

GOVERNMENTS ENABLED WITH IPv6

Monitoring:
**Implementation progress of IPv6
for governmental web sites**

Jiří Průša (CZ.NIC Association), Berlin, 24 November 2014



How to measure IPv6 adoption?

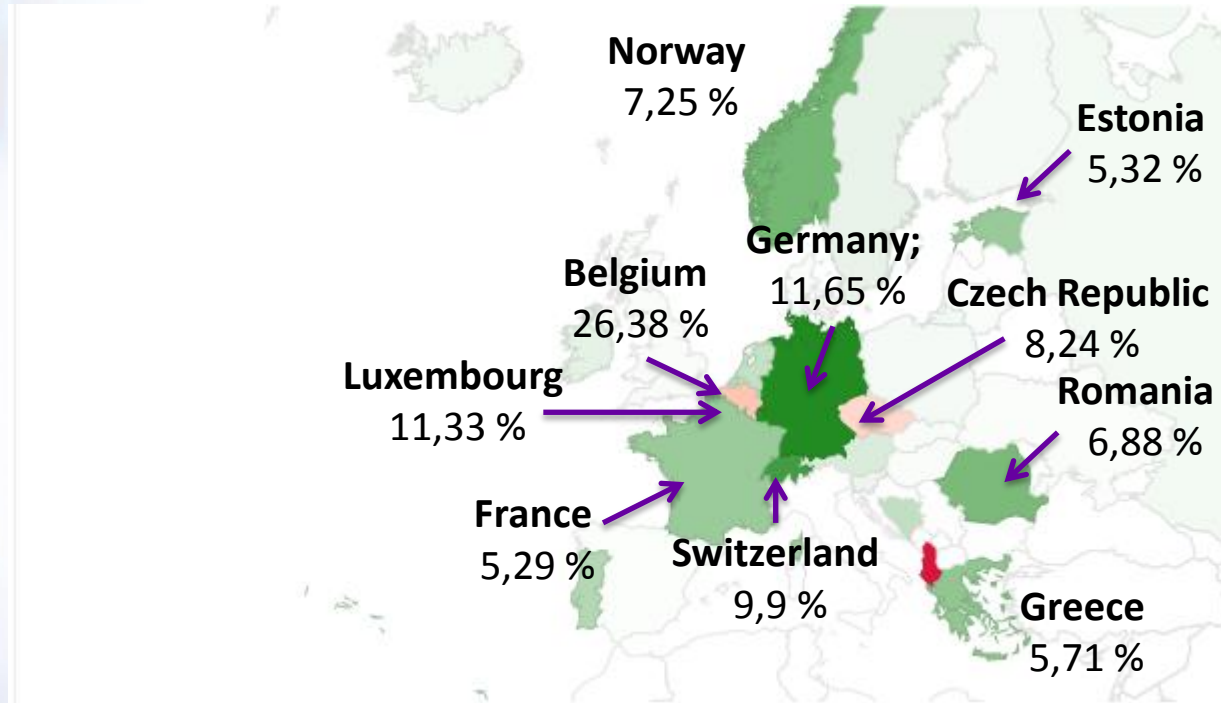


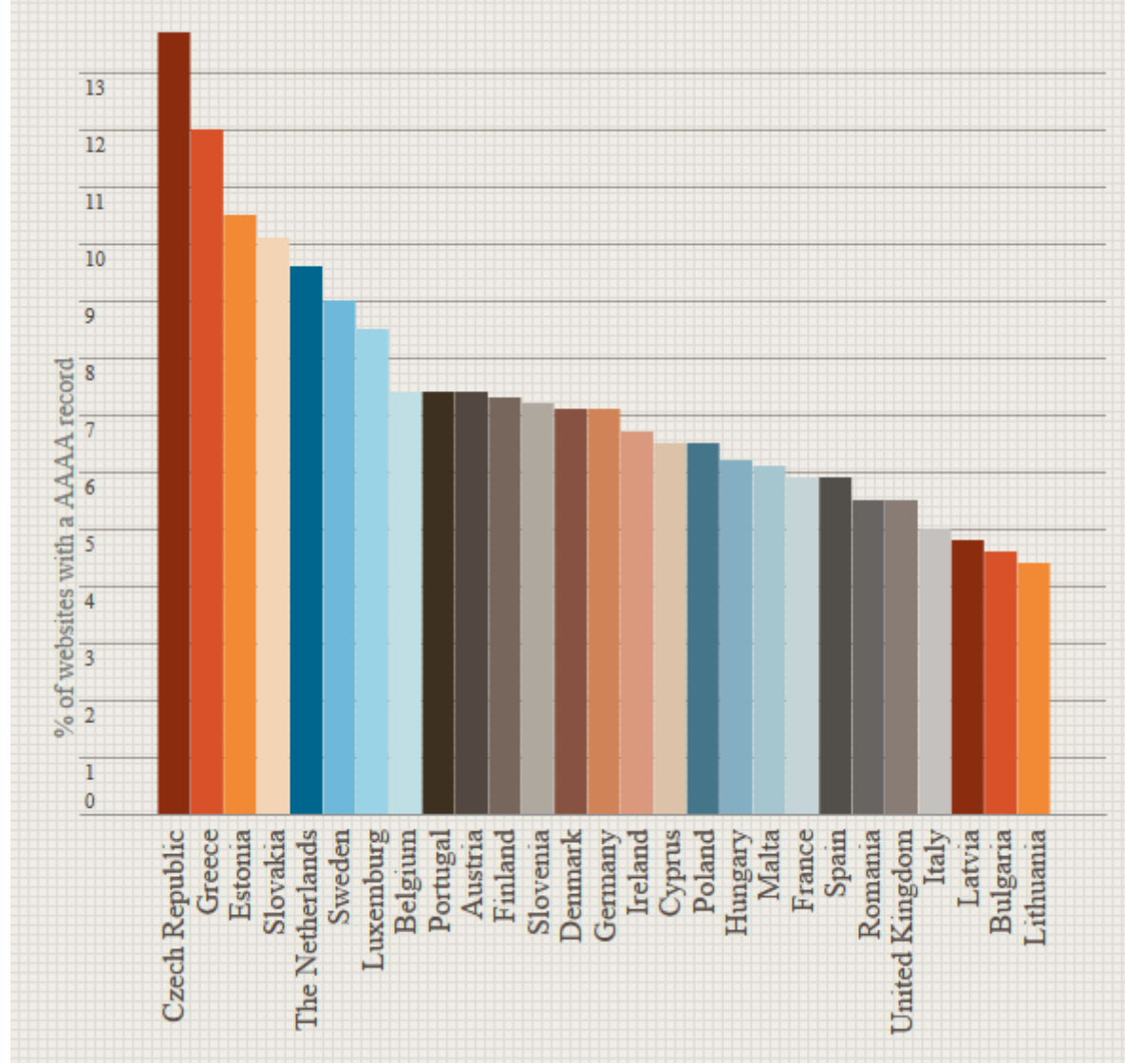
Based on the IPv6 connectivity

(Google users)

IPv6 readiness of web-servers, DNS and mail servers

(Alexa, GEN6)





