eBusiness in Croatia

a comparative overview

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Agenda

1. Intro
2. Good examples of eBusiness
3. eInvoicing (B2B)
4. eBanking & ePayments
5. eGovernment
6. eHealth
7. GS1 Croatia
8. Some conclusions

1. Intro

Political environment + eStrategies
Croatia entering EU on July 1st 2013.

Croatia - two *expired* strategies:

- eBusiness 2007-2010[1]
- eGovernment 2009-2012[2]

Two strategies in *draft* form:

- ePublic procurement 2013-2016[3]
- eHealth 2014-2020

EU - main strategic documents:

- Digital Agenda 2020[4]
- eInvoicing: Reaping the Benefits…, 2010[5]
- eProcurement: Strategy…. 2012[6]
- *No more* eBusiness W@tch reports! 2002-2009[7]

Croatia today is *without valid basic documents* regarding eBusiness and eGovernment and has not yet incorporated some main EU eDocuments into national frameworks.

1 - http://hgk.biznet.hr/hgk/fileovi/11499.pdf (*not found* on Mingo web site!)
2 - www.uprava.hr/UserDocsImages/eHrvatska/2011-06%20-%20Arhitektura%20umrezene%20uprave.pdf
3 - www.javnanabava.hr/userdocsimages/userfiles/file/ZAKONODAVSTVO%20RH/Nacrti%20propisa/Strategija%20e-nabave_nacrt.pdf

4 – COM(2010) 245, 2010
5 – COM(2010) 712, 2010
6 – COM(2012) 179, 2012
7 – ec.europa.eu/enterprise/archives/e-business-watch/index.htm (archives!)

eGoals to achieve

- **Costs reduction** – can reach up to 2-3% of GDP
- **Competitiveness** – Croatia is in 2013. lagging in two important competitive factors* (lost rank: from 76th to 81st of 144):
  - (lack of) **Innovation (score: 3.1 of 7),**
  - (low) **Business sophistication (score: 3.7 of 7).**
- **More eGovernment services** – to citizens and businesses
- Maximal **eHealth** eServices
- **Automation of processes** – more efficiency is needed in *both* public sector administration and general business processes
- **Sustainability** – paperless green horizon is desirable

* Source: *World Economic Forum* – The Global Competitiveness Report 2012-2013
www.weforum.org/issues/global-competitiveness

2. Good examples of eBusiness

Case1: SMS parking

- Back in 2001. Zagreb started with pilot project
- Now 35 towns in Croatia provide standard and uniform SMS parking payment facility
- All mobile operators are offering payments *without prior registration;* → pre-paids are charged immediately, post-paids are charged monthly thru their phone bill
- SMS parking is now a <u>normal way of paying parking</u> in Croatia
- **SORRY, no foreign mobile operators are (yet) covered → please, use COINS in parking automats**!

> *Motto*: **We are moving forward while we are 'at rest'**

SMS parking

Source: HPU (Croatian Parking Association - member of EPA) www.hpu.hr

Case2: ePrescription

- One of several eHealth projects being implemented by Ministry of Health and Croatian Institute for Health Insurance
- ePrescription started in 2011. and fully operational
- All family doctors (2328**) and all pharmacies (612*) are on-line connected to **CEZIH** (*Central Healthcare Information System of Republic of Croatia*)

  Results:
  - of **~50 M** prescriptions in the starting year (2011), more than **~44 M** (~88%) where issued and used in electronic form*
  - only ~3% of prescription users say they do prefer paper medicine prescription instead of ePrescription*

> *No more paper prescriptions in Croatia!*

* *Source*: Tihana Govorčinović, Croatian Chamber of Pharmacists, 2012
** Target number of **5500** doctors including pediatric, gynecologist's and dentist's teams to be reached soon

3. eInvoicing (B2B)

Enterprises sending and/or receiving e-invoices						
geo\time	2007	2008	2009	2010		
EU (27 countries)	**18**	**21**	**22**	**31**		
Euro area (changing composition)	18	23	26	37		
Belgium	31	36	39	39		
Bulgaria	9	26	26	26		
Czech Republic	33	17	18	17		
Denmark	37	43	38	39		
Germany	19	27	31	36		
Estonia	25	39	40	39		
Ireland	26	22	21	28		
Greece	10	15	11	16		
Spain	9	12	17	25		
France	10	20	21	36		
Italy	34	29	34	56		
Cyprus	10	7	7	10		
Latvia	25	20	31	46		
Lithuania	15	35	40	52		
Luxembourg	23	24	20	37		
Hungary	4	5	6	8		
Malta	24	25	26	37		
Netherlands	11	29	34	35		
Austria	18	17	12	18		
Poland	8	11	12	16		
Portugal	14	24	23	27		
Romania	15	11	12	18		
Slovenia	7	8	9	10		
Slovakia	14	23	30	34		
Finland	27	25	24	36		
Sweden	18	17	25	28		
United Kingdom	15	11	8	11		
Iceland	:	20	:	25		
Norway	29	31	31	47		
Switzerland	:	:	:	:		
Montenegro	:	:	:	:		
Croatia	**19**	**25**	**23**	**23**		
Former Yugoslav Republic of Maced	:	:	:	9		
Turkey	5	:	:	13		

2007-2010
Eurostat data

**% of enterprises
sending and/or
receiving
eInvoices**

	2007	2008	2009	2010
EU 27	18	21	22	31
Croatia	19	25	23	26

Source: http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tin00114

Eurostat changing methods...

