

Plamen Nedkov, Marek Holynski & Giulio Occhini (Editors)



ICT Strategies & Applications



IT STAR Series

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Plamen Nedkov, Marek Holynski & Giulio Occhini (Editors)

ICT Strategies & Applications



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on ICT Strategies and Applications

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1. Introduction

1.1. Introduction to the 9th IT STAR Workshop on ICT Strategies and Applications

16 October 2015, Warsaw, Poland

Plamen Nedkov

8 in 1¹

The drivers of the current workshop were similar to these of the previous eight IT STAR events, i.e.:

- Continuity of the Association's Information Society agenda
- Parity representation of academia, industry and government
- Broad dissemination of results and spin-off

IT STAR's conferences have addressed issues related to ICT research & development, universities and the ICT industry, CEE Information Society experiences, ICT skills, education and certification, electronic business, digital security, and history of computing. The presentations, statements and other documentation are available at www.starbus.org/conferences.

So what does 8 in 1 imply?

Previous debates and conclusions should be further regarded and refined in order to trace patterns of development. In a dewdrop, here are some conclusions of previous events that assisted the debate on ICT Policies and Applications:

- *The increasing relationship between investment in new digital technologies and economic development is obvious and countries unable to take active part in the new digital scenario risk to be marginalized with increased unemployment and reduced competitiveness and quality of life.*
- *Continuous ICT education and encouragement of IT professionalism need to rank high on governmental agendas. A stable R&D environment in ICT with appropriate regulations, financing and incentives should be ensured to keep the best scientists at home and the leading national R&D institutions competitive and integrated within the European network of programs and institutes. Good university education is essential and stronger collaboration between informatics departments and business/application communities should lead to the establishment of multi-stakeholder partnerships, in which universities play a major role in extending the provided products and services by utilizing and combining the respective strengths and resources of government, the private sector and civil society.*
- *To be efficient in providing the regulatory framework of national IS developments, governments need objective assessments and periodical revision of their own policies and institutions. Issues*

¹ For further reference please check www.starbus.org (conferences and publications)

such as information ownership, information clarity, availability, accessibility, protection and processing remain the crux of governmental responsibility. Reliable and transparent information streams should be sustained to avoid information bunkers and the growth of an e-bureaucracy.

- *The e-Business paradigm is based on the exploitation of informatics and Internet technologies to energize key business processes. The availability of ICT in a company by itself, however, is not sufficient for a successful e-business practice - there are many social, organizational, legislative and security aspects, including users' trust and confidence. E-Leadership competences are of crucial importance and should be seen against the rapid penetration of web approaches transforming traditional top-down organizational schemes into dynamic structures based on collaboration and free exchange of knowledge.*

Format

The presentations of Bruno Lamborghini, Martin Przewłoka and Włodzimierz Marciński provided an insight on aspects of the general conference topic², and, on that base the debate proceeded within 3 distinct areas:

1.National Strategies, Policies and Action Plans

Three presentations were delivered:

The presentation of *Ivan Dimov* reviewed the **Bulgarian ICT Policy and Strategy**. ICT is one of the five priority areas of the Strategy for Development of Science in Bulgaria until 2020. A critical analysis of the Bulgarian ICT national policy, activities and instruments was presented and the following two activities were concretely analyzed - Creating an environment for introducing information and communication technologies, and Introducing Open Access to scientific information and research data.

An interesting discussion followed on brain drain in the ICT field and the need to reintegrate ICT professionals back into the national economies.

Kálmán Kovács presented the **Smart City Strategy in Hungary**. *Eugenijus Telešius* introduced the **Lithuanian National Digital Coalition: Purposes, Possibilities and Opportunities for Digital Jobs**, which has the mission to increase youth employment by promoting ICT knowledge and achieve more effective use of the digital potential by supporting the implementation of the Digital Agenda for Lithuania 2014-2020.

2. Industry, Innovation and Take-up

Wacław Iszkowski, President of the Polish Chamber of Information Technology and Telecommunications, provided an overview of the **Polish ICT Industry and Market** and raised some critical issues related to the role of the EC in strengthening the performance of the EU

² Please see Vol. 13, no.2, Summer 2015 of the NL for the abstracts of their presentations

member countries in the field.

Jaan Oruaas presented the **GoSwift Queue Management Service**, an innovative queue management system developed to answer the problems created by traffic jams of vehicles waiting to cross the EU border from Estonia into Russia.

