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## eBusiness in Front of a Period of Crisis and of New Technological Opportunities

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## Ladies and Gentlemen,

First of all, many thanks to Plamen Nedkov for inviting me to speak at this IT STAR Workshop and I am very sorry not being able to join you in Zagreb due to unexpected engagements in Italy and my address to the IT STAR Workshop will kindly be presented by Giulio.

I remember what I said last year in Rome about the deep economic depression in which the world entered in second half 2007, dramatically worsening during 2008 and 2009. Now in 2010, the expected recovery shows still weak and uncertain signals in Europe and in the US.

In 2009 the European Monetary Union area showed a GDP decline of minus 4% while in 2010 shows a recovery of 1.8% followed however by an expected slowdown to 1.1% in 2011.

Year 2009 has shown at world level for the first time since many decades zero growth in GDP followed in 2010 by a positive 5% due to India, China and other Asian areas but still a prosecution of economic uncertainties in US and Europe.

International trade has shown in 2009 a decline of 11%, hopefully recovering by 13% in 2010 and by 7% in 2011.

Unenployment in 2009 and 2010 climbed in US and in Europe to 10%.

According to the EITO estimates, the IT markets in Europe have moved from a growth rate of 3% in 2008 to a decline of 5.4% in 2009 followed by zero recovery in 2010 (0.2%) and an expected + 3.5% in 2011 (quick rebound are expected in France and Germany by around + 4%).

Also in the US the IT market shows in 2010 a limited recovery of 0.8%, very similar to the European trend, while India and China are moving at double digit speed (+11%).

In 2009 the European telecommunication market has shown a decrease of 2.0%, expected to stabilise around zero growth in 2010 and a limited recovery to 1.4% in 2011, taking into account saturation in mobile phones and still slow contribution of mobile internet services.

In the US the telecommunication market is moving at a 1.6% rate in 2010, China at a 8% rate and India at a 15% growth.

The digital consumer electronics market in Europe has shown a decrease in 2009 by minus 7%, while is expected to increase in 2010 due to the diffusion of digital TV, videogames and new digital devices.

So, the emerging markets are the drivers while there are structural changes in the telecommunication markets due to the increasing role of wireless mobile services versus fixed lines services, with booming of mobile internet access.

Broadband lines both fixed and wireless are the name of the game with an extraordinary development of video services, like Youtube which require huge amount of transmission band in order to channel billions of bits moving all over the planet.

Facebook has reached 500 million users. Ipod is moving millions music and video files. Ipad success and all new tablets require enormous amount of band to transmit real time films and TV.

At world level the threshold of 5 billion mobile phone subscribers will be exceeded by the end of 2010, doubling in 5 years.

800 million are already using fast UMTS standard with annual increase of around 40%.

In Europe mobile phone subscribers are expected to rise to 650 million by yearend. A third of them using UMTS technology, which enable them to access Internet and video (Germany has 110 million mobile subscriptions).

China is dramatically growing, now with 850 million mobile phones, expected to reach 1 billion end of next year. India has 680 million cell phones, more than the amount of present European users and more than doubling the US users.

Internet users are close to 2 billion worldwide and the number of Internet accesses will dramatically growth due to the diffusion of mobile broadband access on one side and on the other side due to the unpredictable diffusion of cell phone cards in all kinds of objects, sensors, non-human functions which will determine in few years billions of non-human internet accesses.

Up to now, digital technology and web development have favoured new social networks and web TV mainly for entertainment purposes, but now the same technologies and services are moving to business scopes and applications.

Digital technology is changing the way we operate favouring new man-machine-man relations, increasing on line paperless operations, introducing web services into the organisations, speeding up all decision processes, outsourcing internal data processing systems through cloud computing networks.

Mobile devices like Iphone or Ipad are entering into business applications; the number of apps developed by users and distributors is growing every day more also for business applications.

New e-Business services and applications are driven by new digital technologies, being developed for the entertainment market, but now being applied in the business market.

Mobile eBusiness services are the most evident example of the convergence between mobile devices for entertainment with new business applications.

Real drivers are new social needs and requirements of change regarding jobs, work organisation, sense of participation, knowledge sharing.

Concrete example of new shared activities is Open software with thousands of software programs available free on the net at the same time opening to new business initiatives around the world and revolutionising the whole software industry.

Web based communities will move from entertainment and single initiatives to becoming part of change in all kind of organisation, public and private, from business to public administrations.

In research labs the name of the game is Open Innovation based on sharing ideas and research results through the Web in various scientific communities.

eBusiness exploiting new web services will produce real changes in all organisation forms, introducing social communities within the organisations and by this way amplifying the access to knowledge sharing among all employees and dramatically improving decision processes, both inside the company and outside through new forms of web marketing and of new eco-communities including all stakeholders.