Introduction: IPv6 Government benchmarking

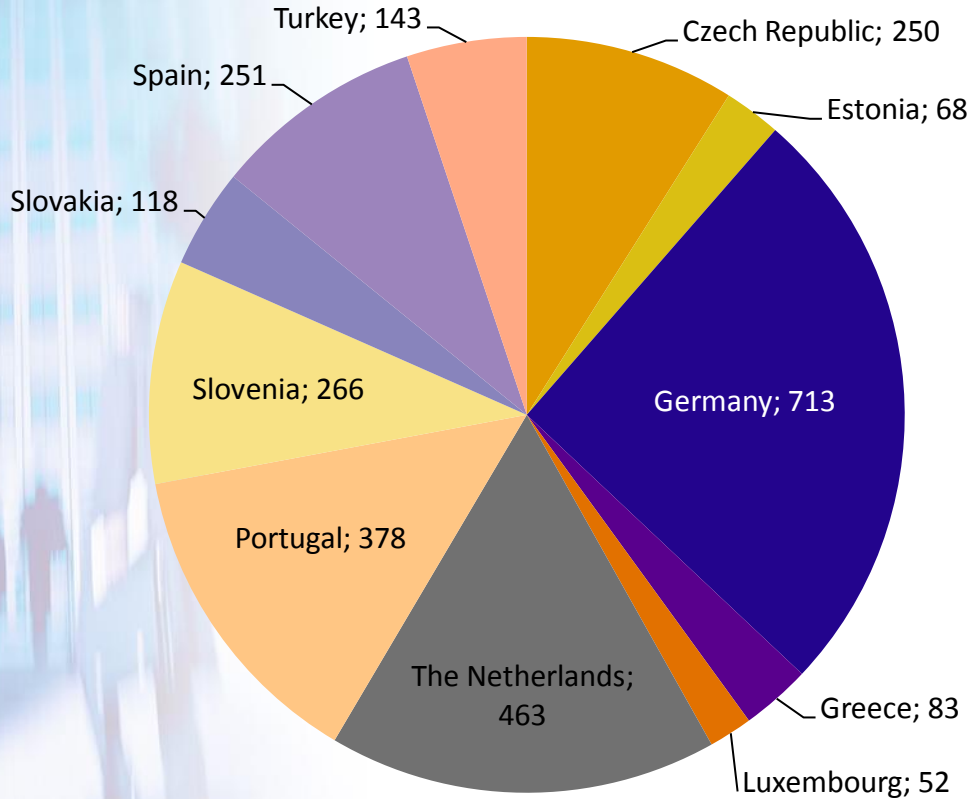


- **Digital Agenda for Europe**, Action 89: eGovernment services supporting IPv6
- Based on the **pilot project** in the **Czech Republic**, IPv6 readiness benchmarking is **expanding** by GEN6 to other countries.
- In order to compare the comparable, the **methodology** for collecting URLs was set up.
- Benchmarking involves **government institutions only**, at all levels:
 - National: ministries, legislative bodies, judicial authorities...
 - Regional: representatives of regions (only in some countries)
 - Local: largest cities in each country
- **Data available for:** the Czech Republic, Estonia, Germany, Greece, Luxembourg, the Netherlands, Portugal, Slovenia, Slovakia, Spain and Turkey.