3. Skills and e-Leadership

Roberto Bellini introduced the **e-CFPlus System**, based on the e-CF framework, and further detailed the operational terms to assess the professional digital skills possessed by ICT specialists, and to evaluate them and develop a suitable action plan to enhance their value. E-CFPlus provides an enriched and structured model of knowledge and operational skills, completed by well-known methods and web tools to manage the assets of business skills in a simple and effective way.

Ronald Bieber presented **Coding for Children**, an Initiative of the Austrian Computer Society, which supports innovative competences and aims to increase the attractiveness of coding and informatics in primary schools and kindergartens. The learning of algorithmic thinking is not necessarily connected with computers - computer science unplugged enables teachers, who are not so familiar with computers, and schools, which are not well equipped, to teach children at an early stage core-competences for basic informatics knowledge.

In the same stream, *Pierfranco Ravotto* presented AICA's "**LOGIC**" **Initiative – Procedural Reasoning and Programming for Kids**, which is intended, along with ECDL, to be offered to schools. It consists of training and certifications for teachers and pupils concerning computational thinking, algorithms, coding and robotics.

1.2. Conference Statement

IT STAR is pleased to release the following



Statement

based on the presentations and debate of the 9th IT STAR Workshop on ICT Strategies & Applications, 16 October 2015 in Warsaw, Poland

The digital scenario is driven by new forms of economic and social evolution based on wide diffusion of global communication networks, machine-to-machine environment, Big Data, Cloud platforms, knowledge sharing, open innovation and virtualization of exchange. The Internet of Things is changing our lives radically: we are exposed to countless trends and concepts, and everything – from smart items to smart cities – is turning smart. The digital transformation will be successfully managed if we no longer have to distinguish between real and virtual!

There is wide understanding that ICT is a driving force of development and governments have developed strategies and policies vis-à-vis the Digital Agenda for Europe. An analysis of the Information Society uptake in the IT STAR region, however, suggests that there are shortcomings related to their implementation and regular updating. Governments are called upon to keep their strategies up-to-date since failing to do that would lead to action-plans and solutions based on old approaches.

The level of digital competences in a country is an important indicator to its government:

- End user e-Skills are essential for individuals to integrate in society. In this regard, the European Computer Driving License (ECDL) as a *de facto* standard for end-user certification is successfully implemented in many countries. To fully participate in the growing digital society, however, it becomes increasingly important to have a better understanding of the basic principles of informatics, computational thinking, algorithms and coding at an early age.
- At the level of Practitioner and e-Leadership skills, the European e-Competence Framework (e-CF) is widely recognized as a tool for identification of competences for the purposes of planning and personal/ institutional development. Based on the e-CF, the e-CF*plus* system details in depth the operational terms to assess professional digital skills.

The IT STAR region continues to loose talented young ICT specialists to other world regions. It would be important for national governments and the European Commission to address the “brain-drain” issue so as to take action in ameliorating its effects.

Comprehensive statistical data on the European ICT Industry is essential for understanding the status and trends in the digital economy. The European Commission could also assume a more visible role in promoting ICT brands, products and services that are “Made in Europe”.

The presentations and further details about the 9th IT STAR WS on ICT Strategies & Applications are available from the conference website - www.starbus.org/ws9.

1.3. Program

Venue: Hotel IBIS Warszawa Stare Miasto (Old Town)

09.00 Opening and Setting the Scene – Keynotes

E-skills and e-leadership for the digital scenario

Bruno Lamborghini, EITO Chairman and AICA President

From Smart Items to successful business models – value adding applications with the Internet of Things

Martin Przewloka, Senior Vice President, SAP SE

Digital competences – do we appreciate their role and importance?

Włodzimierz Marciński, Plenipotentiary of the Polish Minister for digital competences in Administration

11.00 Coffee

11.30 Topic I. National Strategies, Policies and Action Plans

Smart City strategy in Hungary

Kálmán Kovács, Budapest TU

Bulgarian ICT National Policy and Strategy

Kiril Boyanov, Ivan Dimov, Blagovest Sendov, Bulgarian Academy of Sciences

Lithuanian National Digital Coalition: Purposes, Possibilities and Opportunities for Digital Jobs

Renata Danielienė, Eugenijus Telešius, ECDL Lithuania

13.00 Lunch break

14.00 Topic II. Industry, Innovation and Take-up

EU ICT in a Venetian Mirror

Waclaw Iszkowski, President, Polish Chamber of Information Technology and Telecommunications

