

Estonia takes a plunge?*

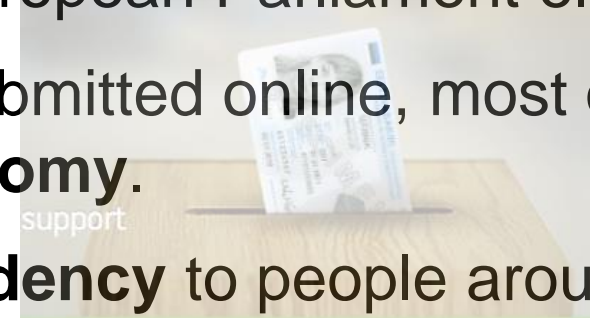
Global Forum 2014
17.11.2014, Geneva
Oliver Väärtnõu



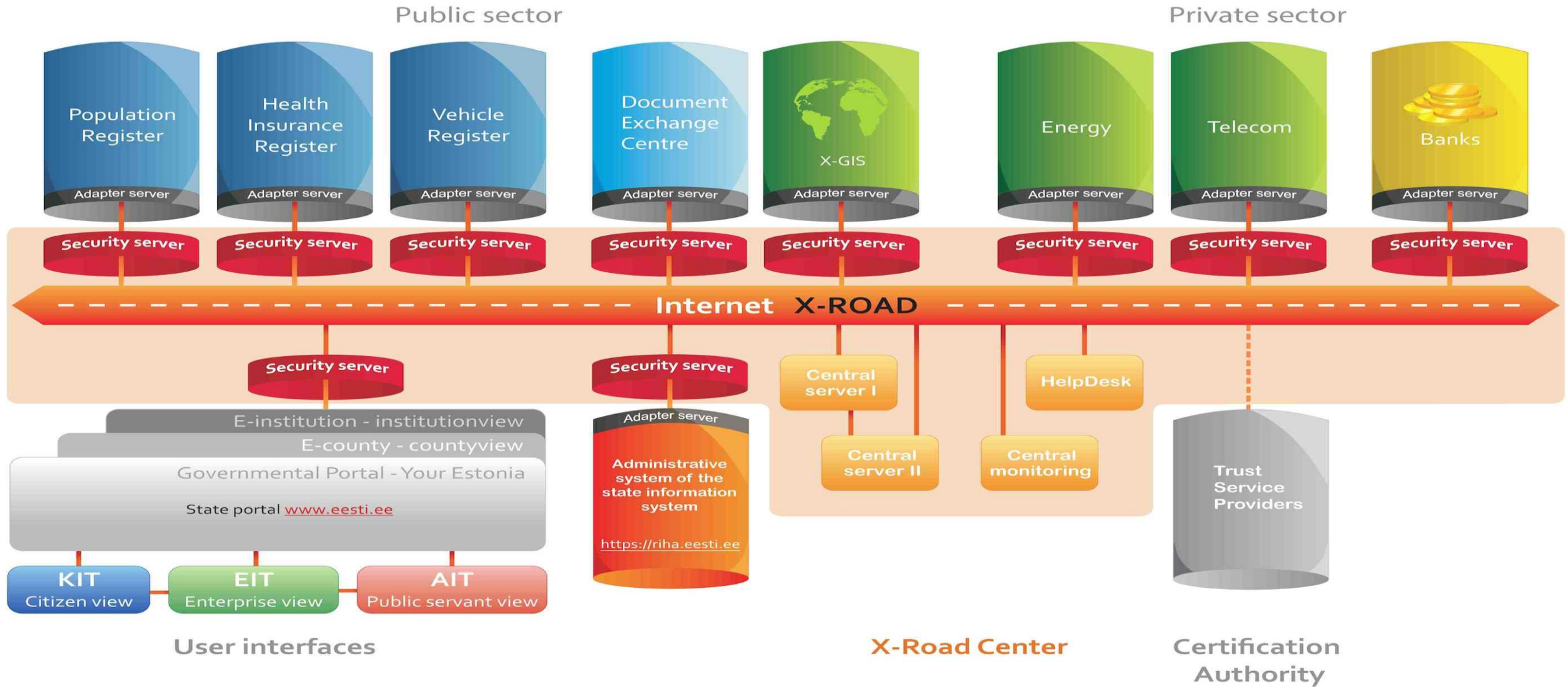
* Picture and headline taken from the Economist.

e-Estonia, brief background

- ⊙ Everybody has an **identity card**, which enables strong **authentication** and **digital signatures**.
- ⊙ 30% of voters **voted online** in the last European Parliament elections.
- ⊙ Over 95% of personal tax declarations submitted online, most of banking done online. Push towards **online digital economy**.
- ⊙ “Estonia is the first country to offer **e-residency** to people around the world, offering state-proven digital identities that give access to services like online banking, education, and healthcare.”
- ⊙ “Estonia sets up "**data embassies**" to allow the government to "operate in the cloud" even if physical territory is occupied.