In the 2011 survey, Eurostat changed the questionnaire:

Asked for the following data:
- Enterprises sending eInvoices in a standard structure suitable for automatic processing
- Enterprises sending eInvoices NOT suitable for automatic processing (e.g. emails, email attachment in PDF format)
- Enterprises receiving eInvoices in a standard structure suitable for automatic processing
- Enterprises sending eInvoices (suitable OR NOT for automatic processing)
- Enterprises sending / receiving e-invoices in a standard structure suitable for automatic processing

Suggestions have been made to Eurostat by EU multi-stakeholder Forum Working group 1, asking if they could gather data related to the number of invoices / electronic invoices (today they provide information only on senders/receivers).

Eurostat answer was *positive* (starting from 2014 survey).

Source of Data	Eurostat							
UNIT	Percentage of enterprises							
TIME	2011							
	E n t e r p r i s e s exchanging e-invoices in 2011							
	All	**All**	**Small**	**Small**	**Medium**	**Medium**	**Large**	**Large**
	Sending	Receiving	Sending	Receiving	Sending	Receiving	Sending	Receiving
European Union (27 countries)	**8**	**17**	**6**	**16**	**14**	**20**	**30**	**31**
Euro area	8	19	6	18	14	21	32	33
Belgium	10	39	8	38	17	39	40	45
Bulgaria	6	27	5	25	9	39	14	40
Czech Republic	8	18	7	18	13	19	27	29
Denmark	45	24	43	22	51	27	63	54
Germany	7	15	4	14	14	19	35	33
Estonia	23	23	22	22	26	26	36	35
Ireland	8	14	6	12	14	18	34	32
Greece	5	24	4	23	11	33	22	33
Spain	6	20	5	19	14	22	27	30
France	9	20	8	19	15	22	32	34
Italy	5	13	4	12	10	14	23	23
Cyprus	5	8	4	7	10	14	8	14
Latvia	17	34	16	34	23	37	29	35
Lithuania	16	45	15	43	17	53	20	58
Luxembourg	6	21	5	20	8	25	23	33
Hungary	2	2	1	1	3	3	12	12
Malta	12	17	11	16	13	21	13	23
Netherlands	11	22	8	21	18	24	32	38
Austria	7	20	6	19	12	22	30	31
Poland	4	16	3	16	7	15	19	19
Portugal	7	23	6	23	12	27	26	38
Romania	6	11	5	11	7	12	16	15
Slovenia	5	10	5	10	8	12	16	20
Slovakia	11	30	10	31	14	28	26	31
Finland	49	47	45	44	63	60	76	83
Sweden	19	17	15	14	31	26	56	54
United Kingdom	6	10	4	9	14	13	30	28
Iceland	:	:	:	:	:	:	:	:
Norway	14	28	11	26	24	35	43	61
Croatia	**11**	**21**	**11**	**23**	**11**	**18**	**16**	**16**
Macedonia	6	8	6	8	5	9	:	10
Turkey	:	:	:	:	:	:	:	:

Eurostat data for 2011
% of enterprises by size sending/receiving e-Invoices

Ent. size		EU27	Croatia
ALL	S	8	11
	R	17	21
Small	S	6	11
	R	16	23
Medium	S	14	11
	R	20	18
Large	S	30	16
	R	31	16