GoSwift Queue Management Service

Jaen Oruaas, Madis Sassiad, Sébastien Mure, GoSwift

15.00 Coffee

15.30 Topic III. Skills and e-Leadership

e-CFPlus System

Roberto Bellini, AICA Vice President

Coding for Children: An Initiative of the Austrian Computer Society (OCG)

Ronald Bieber, OCG Secretary General

Procedural Reasoning and Programming for Kids - AICA's "LOGIC" initiative

Pierfranco Ravotto, Giuseppe Albano, AICA & ANFOR

17.00 Closing

1.4. Co-Chairs, Speakers and co-Authors

Conference Co-Chairs



Plamen Nedkov is Chief Executive of IT STAR and Moderator of the IT STAR Conference series.



Marek Holynski is Director of the Institute of Mathematical Machines and Vice-President of the Polish Information Processing Society.

Keynote Speakers



Bruno Lamborghini is Chairman of the European Information Technology Observatory (EITO), President of AICA and professor of Information Society at the Catholic University of Milan.



Martin Przewloka is Senior Vice President – Strategic Innovation Enablement – and is worldwide responsible for strategic innovation projects at SAP SE. During his tenure with SAP, Martin held various management roles - Global Head of SAP Research Future Internet Applications and Senior Vice President of Showroom & Trial Solutions as part of SAP Marketing. He was responsible for several SAP industry solutions as well as for SAP ERP, the SAP flagship product. Martin is based at the SAP headquarters in Walldorf/Germany.



Włodzimierz Marciński is Plenipotentiary of the Polish Minister for the development of digital competences in administration. He is also a member of the Committee of Experts on Information Technology in the Council of Europe and a member of the Committee on Computer Science. He chairs the Broad Agreement for the Development of Digital Skills in Poland.

Speakers and Co-Authors



Kalman Kovacs is Director of the federated Innovation and Knowledge Center of the Budapest University of Technology and Economics (BME EIT). He served as Hungarian minister for IT during the period 2002 – 2005.



Blagovest Sendov is full member of the Bulgarian Academy of Sciences. He was Rector of Sofia University, President of the Bulgarian Academy of Sciences, President of the International Association of Universities and the International Federation for Information Processing. He was Chairman of the Bulgarian Parliament and Bulgarian Ambassador to Japan.



Kiril Boyanov is full member of the Bulgarian Academy of Sciences and Bulgarian representative to IT STAR. He has provided leadership within the Bulgarian ICT industry and in ICT R&D, notably as Director of the Institute of Parallel Processing.



Ivan Dimov chairs the Scientific Council of IICT and is head of the Parallel Algorithms Department. He is Scientific Secretary of the Bulgarian Academy of Sciences.



Renata Danielienė is CEO at the Information Technologies Institute in Lithuania and of ECDL – Lithuania.



Eugenijus Telesius is consultant to ECDL, Lithuania. He is Director and Founder of UAB ECDLITE.



Wacław Iszkowski is President of the Polish Chamber of Information Technology and Telecommunications.



Jaan Oruaas is responsible for the implementation of innovative GoSwift queue management services in Eastern Europe and development of cyber security management for organizations.



Madis Sassiad is board member and responsible for sales activities in GoSwift.



Sébastien Mure is project manager at GoSwift, working on international business development.



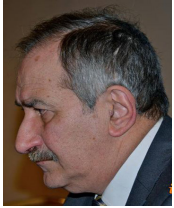
Roberto Bellini is Vice-President of AICA and board member of AISM, the Association of Marketing Professionals.



Ronald Bieber is Secretary General of the Austrian Computer Society (OCG).



Johann Stockinger is responsible for Innovation and Research at OCG.



Giuseppe Albano is expert in educational planning and learning processes and is currently coordinator on behalf of AICA of the LOGIC Program.



Pierfranco Ravotto is an expert in technology enhanced learning and IT certifications. He has coordinated several European projects and training courses for teachers.

The revised and edited proceedings of the 9th IT STAR Workshop on ICT Strategies & Applications, held on 16 October 2015 in Warsaw, Poland, are a follow-up of previous IT STAR events that investigate ICT policies, strategies and successful case-studies in Central, Eastern and Southern Europe.

The papers are based on the experience of leading personalities from government, industry and academia who influence the digital scenario within the Region and beyond.