



# Ministerul Tehnologiei Informației și Comunicațiilor al Republicii Moldova

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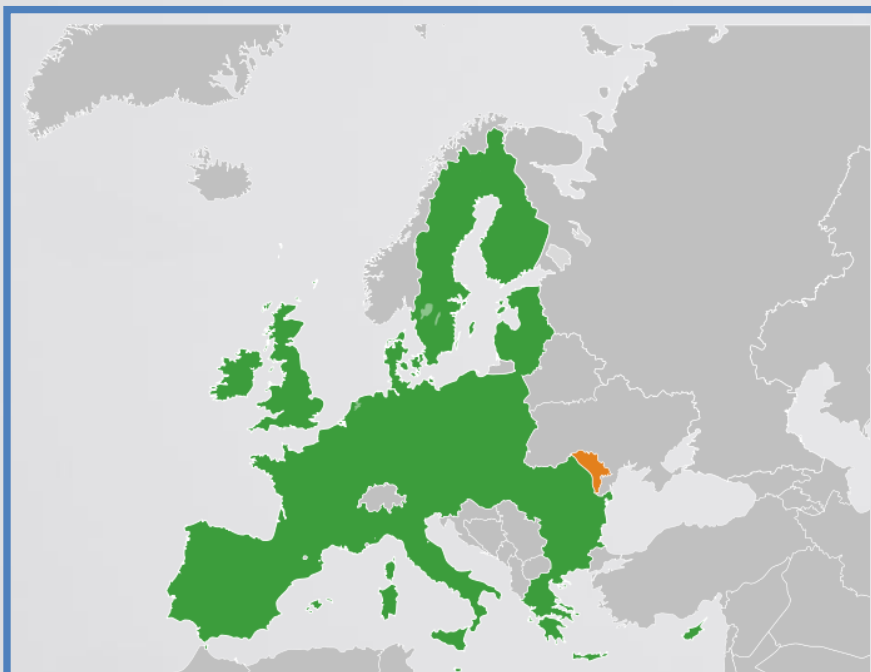
# Policies to Increase ICT Competitiveness and integrate Moldova in global ICT value chain.

September 2012

# Moldova

Moldova is a bridge between the EU markets and the growing CIS markets

An open economy with on-going negotiations for EU integration



Population	3.6 million
Average monthly wage	213EUR
Multilingual population	70%

## Open economy

- Moldova is the only country with:
  - EU autonomous trade agreements
  - CIS countries free trade agreements
- International Centre for Settlement of Investment Disputes (ICSID) member
- World Trade Organisation (WTO) member since 2001

## EU integration

- 52% of trade with the EU
- No visa requirements for EU nationals and other 70 countries
- Ongoing negotiations on EU-Moldova Association Agreement and Deep and Comprehensive Free Trade Agreement (DCFTA)

# Moldova

## Economic and financial



### Real GDP growth

	2011	2012	2013
<b>Moldova</b>	<b>6.4%</b>	<b>2.8%</b>	<b>3.4%</b>
Romania	2.5%	1.0%	3.0%
Bulgaria	1.7%	0.8%	2.4%
Slovenia	0.5%	-0.2%	1.2%
Czech Rep	1.7%	0.3%	2.0%
France	1.7%	0.1%	0.7%

### Cost indicators

GDP per capita as PPP 2012	Avg monthly wages 2011
<b>\$3,233</b>	<b>\$267</b>
\$12,749	\$608
\$13,438	\$467
\$28,818	\$1,978
\$25,893	\$1,269
\$36,817	\$2,422*

PPP projections from EUI, 2012; Wage data from EUI, 2012;

\*France wage data for 2009, does not include entrepreneurs; from French National Statistics Office, 2012

# Economy and ICT Overview

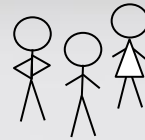
- ICT contributes ~10% of GDP;
  - 153 IT companies;
  - 7 major ISPs;
  - 3 mobile operators;
- Internet penetration
  - Overall - 50%;
  - Broadband – 11%;
  - Since 2010 some ISPs offer 100/100Mbit for 250 MDL (~23 USD);
- Mobile Penetration – 110%;
  - High speed 3G internet access since 2008, 3.5G since 2010, 4G by the end of 2012;
- Networking Infrastructure
  - Fiber link to 99% of localities, last mile is Ethernet, ADSL or ISDN, FTTx;
  - Separate 100Mbps dark fiber network serving central public administration (currently upgrading to 1Gbps);
- Ease of Doing Business: Moldova is ranked 90th out of 183 countries (IFC, WB, EoDB report 2011);

# IT in Moldova



## Government, institutions, and business

- ✓ Free economic zones – discounts on infrastructure; tax and duty exemptions; legal protection from changes in law.
- ✓ Corporate tax rate of 12% – regionally only Bulgaria is better.
- ✓ No personal income tax on portion of income above 7,100 leu/month for IT specialists.
- ✓ Ease of doing business greatly improved: jumped 18 slots in World Bank rankings.
- ✓ Multiple free trade agreements with CIS, regional states, and EU.