S = Sending
R = Receiving

Market penetration 2013
by Billentis - Bruno Koch

B2B/B2G/G2B

- >40%
- 15-40%
- <15%

B2B/B2G 2013 penetration estimates of eInvoices:
World =   ~ 5%
EU =   ~ 20%
Croatia = ~ 3%
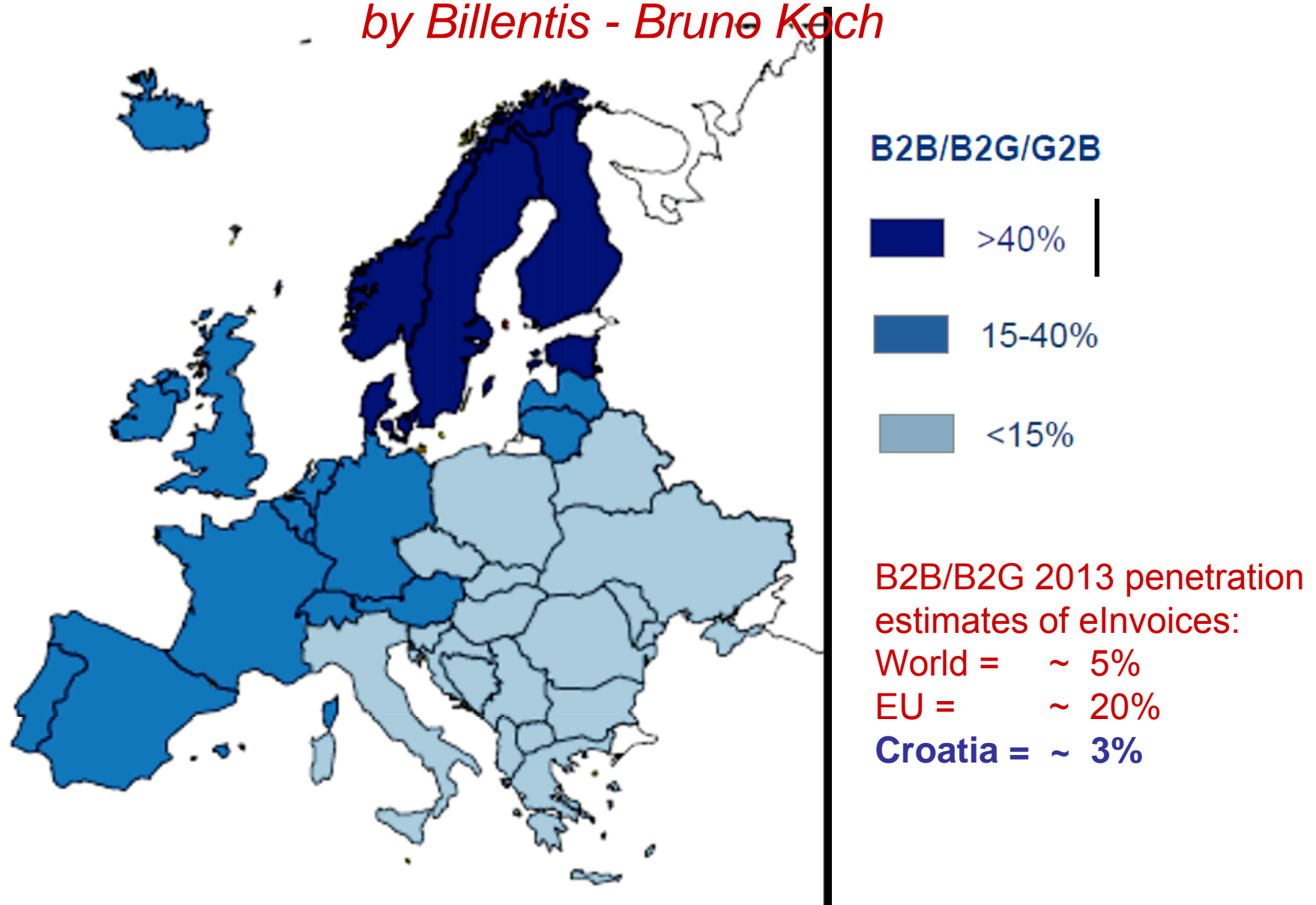
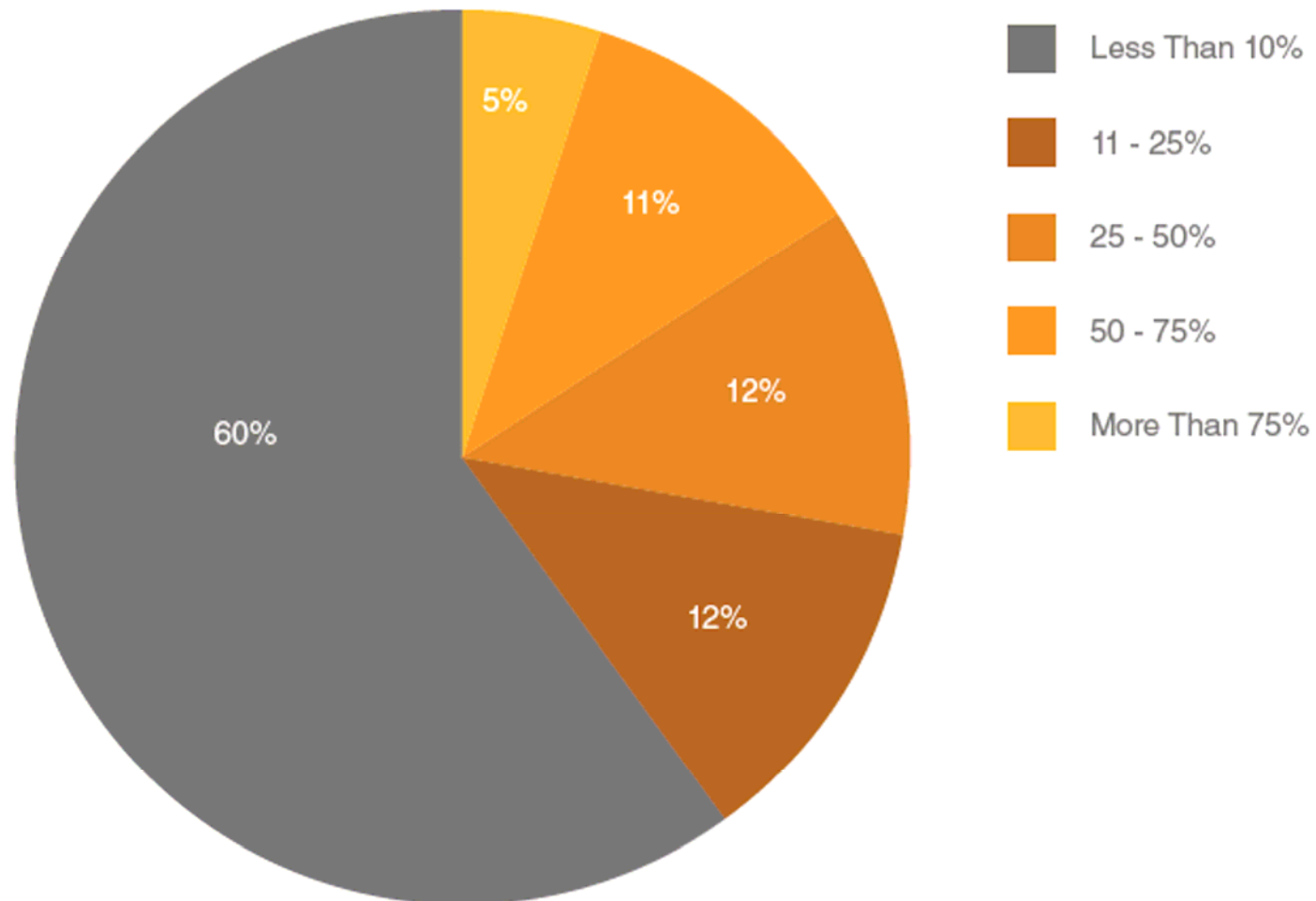*Source*: International Market Overview & Forecast, Billentis, Bruno Koch, feb. 2013 + author's estimates for Croatia

