Cyber Security capabilities

FICORA's experience as a CERT & NRA

Finnish Communications Regulatory Authority
National Cyber Security Centre

World's safest networks?
— Mostly harmless at least

Businesses that have encountered IT security problems, 2010
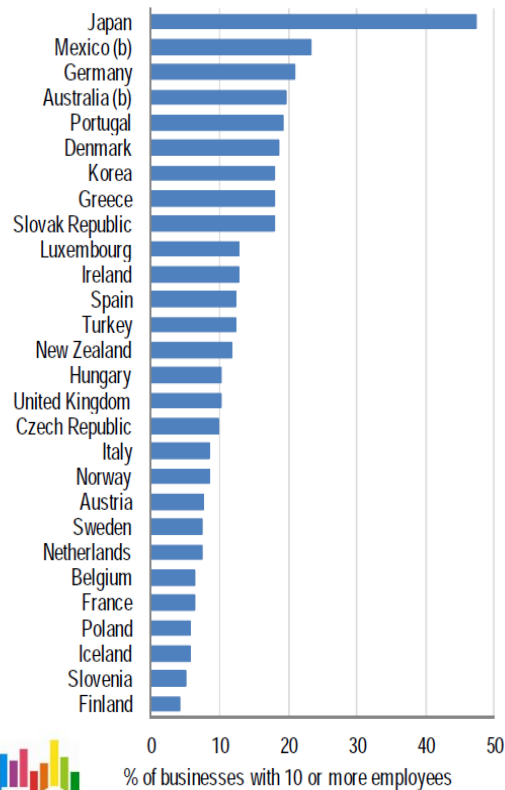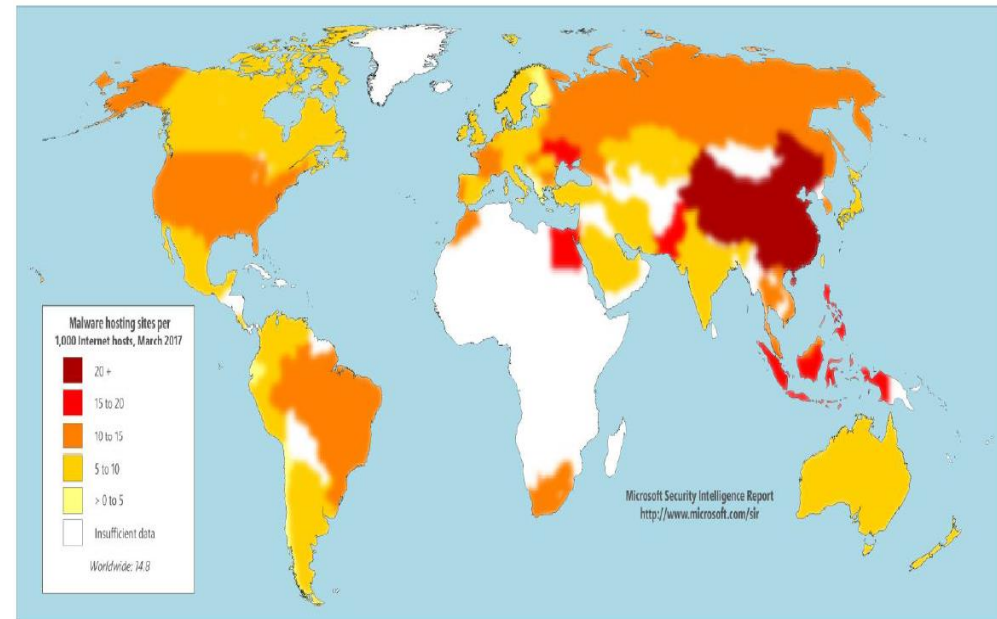