## People and skills

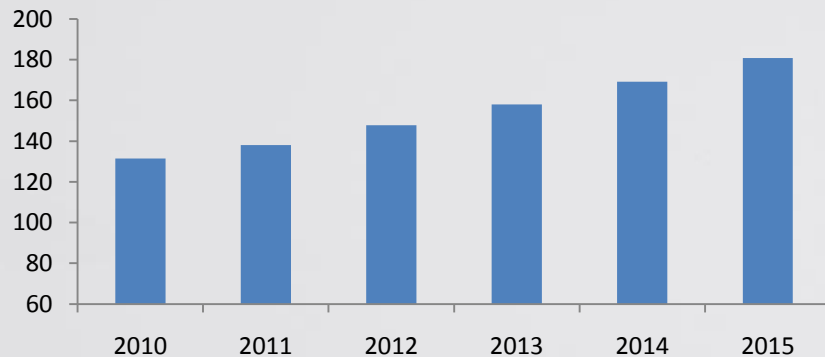
- ✓ Languages, culture, location  
Romanian, Russian, English (46% of graduates), French (51.3% of grads); European. Two hours to Germany.
- ✓ Education: Historically respected universities – long tradition of technical education.
- ✓ Graduates and their skills  
5,900 ICT-related grads in past 3 years; Proportionally more computing grads than RO, BU, CRO, UA, SL; number of IT graduates on the rise.

# Moldova

## IT environment



IT Spending in Moldova\*



### Strong Growth

- 6.6%/year avg to 2015
- ICT spend as % of GDP 2x BU, CRO, SL
- ICT spend as % of GDP 3x RO

### Hardware dominated the market

- 74.2% hardware (2011)
- 14.6% IT services (2011)
- 11.2% software (2011)

### Competition heating up

Telco competition fierce – driving network infrastructure

### Government

Investing in eGovernment and creation of cloud services platform – likely jump over legacies

### Communications

In capital – exceptional broadband.  
Outside capital, a lot left to be done.

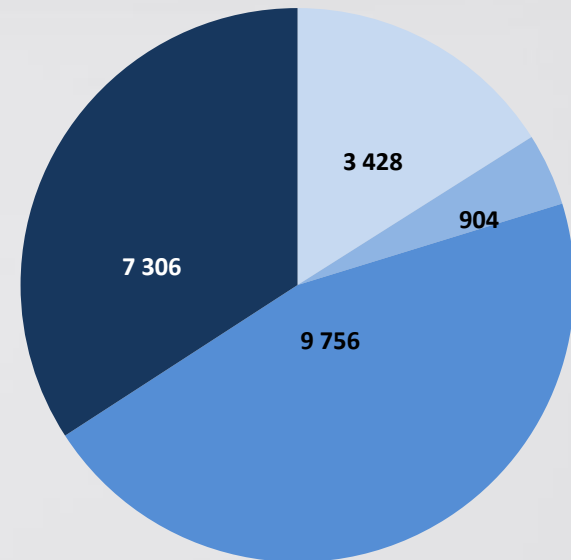
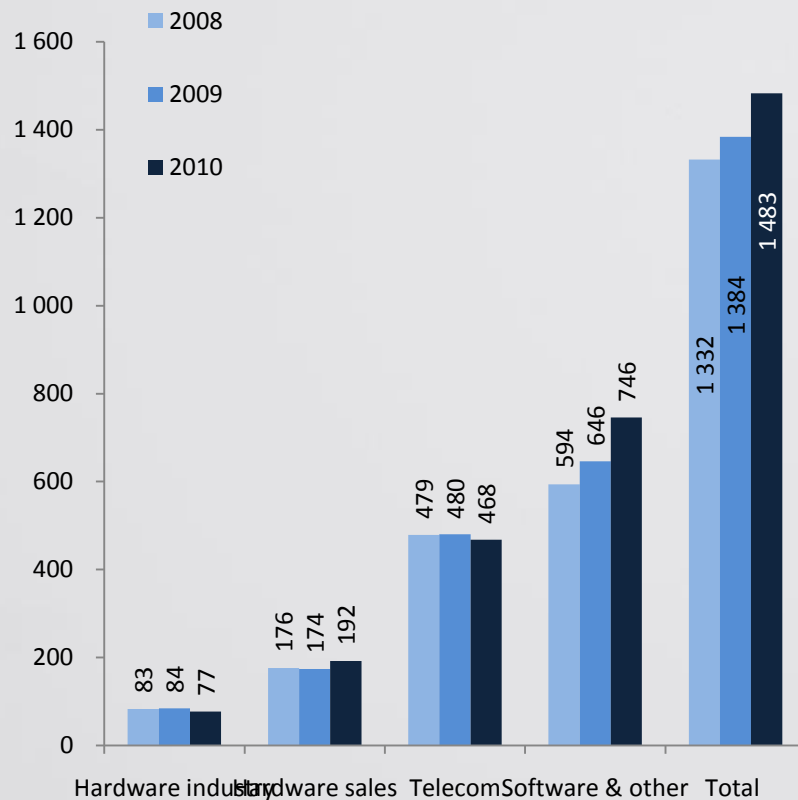
Prognosis: boom ahead