2013 worldwide results
% of invoices received electronically

Legend:
- Less Than 10%
- 11 - 25%
- 25 - 50%
- 50 - 75%
- More Than 75%

Pie chart values: 60%, 12%, 12%, 11%, 5%

eInvoicing in EU & Croatia
compared

1. eInvoicing is a promising eBusiness **B2B** area but still has not produced expected economic benefits in Croatia

2. In EU **B2B** eInvoicing has reached significant penetration results and will progress faster after VAT Directive 2010/45 (= *equal treatment*) has come in effect on January 1st 2013.

3. Croatia will *benefit* from entering in EU on July 1st 2013.

4. Croatia has still to launch **B2G** eInvoicing to accelerate overall eInvoicing usage (*new eStrategy not yet ready*)

5. **B2C** eInvoicing is slowly spreading in Croatia but it produces no significant impact on economic results and competitive picture of national economy

Service providers situation
in Croatia in 2013

B2B segment (EDI)	**6**
B2C segment	**2**
B2G segment (preparing)	**1**
Presentment and (facilitated) payment (EIPP) = banks	**6**
Supporting eInvoicing infrastructure (hubs)	**2**
Enabled for international interchange	**2**

NOTE: Some providers overlap in categories

Source: Author's own research

4. eBanking & ePayments

Croatian National Bank Data 2011

	No. of Transactions (in millions)		Transaction Value (in billions of Kunas)	
Electronic	**195**	**57%**	**1.185**	**55%**
Forms (paper)	29	9%	656	30%
Standing order	116	34%	288	14%
TOTAL	**340**		**2.160**	
Electronic subdivision:				
Internet	83	42%	760	64%
TeleBanking	5	2%	69	6%
EFTPOS	90	46%	18	1%
Other electronic	16	9%	338	28%