IPv6 Government benchmarking



URLs according countries



2 785 websites analysed

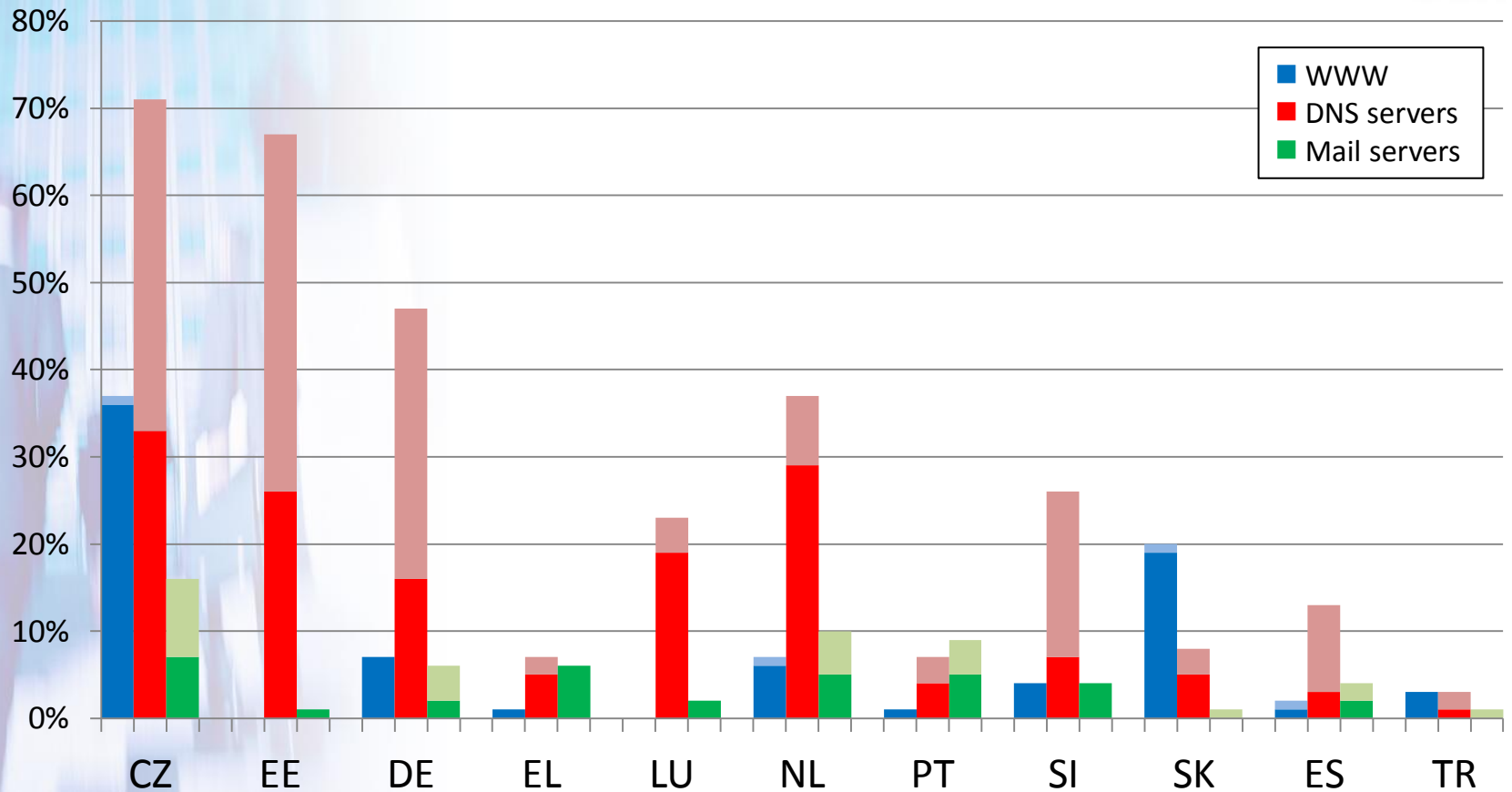
464 national level

143 regional level

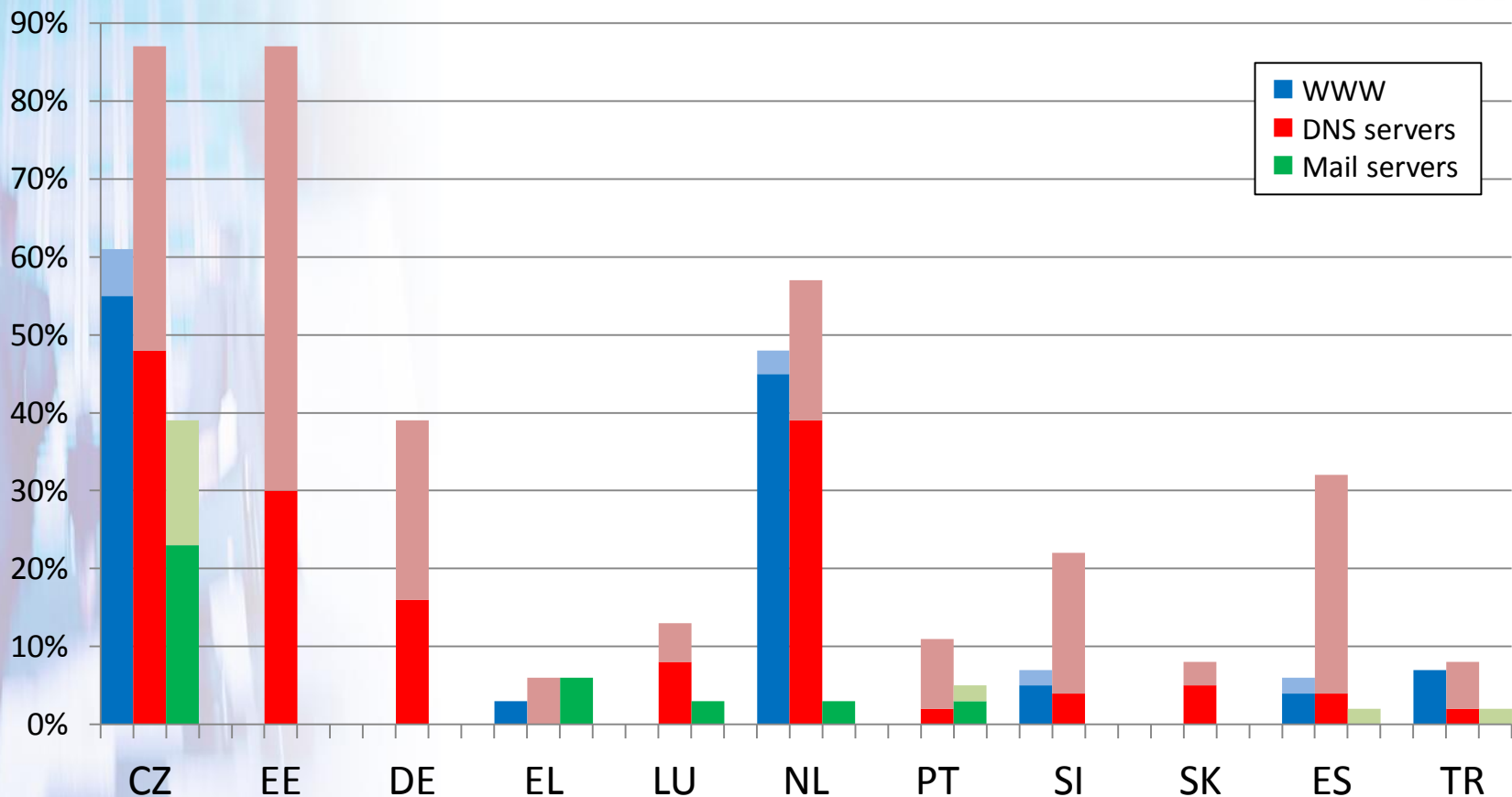
2 178 local level

- Czech Republic
- Estonia
- Germany
- Greece
- Luxembourg
- The Netherlands
- Portugal
- Slovenia
- Slovakia
- Spain
- Turkey

IPv6: Government benchmarking



Government benchmarking: National Level



GOVERNMENTS ENABLED WITH IPv6

IPv6 Government Policies in the Czech Republic



8 June 2009 : **Government Resolution** on IPv6

- IPv6 in public tenders on network infrastructure components (30/6/2009)
- Ensure availability of government websites via IPv4 and IPv6 (1/1/2011)

20 March 2012 : **Digital Czech 2.0 Strategy**

- Wider government support for IPv6 deployment
- Government policy for DNSSEC support
- Internet Governance rules: preferring self-regulation