Figure 34. Malware distribution sites per 1,000 Internet hosts for locations around the world in March 2017
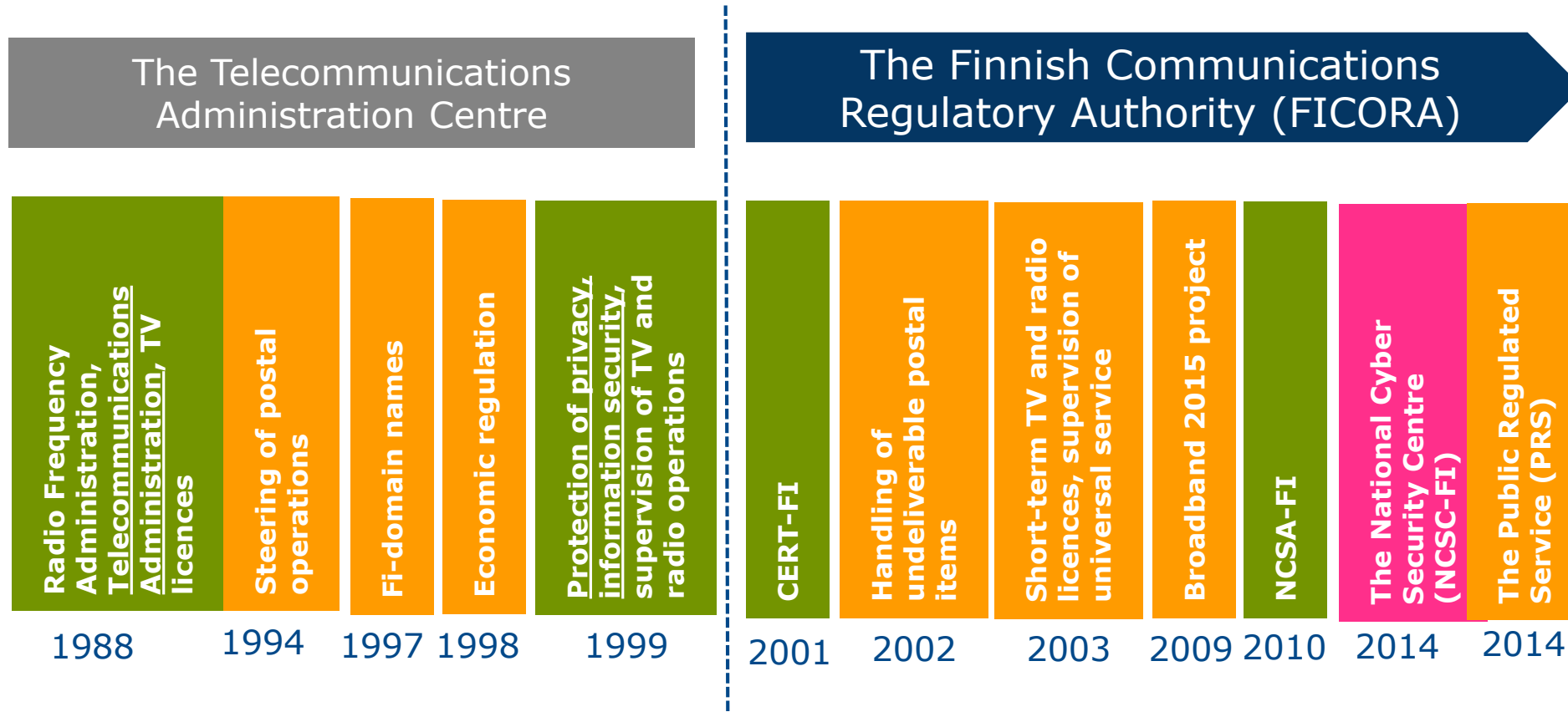