Mobile telephony penetration	110%
BB Internet penetration	Urban 60% Country 11%
Fixed telephony penetration	33%

\* Source: IDC: Competitiveness Assessment of the Moldovan IT Market, 2011

# ICT sector

## Evolution of the number of ICT companies



Hardware industry Hardware sales  
Telecom Software & other

## Number of employees working in ICT (2010)



# The Moldovan ICT market

## Hardware

- \$97.27 million in 2010
- 2.1% growth over 2009
- PC shipments accounts for 62.4% of total hardware spending
- PC market dominated by local assemblers
- hardware market hindered by grey and black imports

## Software

- \$14.93 million in 2010
- 3.4% growth over 2009
- high piracy rate (90% in 2010)
- reduced vendors presence
- revenues mainly from system infrastructure and basic software solutions (accounting modules mainly)
- limited number of EAS implementations

## IT services

- \$19.24 million in 2010
- 3.7% growth over 2009
- low level of IT services spending influenced by the state owned companies subsidiaries presence
- dominant group of services – implementation (hardware centric market), followed by support services
- lack of large projects in public sector vertical and underdeveloped business environment

# IT in Moldova

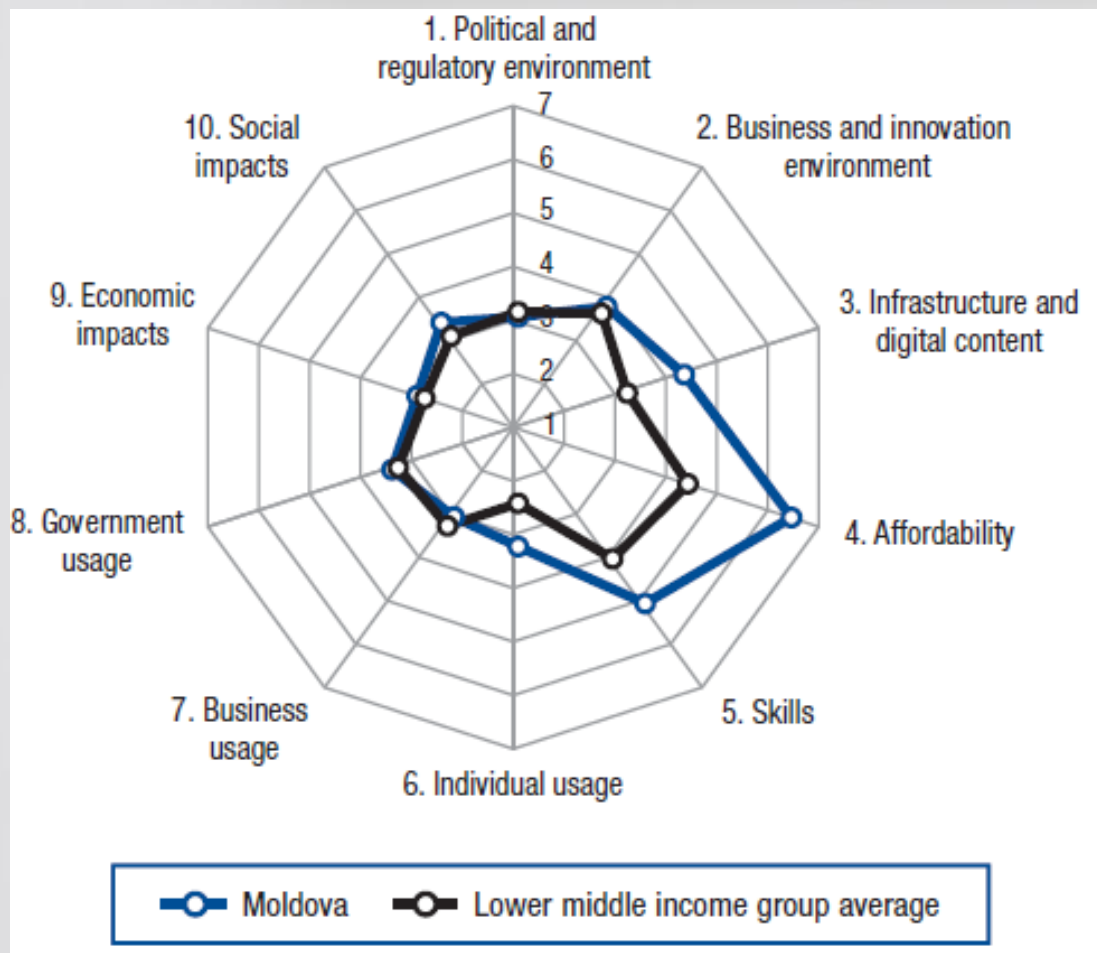
## What it all means

### **Moldova - a solid nearshoring destination**

The combination of education, IT skills, location, and languages makes it ideally suited to organizations looking for a cost-effective alternative to WE and CEE locations. But it comes with a few caveats:

- **Better for higher-end service, development, and R&D**  
