Recommendations for positioning of IT industry as a strategic industry in Croatia



American Chamber of Commerce in Croatia Američka gospodarska komora u Hrvatskoj

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Preamble

Cesare Mainardi, CEO of Booz & Company in the Foreword of World Economic Forum 2013 report¹ says that digitization—the mass adoption of connected digital services by consumers, enterprises, and governments — is far more than a disruptive wave washing over isolated industries.

His company managed to quantify the actual impact of digitization on a country's economic output (GDP) and employment. Their analysis reveals that an increase of 10 percent in a country's digitization score drives a 0.75 percent growth in its GDP per capita. That same 10 percent boost in digitization leads to a 1.02 percent drop in a state's unemployment rate.

European Commission's expert group², analysing taxation of the digital economy, notes that digitisation has had a major transformative effect, and has impacted upon every sector of the economy. If the framework conditions are met, ICT could lead to increases in productivity and innovation, contributing to GDP growth in much the same way as electrification in the 19th and 20th centuries, which is visible from the graph below.

Syverson (2013)³ compared labour productivity growth during the electrification era and the IT-era (Figure 1) with an impressively similar pattern.

Figure 1: Labour productivity Growth during the Electrification Era (1890-1940) and the IT Era (1970-2012) in the United States (1915=100 and 1995=100)



Source: Calculations based on Kendrick (1961) and U.S. Bureau of Labour Statistics data.

¹ The Global Information Technology Report 2013, Growth and Jobs in a Hyperconnected World, Foreword Cesare Mainardi, Chief Executive Officer, Booz & Company, vii, Source:

http://www.google.hr/url?sa=t&rct=j&g=&esrc=s&source=web&cd=1&ved=0CCAQFjAA&url=http%3A%2F%2Fwww3.weforum.org%2Fdocs%2FWEF_GI TR_Report_2013.pdf&ei=YKAnVefJNovYaoCbg1gD&usg=AFQjCNEIIM42HrUgn433AlhtXGGYZA5tXg 2

² European Commission, Directorate-General Taxation and Customs Union (2014): Expert Group on Taxation of the Digital Economy, page 14, Source:

 $[\]underline{http://ec.europa.eu/taxation_customs/taxation/gen_info/good_governance_matters/digital_economy/index_en.htm}$

³ European Commission, Directorate-General Taxation and Customs Union (2014): Expert Group on Taxation of the Digital Economy, page 14, Source:

http://ec.europa.eu/taxation_customs/taxation/gen_info/good_governance_matters/digital_economy/index_en.htm

according to Syverson C. (2013), "Will history repeat itself? Comments on 'Is the Information Technology revolution over?", International Productivity Monitor, Vol. 25, pp. 25-36.

Networked Readiness Index⁴ (NRI) 2015 of the World Economic Forum ranks Croatia on 54th place out of 143 countries. It aims to measure the ability of countries to leverage information and communication technologies (ICTs) for improved competitiveness and well being. Ranked better than Italy, Slovak Republic or Greece, but lagging behind the Czech Republic, Macedonia or Poland, Croatia has better score than on Competitiveness ranking.



As it has been displayed in the Competitiveness Index, Networked Readiness Index⁵ shows that Croatia needs to improve its political and regulatory environment which, with an average rank of 87, has a negative overall impact on Croatia's ranking. Efficiency of legal system in challenging regulations (137), efficiency of legal system in settling disputes (133) and effectiveness of law-making bodies (102) are elements with the lowest ranking in Political and regulatory environment pillar.

Croatia proves to be successful in ICT infrastructure, content, affordability and skills (e.g. mobile network coverage of 100% of population, quality of math and science education, adult literacy rate) and very solid individual usage. Croatia should work on the improvement of business usage (92) and overall quality of education. Potential government's impact on the networked readiness index is very high due to current low ranking in areas like ICT use and Government efficiency (97). Government procurement of advanced technology is ranked 128.

The American Chamber of Commerce in Croatia supports the efforts of Croatian Government to promote competitiveness of the IT industries and services. This has been confirmed in the Industrial Strategy 2014-2020⁶ with the identification of IT industry as one of the main economic drivers.