Source: Croatian National Bank & Croatian Banking Association, 2012

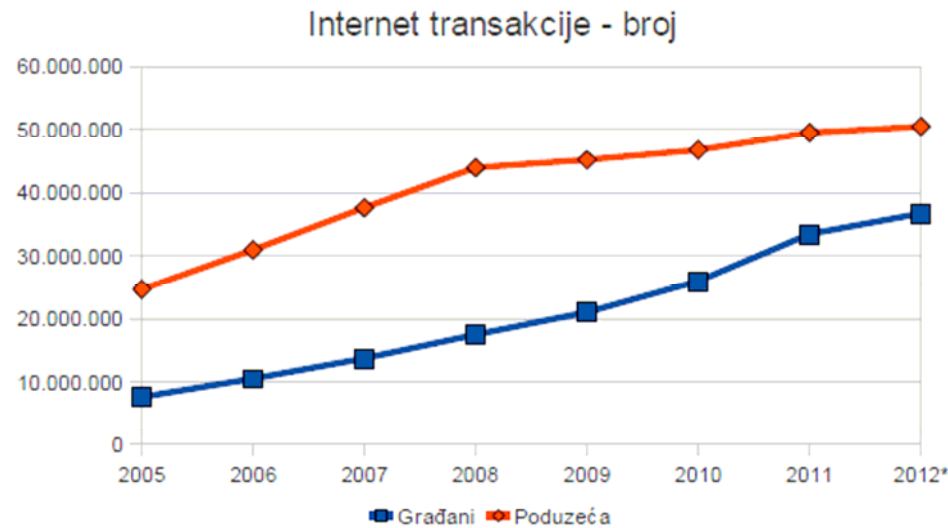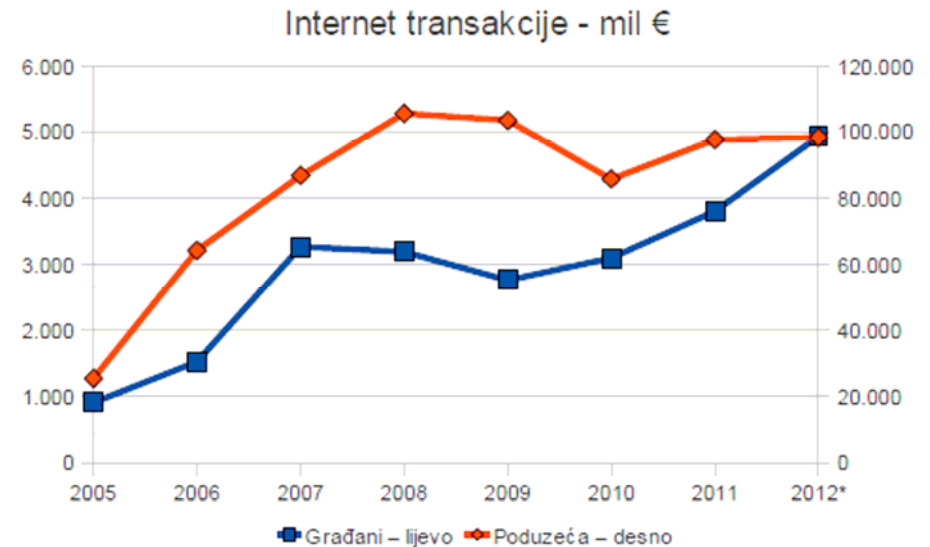# Internet banking users 2005.-2012.
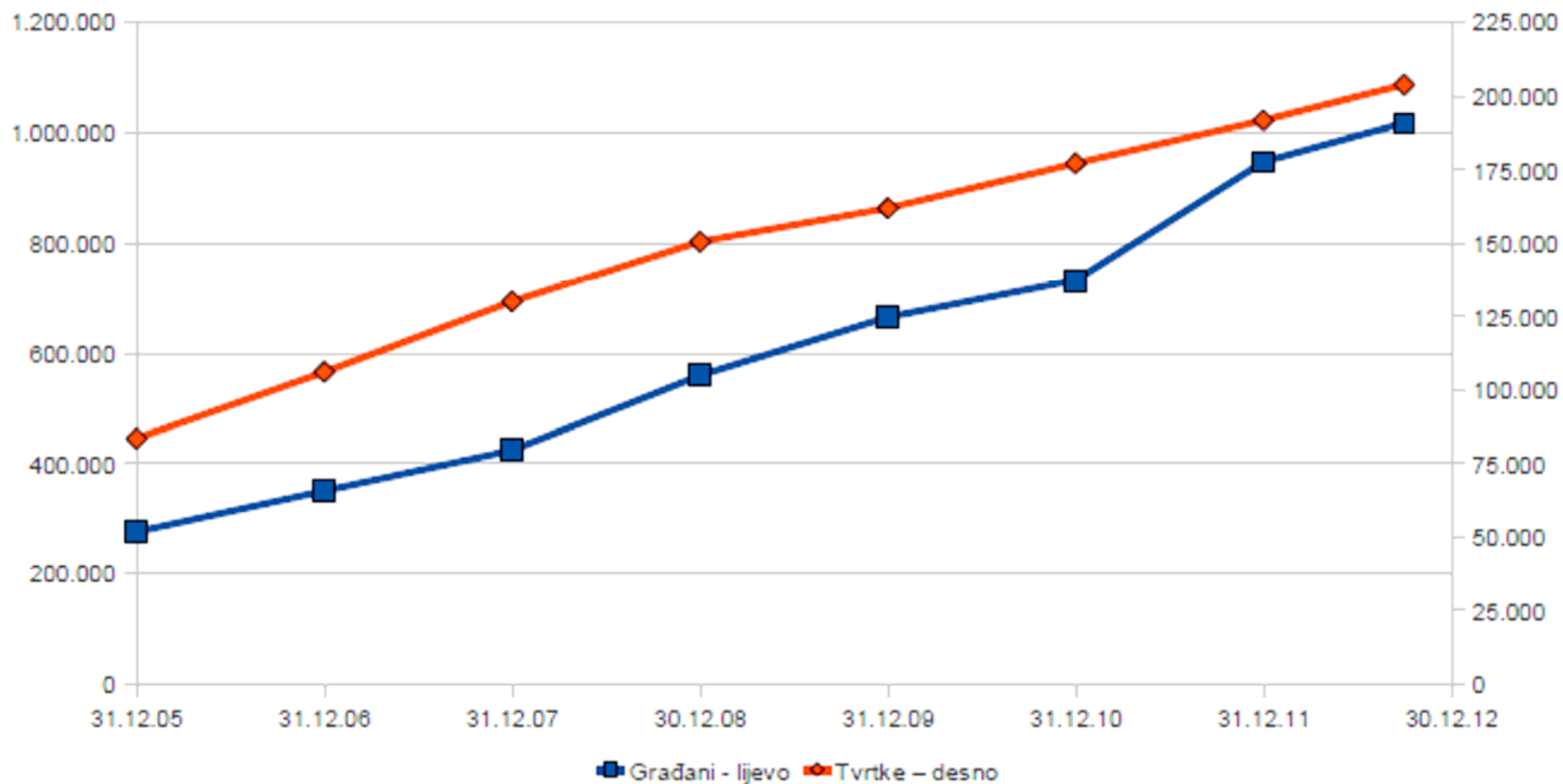
Citizens left scale   Companies right scale

Legend: Građani - lijevo   Tvrtke – desno

Source: Croatian National Bank & Croatian Banking Association, 2012

No. of Internet Transactions and
Total value in M€ 2005 - 2012

Citizens - Companies

Citizens left scale Companies right scale

Effects of economic crisis are clearly visible in value of transactions!