The country is too small to support massive support or call centers or what might be called “sweatshop programming”. Training will be necessary; but skills base well in place.
- **Management tradition still developing**  
Solid processes, work structures, task assignments, and leadership will be needed to ensure coherent, goal-directed teams. Mentoring and leadership programs a good idea in the beginning.
- **Salaries will be rising – make employees happy**  
For IT professionals, monthly salary could be double or triple the average. While still lower than other countries in region, with a boom on the horizon, competition for headcount will grow. Interesting work, training programs, and other incentives a good idea.

# ICT Challenges vs. Policies



1. Improve business environment to stimulate entrepreneurship in ICT
2. Stimulate business usage of ICT encouraged by government usage
3. Improve ICT education to satisfy industry needs – attract foreign university focusing on ICT
4. IT near shoring destination promotion
5. Create modern managed workspace

Moldova vs. middle-income countries (The Global IT Report 2012)

# ICT Policies issues

Challenges	Approach	Policies
Compatibility	Knowledge transfer: Universities, MNCs, R&D centers	Enabling environment Promotion
Improving public service delivery	Intelligent Public Investments Smart regulations	Shared First Open Government
Growing an Entrepreneurial Society	Level playing field Innovation ecosystem	Think small first PPPs for innovation

# ICT Policy solutions

## Digital Moldova 2020

- Acces and Infrastructure
- Skills and Usage
- Content and Services

## ICT Competitiveness

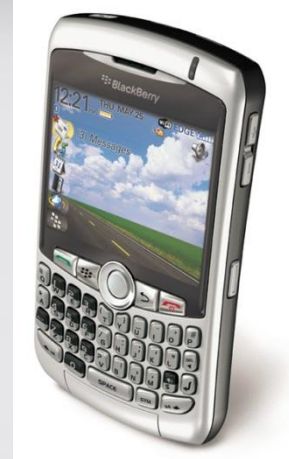
- ICT Entrepreneurship
- ICT Innovation Ecosystem
- Increase domestic ICT adoption
- ICT Education