⁴ The Global Information Technology Report 2015, Growth and Jobs in a Hyperconnected World, page 8, Source: <u>http://www3.weforum.org/docs/WEF_Global_IT_Report_2015.pdf</u>

⁵ The Global Information Technology Report 2015, Growth and Jobs in a Hyperconnected World, page 147, Source: <u>http://www3.weforum.org/docs/WEF_Global_IT_Report_2015.pdf</u>

⁶ Industrijska strategija Republike Hrvatske 2014.-2020., page 286, Source:

http://www.google.hr/url?sa=t&rct=j&g=&esrc=s&source=web&cd=1&ved=OCBsQFjAA&url=http%3A%2F%2Fwww.mingo.hr%2Fuserdocsimages%2Findustrija%2FIndustrijska_strategija.docx&ei=uZ4nVeqqFYaTsAGblYDQAg&usg=AFQjCNHMjv0oIn-T_nHID-OAMZVg7tkVwA

Croatia has developed some world class services in public and private sector with increasing number of companies involved in IT sector, exports and increasing ability to create new jobs.

The American Chamber of Commerce in Croatia wishes to thank for the opportunity to cooperate with the Government of Croatia in organizing a high level Government delegation to the U.S. based IT companies with the aim to establish high level relations, present Croatia as IT relevant country and showcase some of the new technology trends.

We believe that the ICT sector has potential for further growth and export and would like to present recommendations for transformation of Croatia into digital society.

Our recommendations are based on prerequisite of immediate implementation of five global megatrends, both in ICT as an industry sector and a digital society: Cloud, Mobility, Big Data, Social, Security and Privacy.

To provide a good infrastructure base for developing Croatia as a digital society, it needs to position itself among the leading EU countries by providing broadband Internet speed of more than 100 Mbit/s. DESI 2015 index⁷ (The Digital Economy and Society Index) which summarises relevant indicators on Europe's digital performance and tracks the evolution of EU member states in digital competitiveness, puts Croatia on 24th place among 28 countries.

Although fixed broadband is available to 97% of homes (in line with the EU), Next Generation Access capable of providing high speed internet (at least 30 Mbit/s), is available to only one third of homes (compared to average 62% in the EU).

Croatian Government can use available EU funds for development of broadband network, which will have positive implications on the development of new services for citizens and the business sector.



Background information

Positioning of IT industry in Croatian economy and society is defined by the environment created by the Croatian government. Fruitful environment creates competitive internal market, attracts investments and encourages companies to export and work successfully on the global scene.

General tax regimes by competing countries:

2014 tax system overview	Croatia	Bulgaria	Czech Republic	Romania	Serbia	Slovak Republic
Corporate tax rate (general)	20%	10%	19%	16%	15%	22%
VAT rate (general)	25%	20%	21%	24%	20%	20%
Personal income tax rates (salaries)	12%, 25%, 40% + City tax up to 18% (top rate applied on annual taxable income above EUR 13,900; EUR 20,800 in 2015)	10%	15% (+ solidarity surcharge of 7% applied on income exceeding EUR 45,000)	16%	10% (+ 10% applied to income between EUR 18,500 and EUR 55,500) + 15% applied to income exceeding EUR 55,500)	19% (25% if the annual income exceeds EUR 35,000)
Mandatory social security contributions (salaries)	Employee: 20% (partially capped) Employer: 17,2% (uncapped)	Employee: 12,9% (capped) Employer: 17,8% to 18,5% (capped)	Employee: 11% to 13% (partially capped) Employer: 34% (partially capped)	Employee: 16,5% (capped) Employer: 27,75% to 28,45% (capped)	Employee: 19,9% (capped) Employer: 17,9% (capped)	Employee - 13,4% (partially capped) Employer - 35,2 % (partially capped)

Source: EY

Based on publicly available data and may not be fully up to date (details should be reconfirmed with respective country tax experts)

Croatia differs from other countries mostly in personal income tax category due to high tax rate applied on the low income level.

