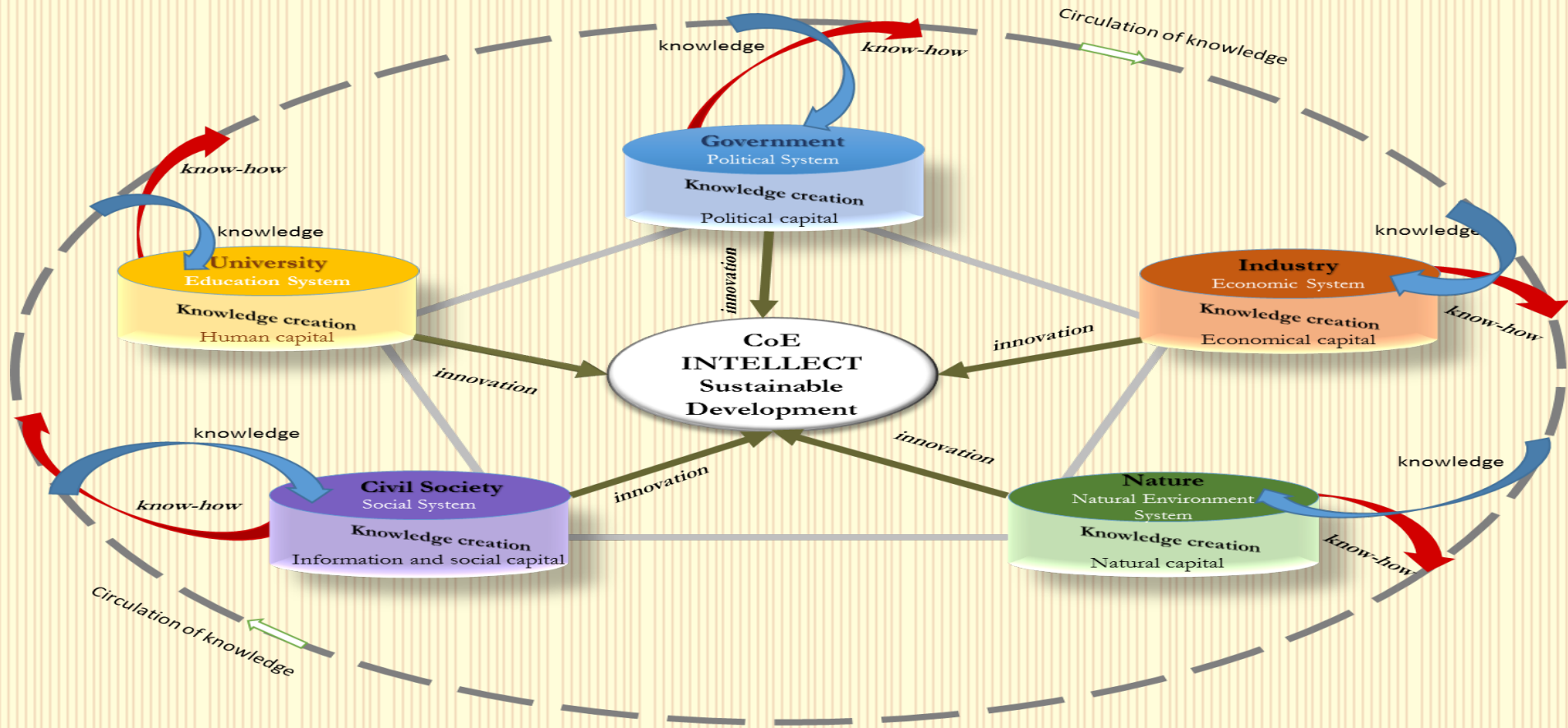
- **Associated partners** – more than 50 national and international, including: Sofia Municipality, Ministry of Education and Science; Ministry of Economy and Energy, Ministry of Culture, Sofia Tech Park, Milano University, ICT Audiovisual cluster Madrid, Basque Audiovisual Cluster, Honeywell – CZ, Association of the Business Clusters, etc



# Knowledge Triangle of the CoE INTELLECT



# CoE INTELLECT model

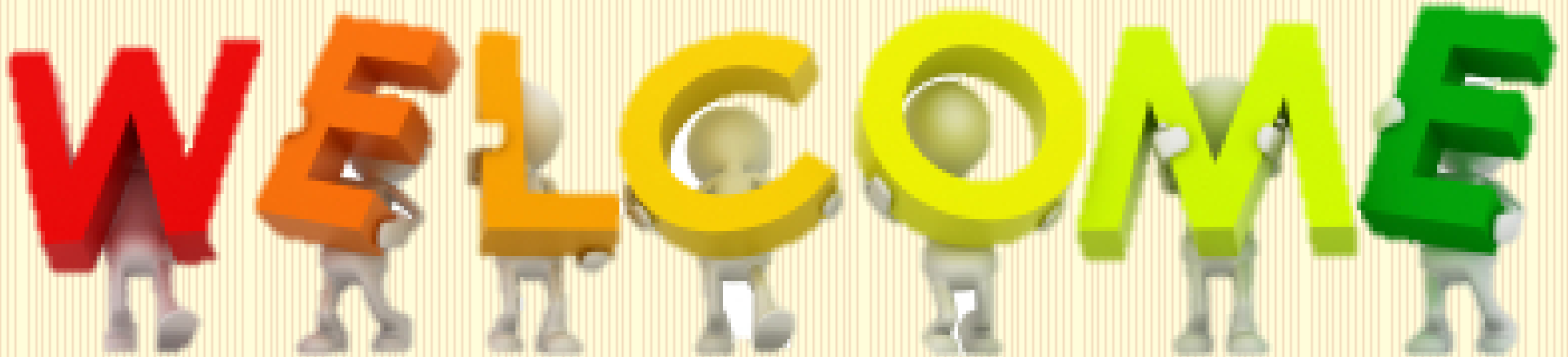


based on Quintuple Helix (university - industry - government - civil-society - natural-environment-system) model for sustainable development

# UNESCO Workshop – *QED2011*

UNESCO International Workshop *QED*:  
*Educational Quality and Challenges for Teachers in a Digitally  
Networked World*

**October 30-31 2014 in Sofia, Bulgaria**



**From Accredited Qualification To Certified Skills**

**THANK YOU FOR YOUR ATTENTION!**