Source: Croatian National Bank & Croatian Banking Association, 2012

SEPA in Croatia – when?

Present situation:

- **National RTGS (gross settlements) = HSVP** (based on SWIFT MT)
- **National clearing = NKS** (based on own standards)
- **Soon in EU, but still don't know when will start using EURO**
- **Majority of Croatian banks is owned by banks from SEPA**
- End date **for EUR payments** is set to October 2016
- **Dilemma:**
  - **To use same standard for Kuna payments?**
  - **If yes, when?**

Source: Zdenko Rupnik, PBZ (INTESA SANPAOLO Group) and SWIFT UGCP of Croatia

Shadow Economy - % of GDP

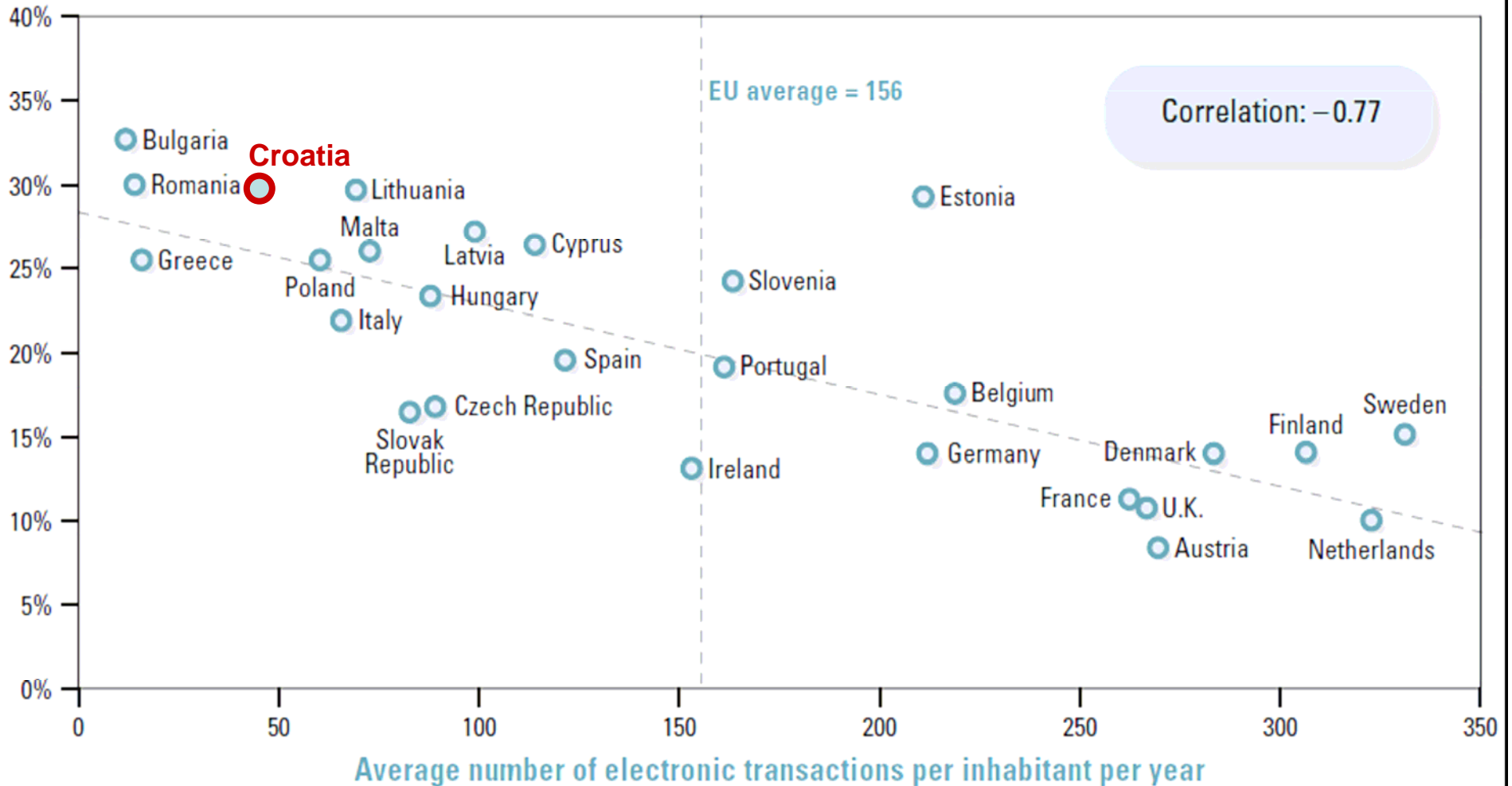The shadow economy in relation to total GDP
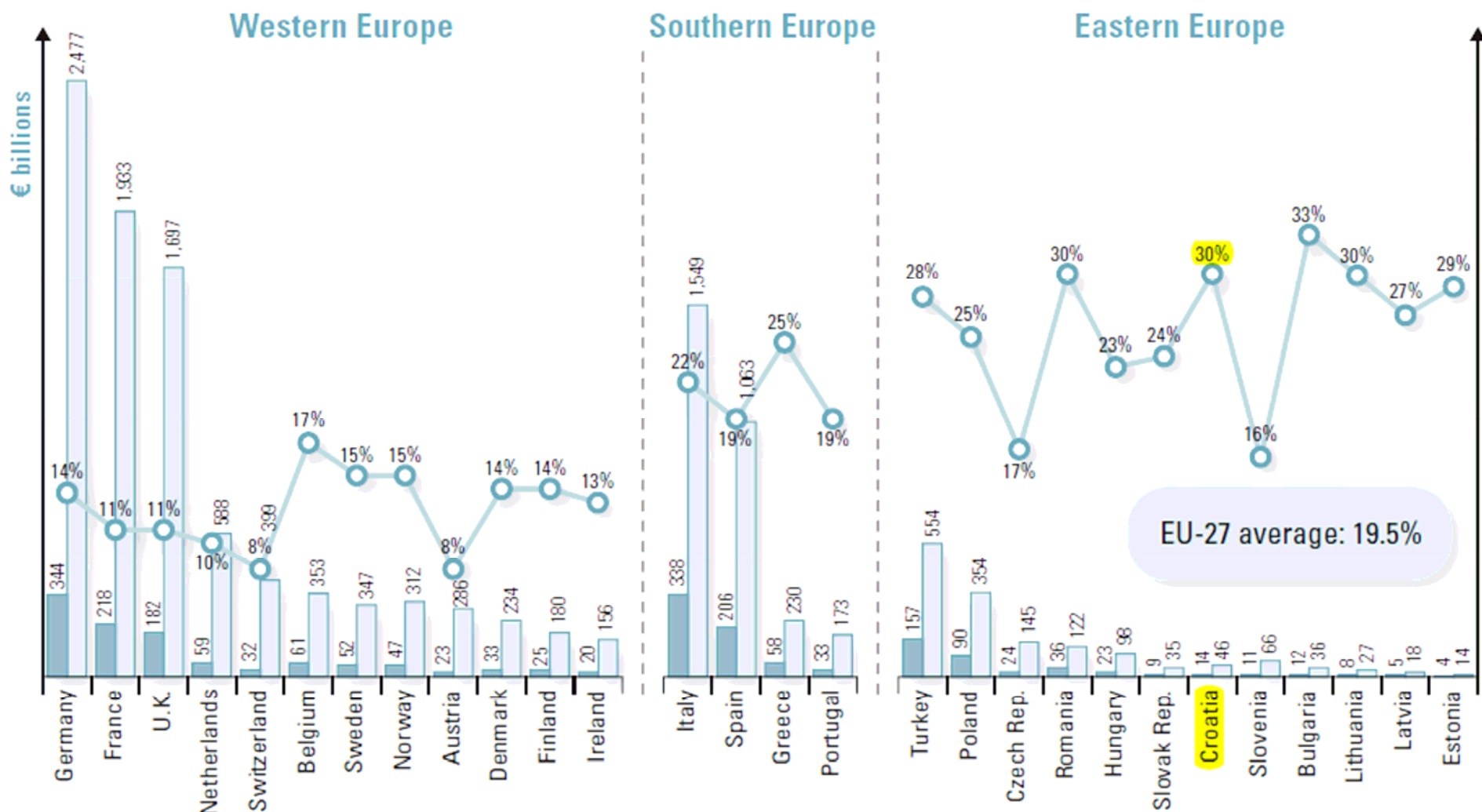
Source: Fridrich Schneider, Johannes Kepler University Linz, The Shadow Economy in Europe, 2011; highlights are by author