Practice of our members companies shows that for one Croatian employee, it is possible to employ three people in Bulgaria and four in Romania.

Average net salary for employees in computer programing, advisory and related activities was 9.001 kn (November 2014, according to Croatian Bureau of Statistics).⁷

Salaries in Zagreb for computer programeing and advisory were 10.284 kn (March 2015, according to Department for Statistcs pf City Office for strategic planning and development).⁸

According to these data, majority of salaries in IT sector are in the hihghest personal income tax rate of 40%.



⁷ Jutarnji list, March 2, 2015, Source: <u>http://www.jutarnji.hr/dzs--najveca-placa-zracnom-prometu---10-555kn--placa-cinovnika-narasla-za-1-3-posto-</u> /1305651/

⁸ HRT, April 3, 2015, Source: <u>http://vijesti.hrt.hr/278805/prosjecna-neto-placa-u-zagrebu-za-sijecanj-6608-kuna</u>

Recommendations

- 1. Positioning and incenting IT export in order to make ICT Croatian #1 exporting industry
 - Export incentives should be based on concrete offering of e.g. products, services, processes or models
 - Introduce tax reductions on corporate income tax for software exporters and exporters of IT services. E.g. certain level of export value corresponding to lower tax liability
 - Introduce favourable credit lines for IT exporters (HBOR, HAMAG)

2. Measures which will enable **increase in competitiveness** and accelerated development of Croatian IT industry:

- Enable relief in labor taxation. Further reduce personal income taxation (for example Romania is **applying zero personal income tax rates for software professionals)**; expand on non-taxable benefits that may be provided to employees to keep up with market trends. Currently, apart from very limited benefits that may be provided tax free, any other benefit (e.g. coffee and other beverages provided at work place) is considered a taxable net income, subject to approximately 170% of taxes and social security contributions on top of the net value of the benefit provided.
- Enable competitive workforce in EU markets with **non-taxable and flexible assignments**. Currently, typical longer term assignments trigger taxation of travel expenses and host accommodation expenses. Such expenses are subject to approximately 170% of taxes and social security contributions on top of their net value. Even short term assignments / business trips may be taxed heavily based on current rules: for example, when Croatian IT company needs to visit an EU client to implement one of their products, the company is allowed to pay their employees a non taxable allowance of HRK 250 per day, which is often insufficient to cover the employee's costs of food, beverages and local transporation in the host country (especially in Western European countries). Any amount paid in excess to the employee is subject to approximately 170% of taxes and social security contributions on top of the net value of the benefit provided.
- **Reduction of corporate income tax**. For example Ukraine is applying reduced 5% corporate income tax for software industry. Introduce an exemption from corporate tax (in certain period / up to certain threshold) for startups. Or, introduce reduction in corporate tax for exports and royalty fees.
- Elimination of para-fiscal fees: monument annuity, fee for tourist board etc.
- Simplify conditions for **recognition of R&D activities** for smaller software and hardware companies. Through Horizon 2020 nearly €80 billion of funding is available over 7 years (2014 to 2020) in addition to the private investment that this money will attract. SMEs are supported by Eureka Eurostars program, focused on research performing SMEs.
- Enable local IT companies to **better protect their IP rights** and ensure consistent IP enforcement in Croatia.



When distributing state financial assistance to SME companies it is vital to set up a control system (like measurement of ROI etc.) that will make sure funds are being spent for planned activities.

3. Carry out the Government's strategic focus on the IT industry and transformation into digital society by founding a responsible governmental Croatia is the **19th** among EU body Services dimension.

Introduce relevant governmental body to manage two main areas:

- a) Full responsibility for strategic development of ICT industry, its promotion and execution of activities required for its positioning as a leading export industry (vertically focused on ICT industry)
- b) Drive processes in the governmental sector to enable fast transformation of Croatia into digital society (horizontal application of IT technology) based on defined standards.

Ministry For Digital Society – responsible for industry and digital development (vertical and horizontal development), it could be an optimal instance to drive accelerated development of the sector and new digital economy in Croatia.