X-road, Secure Communication Layer



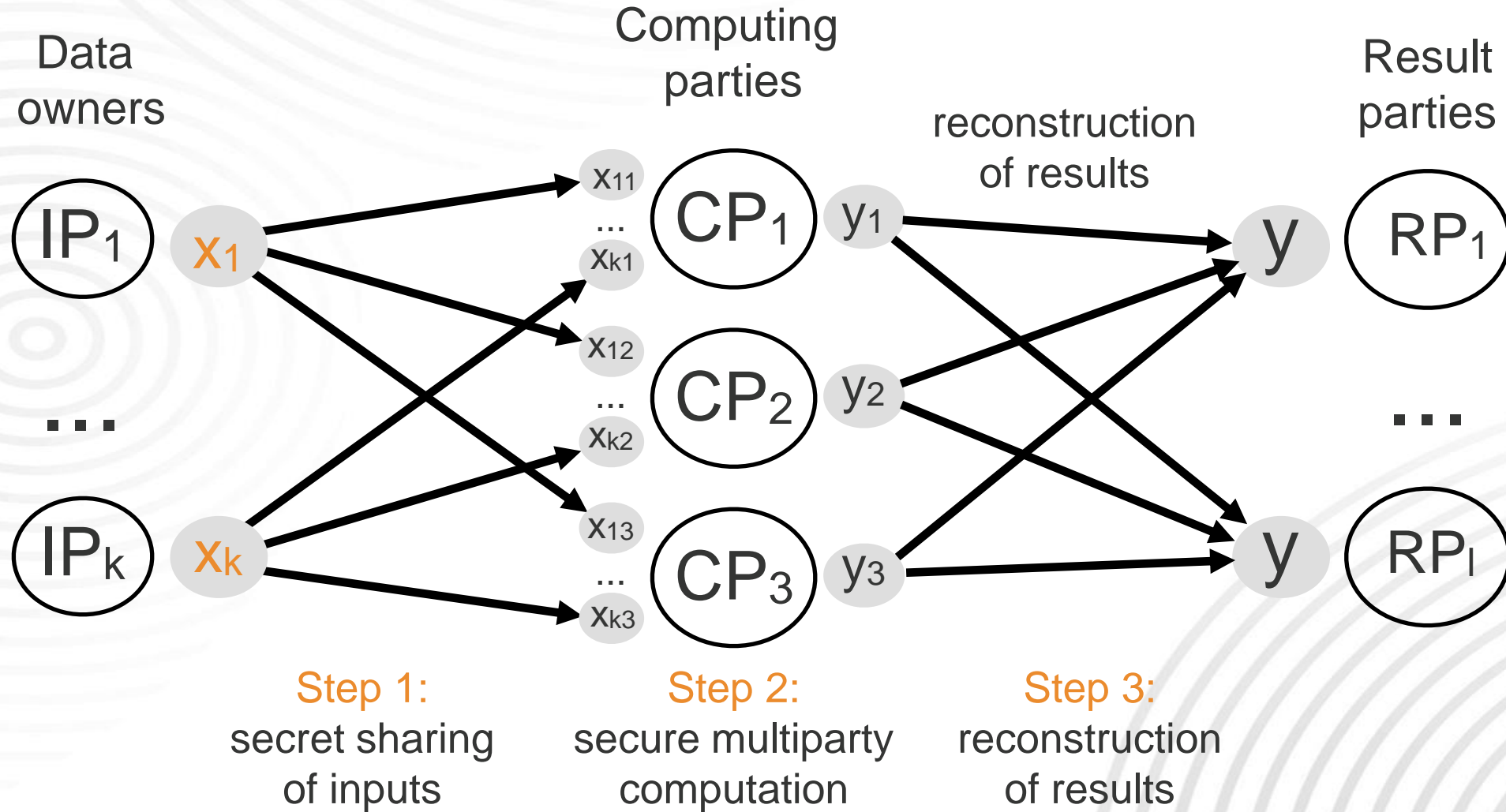
Origins of X-road, how it came to be...

- ⊙ **Many registries**, all very different, managed and developed **by different organizations and financed separately**.
- ⊙ Very many users, most of them were very small **organizations without security knowledge and with a very small IT budget**.
- ⊙ **Very high security requirements**. Registries contain personal data that is in some cases used to make high value decisions and in some cases needed in real time.
- ⊙ **Strong political support** to ICT innovations (PM Office), which also was supported by a strong legal base for e-government solutions. Estonians are receptive to technological change!