ePayments impact on shadow economy

Countries with more electronic transactions have smaller shadow economies

Share of shadow economy *(% of GDP)*

EU average = 156

Correlation: −0.77

Bulgaria
Croatia
Romania
Lithuania
Estonia
Malta
Cyprus
Latvia
Greece
Poland
Hungary
Slovenia
Italy
Spain
Portugal
Belgium
Czech Republic
Sweden
Slovak Republic
Finland
Germany
Denmark
Ireland
France
U.K.
Austria
Netherlands

Average number of electronic transactions per inhabitant per year

Source: Fridrich Schneider, Johannes Kepler University, Linz: The Shadow Economy in Europe, 2011 + intervention by author

5. eGovernment

eCroatia is now part of
Ministry of Public Administration

- In 2012. the eCroatia central administrative unit has been incorporated into Ministry of Public Administration (with new 2012. Government) putting in focus only eGovernment and leaving eBusiness out of their scope

- Several new eGovernment projects are underway

- The new Commission for Public Administration Informatisation is composed of several ministers and other high officials is presided by Ms. Milanka Opačić, Deputy Prime Minister and Minister of Social Welfare and Youth

Croatia is ranking 30th on the United Nations World eGovernment scale with score = 0,7328* (up from 35th rank and 0,5858 score in 2010)

Source: UN E-Government Survey 2012

Table 1.20 **Top 10 in Europe**

Rank	Country	E-gov. development index 2012	E-gov. development index 2010	World e-gov. development ranking 2012	World e-gov. development ranking 2010
1	Netherlands	0.9125	0.8097	2	5
2	United Kingdom	0.8960	0.8147	3	4
3	Denmark	0.8889	0.7872	4	7
4	France	0.8635	0.7510	6	10
5	Sweden	0.8599	0.7474	7	12
6	Norway	0.8593	0.8020	8	6
7	Finland	0.8505	0.6967	9	19
8	Liechtenstein	0.8264	0.6694	14	23
9	Switzerland	0.8134	0.7136	15	18
10	Germany	0.8079	0.7309	17	15
Regional Average		0.7188	0.6227		
World Average		0.4882	0.4406		