# eGov: Where we want to be

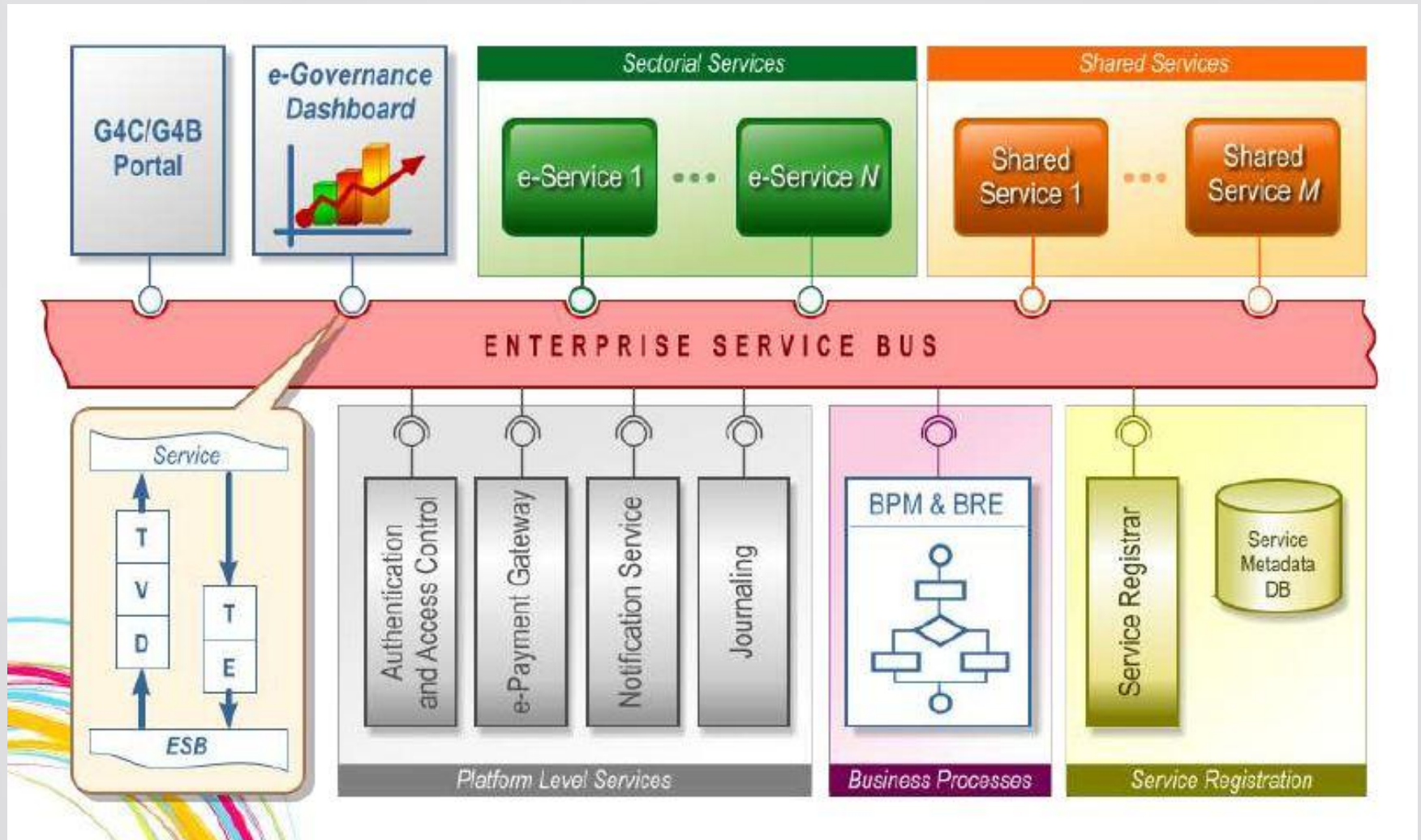
**Objective:** By 2020, the Government will become more transparent, more responsive, and will perform better due to intelligent investments in IT and their high uptake in the public sector

- **The modernization of public services** through digitization and business process reengineering and the convenient access to information and services for citizens and businesses
- **The optimization of government operations** through interoperability, IT asset consolidation, and data reuse that will help overcome departmental silos and enable public institutions to operate and interact through a shared technology platform in order to offer high quality services

*Strategic Program, approved Sept 20, 2011*



# M-Cloud and interoperability



# eGovernment projects

1.	Open Government Partnership <a href="http://www.date.gov.md">www.date.gov.md</a>	Joined in Apr 2012 Launched in Apr 2011
2.	Government 4 Citizens Portal, <a href="http://servicii.gov.md">servicii.gov.md</a>	Launched May 2012
3.	Online application for criminal records, Ministry of Interior	Launched Aug 2012
4.	Mobile e-ID	Launched Sept 2012
5.	Interoperability Framework for the Public Sector	Adopted Aug 2012
6.	Online CNAM reporting (Ministry of Health, National House of Medical Insurance)	Launching Oct 2012
7.	Document and Records Management System for Central Government	Launching Oct 2012
8.	Online licensing, Ministry of Economy	Launching Nov 2012
9.	Norms and standards for construction published online (Ministry of Construction)	Launching Nov 2012
10.	M-Cloud Shared Government Technology Platform	Launching end of 2012
11.	Enterprise Architecture Framework	Launching end of 2012
12.	Electronic Payments Gateway	Launching end of 2012



# Moldova

## ICT Success stories



More to come...