The body should create a digital strategy, align substrategies such as e-health, e-government, e-education, National Broadband Strategy, etc., and define activities for Croatia's transformation into a digital society by:

- Defining digital foundation principles, standards and processes
- Defining priorities for different public institutions • regarding their need for public data, data collection and management
- Driving creation of new e-services
- Driving single citizen view and experience
- Driving a national engagement plan, including • nominating a Digital Champion for Croatia

Strategy for Digital Croatia needs to be directly linked to the Mission/Vision and strategic goals of the Croatian Government

countries in the Digital Public

Percentage of **eGovernment** users: only 18% of Internet users against 33% in the EU average .

Use of eGovernment is still low, partly due to the low level of development of online public services.

Provision of **pre-filled forms is** the lowest in Europe, Online Service Completion and Open Data well below the EU average.

Widespread use of ePrescription (99%), used by almost all the General Practitioners.

Source: European Commission

The percentage of businesses using technologies such as electronic information sharing (ERP – 18%), cloud services (16%) and social media (15%) in Croatia is in line with or higher than in the other European countries.

One fourth of SMEs in Croatia sell online - well above the EU average of 15% - and 8.4% sell online to other EU member states (against 6.5% at European level), making as much as 11% of their turnover from these sales.

Source: European Commission¹⁰

⁹ European Commission, Digital Agenda For Europe, Digital Agenda Scoreboard, Croatia, Source: http://ec.europa.eu/digital-agenda/en/scoreboard/croatia

¹⁰ European Commission, Digital Agenda For Europe, Digital Agenda Scoreboard, Croatia, Source: http://ec.europa.eu/digital-agenda/en/scoreboard/croatia

with defined responsibilities of relevant bodies and developed indicators and timelines. We recommend a comperhensive example like National Digital Strategy for Ireland¹¹ or specific, detailed and actionable Digital Agenda 2020 for Estonia¹² which proved their success in practice.

Digital transformation should be driven by state investments in IT projects which significantly increase absorption of EU funds, improve efficiency of public administration ("paperless public administration"), bring benefits to citizens and help recognition of IT's strategic importance.

We recommend the following measures:

- Consolidate state registers and implement legal provisions which state that public administration is not allowed to require from citizens those documents which are already at its disposal.
- Achieve interoperability of public systems to utilize existing data and minimize redundancy.
- Recognize and encourage systematic data collection and management in areas which can significantly add value to smart governance.
- Ensure Public Cloud positioning and usage in Government projects has better or at least equal treatment as the Private Cloud positioning and usage given the extraordinary TCO (total cost of ownership) benefits of Public Cloud comparing to any other IT infrastructure alternative.
- Aggressively enable and maximize usage of Open Government Data for the benefit of Croatia's both commercial and public sector (The EU stands to benefit from Big & Open Data to the tune of 206bn Euro by 2020, a 1.9% increase in regional GDP).
- Introduce free e-ID with certificate and its wide multiple application.
- Develop regulatory bases for pre-commercial procurement procedures in order to facilitate development of new innovative and exportable ICT solutions for citizens and public institutions.

To enable effective and efficient implementation, foster the development of the ICT industry, apply cutting-edge technology and also take into account scarce human IT resources in the public sector and in Croatia in general, it is necessary to define which activities/projects the Government will open to IT companies originating from Croatia to support their development and international companies which can contribute with top industry knowledge and have a strong knowledge base and resources.

To keep up with the newest technology trends and implement the best solutions, the Government should work closely with private sector.



¹¹ National Digital Strategy for Ireland, Source: <u>http://www.dit.ie/media/ace/accessresources/NationalDigitalStrategyforIreland.pdf</u>

 $^{^{12} \}text{ Digital Agenda 2020 for Estonia, Source: } \underline{}_{\underline{\text{https://e-estonia.com/wp-content/uploads/2014/04/Digital-Agenda-2020 Estonia ENG.pdf}}$

4. **Investment in the education** system with the goal to increase interest for natural sciences and development of necessary technical skill and knowledge

- Increase focus on natural science, technology and math in education (STEM) starting in the first grade of primary schools.
- Increase quotas for pupils and students applying for higher education related to STEM. Specifically promote and incentivise increase of female students in IT and related areas.
- Introduce a mandatory IT and software development subject in primary schools starting from the first grade.