18 December 2013 : **Government Resolution** on DNSSEC & IPv6

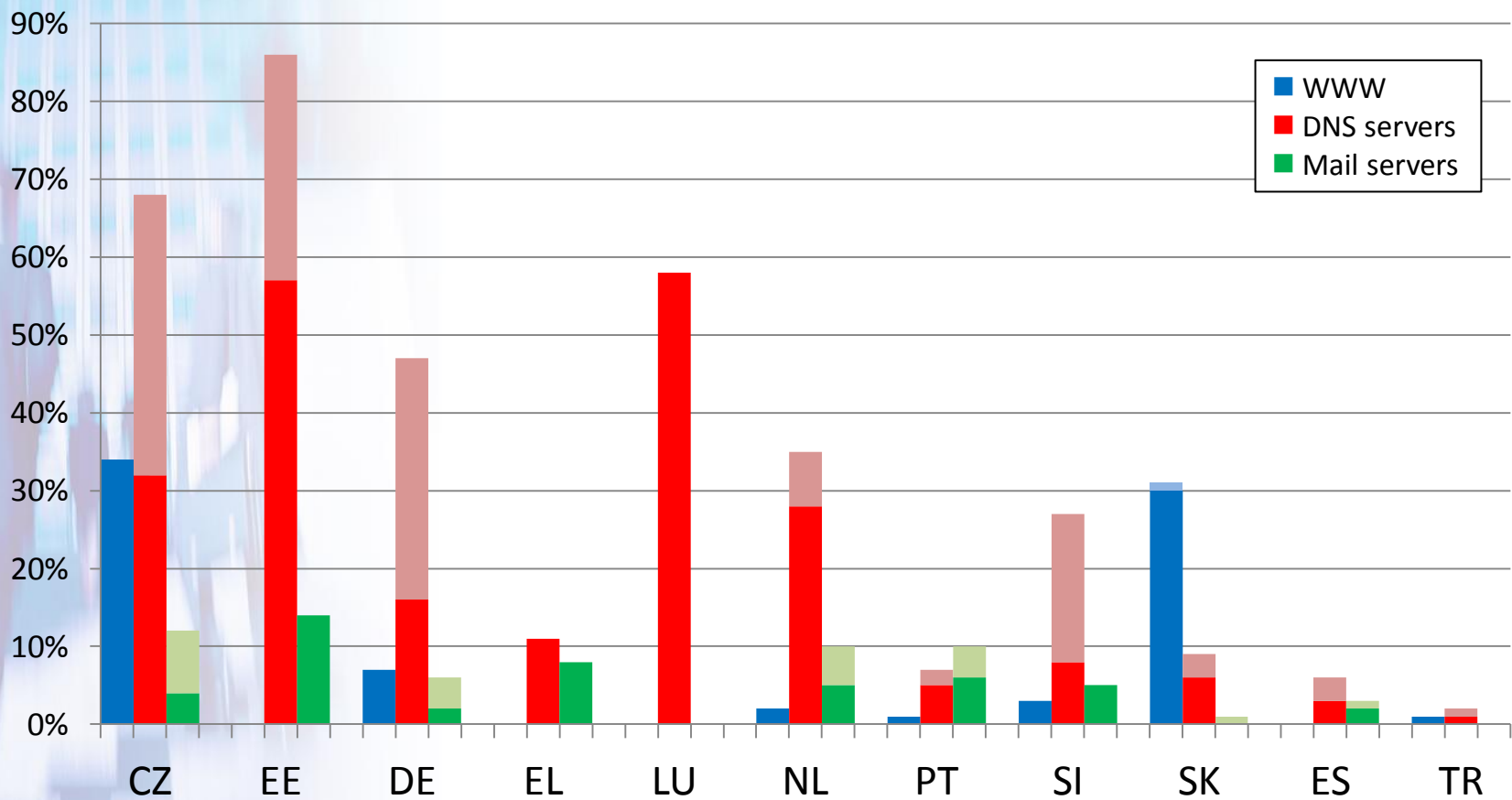
- IPv6 and DNSSEC in all relevant public tenders (1/1/2014)
- Availability of mail servers via IPv6 (1/3/2015)