Some national eProjects

Project	Area	Responsible
HITROnet	Secure eGov network	Government RoC
eCadastre	Real property Register	Ministry of Justice & State geodetic Admin.
eIzvadak	Public information about real property	Ministry of Justice
ePorezna **ePDV**	Tax data and information VAT data submission and info	Ministry of Finance
eMatica	Civil Registers	Ministry of Public Admin.
eRegos **eMirovinsko** **ePrijava**	Central Pension Registry	HZMO - Croatian Institute for Pension Insurance
eLearning	edu.hr ePortfolio, MOD, Merlin (all based on *Moodle*)	CARnet univ.network & SRCE univ.comp.centre

eID in Croatia

- eID project is overdue for several years in Croatia
- The new initiative by eCroatia and Ministry of interior is promising a pilot in 2013
- eID will provide PKI certificates to all citizens and enable more eServices in C2G segment

Source: Blaž Sviličić, AKD

Fina PKI infrastructure
in place in Croatia

- **Fina** (*financial agency*) provides PKI certificates for: citizens, businesses and applications
- Co-operates with eight (8) banks and provides co-branding secure devices (cards, tokens) including Fina certificates
- The cash transactions fiscalization campaign by Ministry of Finance has boosted use of (soft) certificates. Now ~30.000 but ~100.000 expected by the end June 2013.
- At present ~143.000 Fina certificates used for different eBusiness and eGovernment services

fiskal.pfx

Source: Andreaja Kajtaz, Fina, leader of eBusiness Centre

ECDL in Croatia

Economic crisis has significantly affected the reduction or complete elimination of funding for ECDL training and certification

With the aim to increase the number of participants the following actions are being implemented:

- *ECDL for competitive Croatia* with support of Croatian Chamber of Economy and Croatian Employment Service
- E*CDL for blind people*
- *ECDL for unemployed persons*
- EU project **Darda** - Education and certification for national minorities
- Cooperation with national ECDL organizations in the region

New ECDL Opportunities → Croatia as a new member of EU to use funds of ESF

Source: HIZ, Croatian Information Technology Association (CITA) - www.hiz.hr and www.ecdl.hr

6. additional eHealth eProjects

In addition to ePrescription (see Case2):

- **eWaiting List -** started in 2012. with all public hospitals in Croatia (>65)

- **eOrdering -** to laboratory or specialist's examination is underway, to be fully implemented by the end of the year

- Both processes integrated into different HIS (*Hospital Information Systems*) and family medicine doctor's information systems, providing *machine-to-machine* integration

Beneficiaries:
- **Patients**
- **Family doctors**   **= EVERYBODY!**
- **Specialists at hospitals**
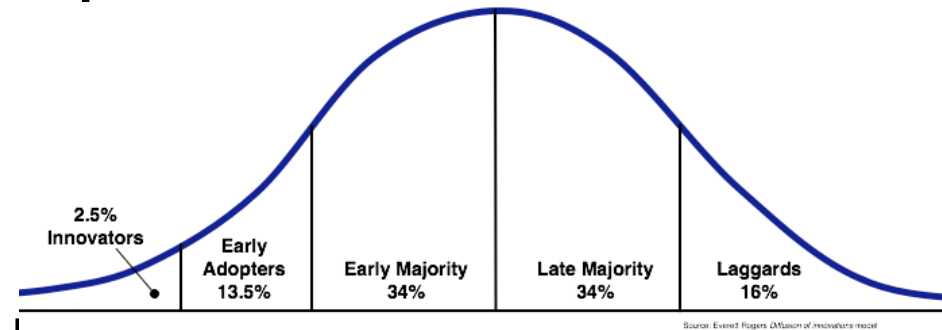
+more eHealth projects in pipeline!

7. GS1 Croatia

1. Retail supply chain is well supported by several players – main player is Croatian company Agrokor/Konzum

2. GS1 Croatia provides GlobeCat® catalogue application with certified GDSN synchronization capabilities

3. For a small country, with limited internal markets, as Croatia, GlobeCat® is important for FMCG exporters

4. GS1 Croatia is also trying to promote GS1 standards (GTINs and GLNs) in public sector

Source: www.gs1hr.org

Why this *critical* overview?

➢ *Competitive edge* is important to reach benefits

➢ With time passing the possible benefits become less achievable

2.5% Innovators

Early Adopters 13.5%

Early Majority 34%

Late Majority 34%

Laggards 16%

Source: Everett Rogers *Diffusion of Innovations model*

➢ It is possible, when high penetration rates are achieved that *little or no benefits* are obtained because there is no more competitive edge

➢ It is still not too late to do the necessary

8. Some conclusions

❖ The overall situation with implementation of eBusiness and eGovernment is preoccupying

❖ Government is reluctant to 'push harder' eGovernment and eBusiness activities

❖ Unfavorable economic situation (i.e. crisis) is not understood as good starting point for rapid changes

❖ New initiatives are needed to boost eBusiness

Thank you!
…questions…

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