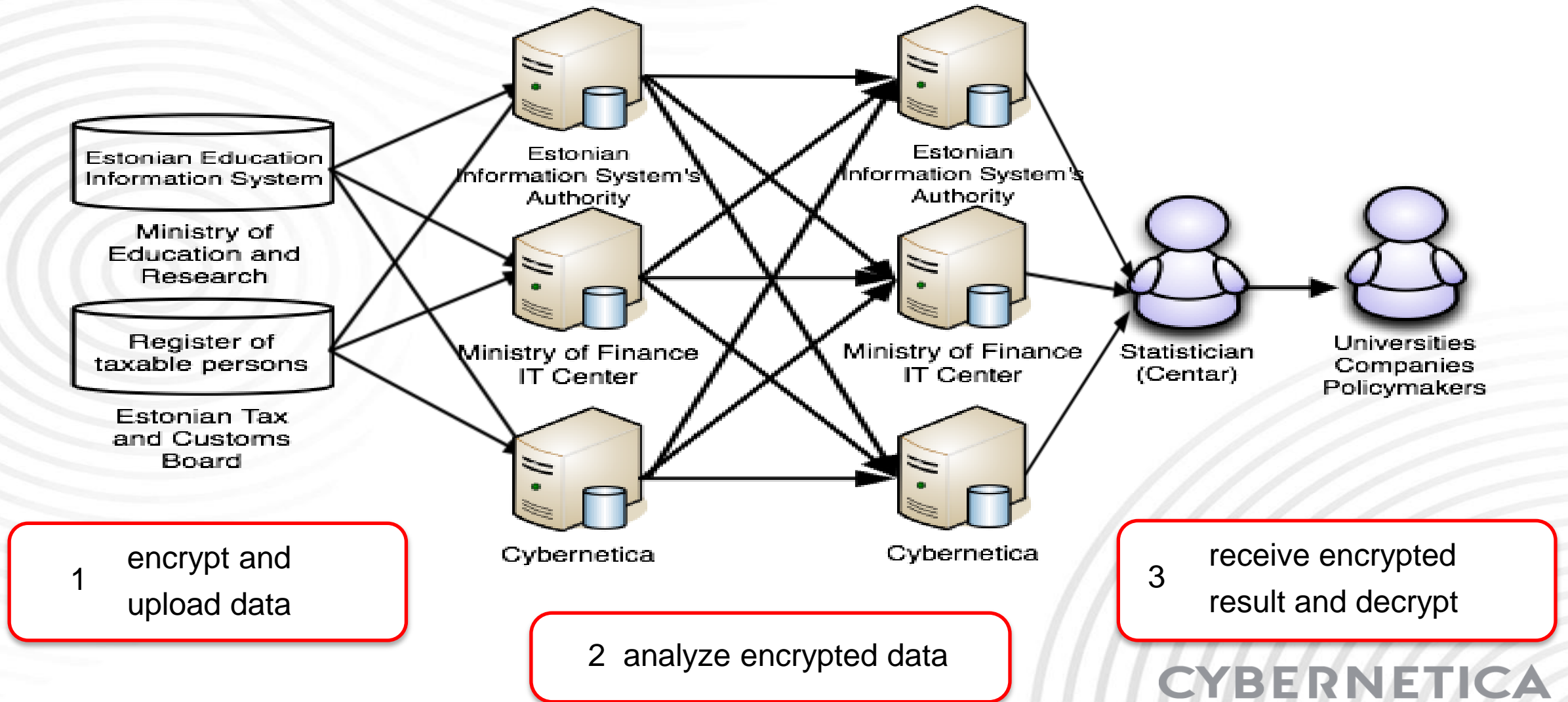
Today, we have achieved...

- ⊙ More than **160 databases offering services** via X-Road (producer certificates).
- ⊙ More than **3000 individual services** available.
- ⊙ More than **900 organizations** using X-Road daily (consumer certificates).
- ⊙ over **400 million transactions** per year
- ⊙ **12 years uptime**, 0 hours downtime
- ⊙ No incidents reported.

Secure computations via Sharemind



Analyzing confidential tax and educational data



The background of the slide features a series of concentric, light gray circles that create a ripple effect, centered around the text. The circles are more prominent on the left and right sides, fading towards the center.

Thank you for your attention!

oliver.vaartnou@cybernetica.eu
www.cybernetica.eu

Cybernetica AS
Mäealuse 2/1
12618 Tallinn
Estonia

CYBERNETICA