At the Catholic University in Milano I have organised a new course on Knowledge Management in the organisations based on the web, which intends to prepare new skills on knowledge management and have an impact on organisations.

Knowledge sharing is a major asset for an organisation and it is the engine for innovation and competitiveness.

Traditional organisation schemes based on top down processes is becoming every day more inadequate to compete in a complex global environment.

New successful organisations are based on dynamic structures favouring the exchange of ideas and knowledge among all people.

Positive change management and innovation is strenghtening through effective participation and collaboration at all levels.

Only a bottom up approach by people close to market needs and customer requirements can permit to create an effective and constructive Business Intelligence system.

eBusiness systems have to provide the favourable infrastructure to permit the development of new organisations both at company level and at public administrations level.

Main areas in which new eBusiness trends are working are Business Intelligence, Security, Application Datawarehousing, Virtualisation, Document Management, Cloud computing.

Business Intelligence is a central point for successful organisations, starting from Customer Intelligence which is a very complex task, taking into consideration the enourmous amount of data and informations provided daily by web services, social networks, blogs, etc.

New forms of CRM can provide direct relations with customers and build intelligent data bases in order to create personal relationships with customers.

Security is an absolute need given the growing interconnections of networks and the increasing risks of data hackering and the absolute requirement of data protection, considering also the widening of network access through mobile devices.

Application Datawarehousing is becoming a relevant area due to the development of an increasing number of apps entering eBusiness systems from inside and from outside suppliers like dealers, partners and also customers.

Datawarehousing and Data Mining have to provide selective certification and access right for any kind of apps.

Virtualisation and Document Management have a fundamental role to move documents from paper to bits in order to speed up change in document flows and all kind of procedures.

Today these processes can really change any kind of activities in Public Administrations and by this way improving effectiveness, productivity, cost saving and quality of services.

Cloud computing using networks of million of servers today can provide an unbelievable amount of computing intelligence, reducing cost but mainly standardise and link applications, software systems and creating new forms of interconnections.

Cloud computing has not to be considered decentralisation of data services but a new extraordinary way for innovate eBusiness systems.

We are in the middle of a revolutionary change in eBusiness which will provide new forms of interactive networks relations with mobile applications transforming the office environment into a mobile office context, and with on line transactions, on line banking, on line entertainment.

The real issue facing the change is not technology by availability of e-skills, of people having competences on eBusiness technologies, but also on new organisations and market requirements.

As I said in Rome e-skills represent the real strategic asset for strengthening Europe as a real Knowledge Society, having the forces to participate and compete successfully in the new global environment.

New world areas, like China, India, Vietnam, Brasil, but also other Asian countries are taking advantage of the digital scenario and investing in e-skills education, successfully following the new path. Hundred of thousands e-engineers come out every year from Chinese and Indian universities and will drive future industrial evolution. In India the number of new ICT engineers every year outpasses the total of all existing Italian ICT engineers.

The major concern for the future of Europe is on one side to increase investment in research and innovation in ICT and its applications but on the other side the most critical target is to increase investment in new e-skills, new competences, new forms of education for the digital change.

There is a strong need to give to policy-makers in Europe the right requests to speed up the change in education, to increase investment of the universities for preparing the right skills, we need in Europe to prepare every year hundred of thousand engineers, in physics, in mathematics, in informatics, in nanotech, in biotech, starting from the secondary schools.

We need to certify at European level professional preparation in ICT as it is done through the EUCIP certification, which can permit an harmonised and dynamic approach to the preparation of new e-skills.

In AICA we feel very strongly this need to proceed rapidly in closing the skill gap.

AICA through its participation to international institutions like IFIP and CEPIS and also as founding member of the IT STAR is responsible for development and management in Italy of the

European Informatics certification such as the European Computer Driving Licence (ECDL) with more than 1.6 million registered candidates, 2700 test centers and 100.000 tests monthly performed.

I know that you all are doing the same in your countries in order not to lose this unique and fundamental train driven by the new digital scenario, which in my view is the only way to avoid to be permanently blocked into a depressive economic context while on the contrary it is the way to speed up the re-launch of economic and social development and new jobs in our countries and in Europe as a whole

I want to conclude saying that we have in front of us extraordinary opportunities driven by digital technologies.

To take advantage of it we have to take care of the basic asset, people, e-skills, human competence and intelligence through largely investing in education.

As I said in Rome, we talk a lot in Europe about the need to invest in broadband infrastructures reaching all areas, but we don't talk enough about the need to invest more on e-skills, on e-brains.

As a slogan I say, Broadband yes but in parallel also Brainband. Otherwise we will have broadband highways but very few digital vehicles on them and no social and economic advancement.

My thanks and best wishes to your meeting.