19 December 2013 : **Guidelines for data traffic management**

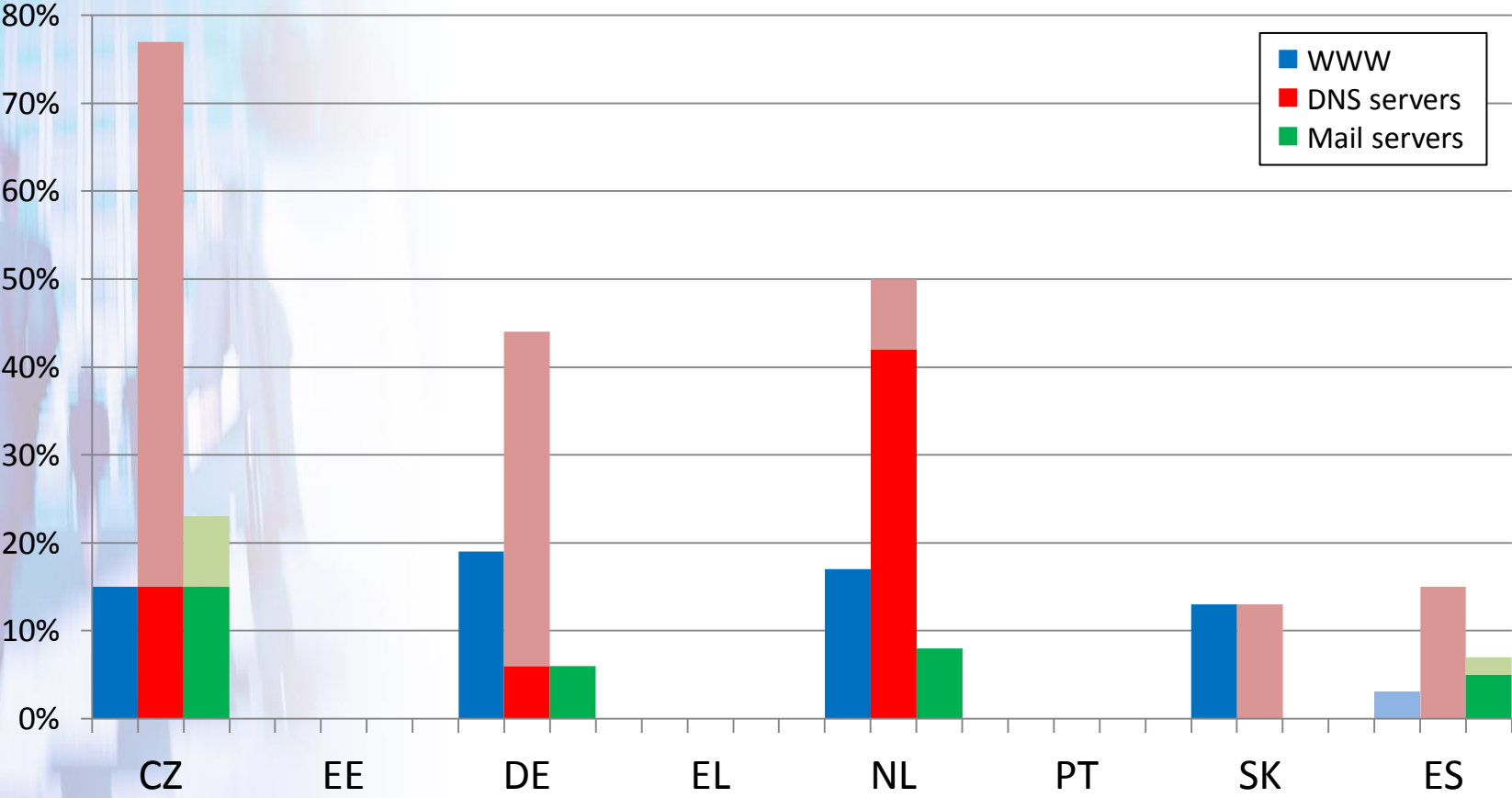
- National telecom regulator declared IPv6 as a part of net-neutrality

IPv6 = net neutrality!

Government benchmarking: Local Level



Government benchmarking: Regional Level



GOVERNMENTS ENABLED WITH IPv6

IPv6 Deployment in Germany



	WWW		DNS		E-mail	
	1/13	11/14	1/13	11/14	1/13	11/14
Central gov. institutions	0 %	0 %	35 %	39 %	0 %	0 %
Bundesländern	13 %	19 %	37 %	44 %	6 %	6 %
Cities	6 %	7 %	33 %	47 %	1 %	6 %

- From the service point of view, the **highest IPv6 deployment** is recorded by name servers. Its probably **due to** name servers operators, especially **data centers**.
- (Regional) data centers also play an important role in IPv6 transition by cities – **43** new municipalities started to support IPv6 on their webservers, **269** on name servers and **37** on mail servers.

IPv6 Deployment in the Czech Republic



	WWW		DNS		E-mail	
	1/13	11/14	1/13	11/14	1/13	11/14
Central gov. institutions	19 %	55 %	55 %	87 %	19 %	39 %
Regional Governments	8 %	15 %	54 %	77 %	15 %	23 %
Cities	8 %	34 %	39 %	67 %	2 %	12 %
Average in .cz domain	15 %	23 %	51 %	61 %	13 %	16 %

- **Legislation has the power to support IPv6 deployment** – institutions affected by government resolution have more than twice higher IPv6 support by web-servers than is the national average. The IPv6 deployment by public administration is quicker by public administration.
- Involvement of IPv6 criterion in various „**the best website**“ **competitions** has similar effect with minimum effort!

Conclusions



Although there are no free IPv4
address blocks in Europe, IPv6
deployment is still very low, both within
the public administration and business!

Contact



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