With a rate of **17 per 1000** individuals (between 20 and 29 years old) with a **STEM** (science, technology, engineering and mathematics) graduate degree, Croatia is in line with the EU average and ranks 12th among the EU Member States in terms of high-level training in these scientific disciplines.

Source: European Commission¹³

- Insist and efficiently execute E-schools project while shortening the multy-year term for the devices procurement and distribution (PCs, laptops, tablets etc.).
- Recognize talents for natural sciences by selection based on subjects/knowledge and create subject Circles of Excelence from those areas.
- Use EU funds to pre-qualify, vocationally educate and organize life-long learning activities.
- 5. Prepare necessary legal framework and implement a program for **opening the government data** for development of new and innovative ICT products and services in the areas like:
 - energy consumption
 - everyday commuting and transport
 - health care etc.

6. **Increase citizen engagement** to increase demand for digital services

- Run awareness campaign for digital services
- Convert non-users in elderly groups, rural areas
- Encourage low users
- Create opportunities for increase of digital skills

With regards to propensity of individuals to use Internet services, Croatia is the 25th among EU countries.

Croatia's percentage of **regular** Internet users is 65%, below the European average of 75%. Croatia is also far behind the EU average in digital skills, since only 39% of Croatians have basic digital skills.

Source: European Commission¹⁴



¹³ European Commission, Digital Agenda For Europe, Digital Agenda Scoreboard, Croatia, Source: <u>http://ec.europa.eu/digital-agenda/en/scoreboard/croatia</u>

¹⁴ European Commission, Digital Agenda For Europe, Digital Agenda Scoreboard, Croatia, Source: <u>http://ec.europa.eu/digital-agenda/en/scoreboard/croatia</u>

Conclusion

Despite the economic recession which hit Croatia severly, software development and computer services had a 78% increase in export revenue¹⁵ in the last 5 years. The expected IT sector revenue growth¹⁶ is 6,7% per year (2014-2018). These data present agility of the IT sector and its growth and export potential. Currently, the volume of the IT industry, its contribution to GDP and to youth self-employment is below its potential.

Identification of IT as a strategic sector needs to be backed up by a national digital strategy linked to Government's mission and vision and specific



substrategies as e-health, e-education, e-government, National Broadband Strategy etc. Such strategy, due to its national importance needs to involve all stakeholders: government, industry, academia, experts, and needs to be the basis for efficient use of EU funds.

Our recommendations are oriented toward strengthening export of companies and creating environment for attracting FDIs.

Tax reliefs or favourable credit lines are needed so that ICT becomes #1 Croatian export industry.

Measures based on lower labour taxation and benefits, as well as lower corporate income tax, can increase competitiveness of the IT industry and Croatia overall.

To fully adopt the refocus of the IT sector, Croatian Government could appoint a Government CIO with necessary responsibilities and accountabilities to drive digitalization processes.

We feel further investment in education is needed, and we encourage the opening of Government data and driving citizen engagement.

AmCham Croatia calls for setting the right infrastructure and environment for digital economy in Croatia. There is an opportunity to bring industry 4.0 into light (4th industrial revolution), as steam and electricity were in the 19th century.

We welcome the commitment of the Croatian Government to embrace opportunities of new technologies for the Croatian economy. AmCham Croatia members call for and look forward to a constructive, open and comperhensive debate and work on the Croatian digital strategy.

¹⁶ IDC (2014), Source: <u>http://www.ictbusiness.info/poslovna-rjesenja/idc-ocekuje-nastavak-rasta-domaceg-ict-trzista</u>



¹⁵ Banka, Dražen Tomić (2014), Source: <u>http://www.banka.hr/komentari-i-analize/prodavaci-hrvatske-pameti-52288</u>