Microsoft SIR, March 2017: Locations with low concentrations of malware hosting sites included Finland (4.1), Taiwan (5.3), and Turkey (5.3).
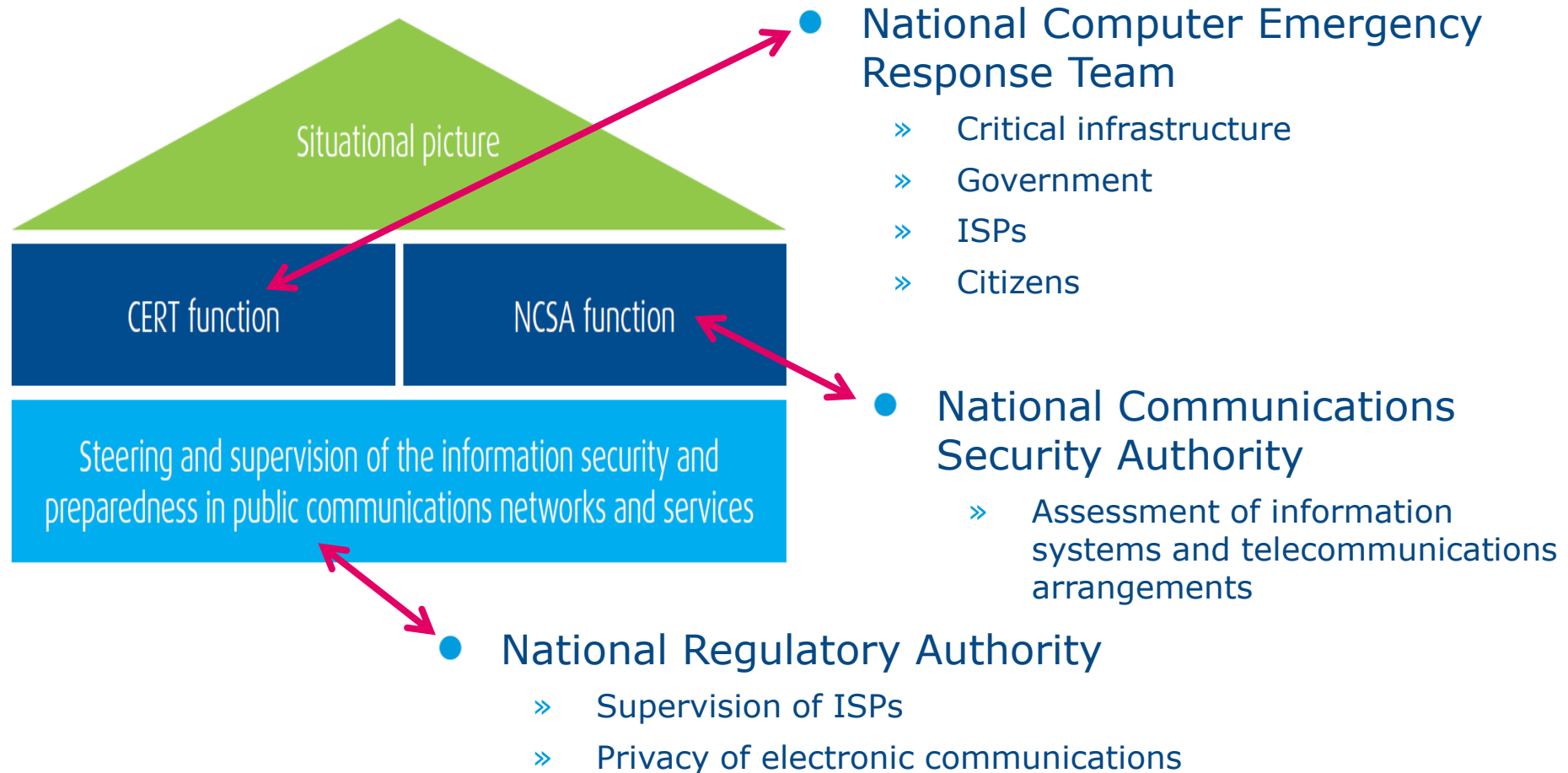
NCSC-FI as a department of FICORA

FICORA milestones

The Telecommunications Administration Centre

The Finnish Communications Regulatory Authority (FICORA)

Radio Frequency Administration, Telecommunications Administration, TV licences	Steering of postal operations	Fi-domain names	Economic regulation	Protection of privacy, information security, supervision of TV and radio operations	CERT-FI	Handling of undeliverable postal items	Short-term TV and radio licences, supervision of universal service	Broadband 2015 project	NCSA-FI	The National Cyber Security Centre (NCSC-FI)	The Public Regulated Service (PRS)
1988	1994	1997	1998	1999	2001	2002	2003	2009	2010	2014	2014

Different roles support creating situational awareness and providing services to different customers

- **National Computer Emergency Response Team**
  - » Critical infrastructure
  - » Government
  - » ISPs
  - » Citizens

- **National Communications Security Authority**
  - » Assessment of information systems and telecommunications arrangements

- **National Regulatory Authority**
  - » Supervision of ISPs
 - » Privacy of electronic communications

# An example of how CERT and NRA functions play together

- Autoreporter is one of our services
  - » Since 2006
  - » It automatically and constantly collects data on malware and information security incidents related to Finnish networks
    - "How Finland looks like from outside"
  - » Some information we get, is based on our status as the national CERT, and some information we get from our other friends
  - » The incidents are categorized, daily reports are compiled and sent to the network operators
    - Operators are obliged by law to take care of their information security
    - Legislation also gives operators rights to take action in order to preserve network and service security

In 2013 something happened

Autoreporter handled ~ 500 000 incidents
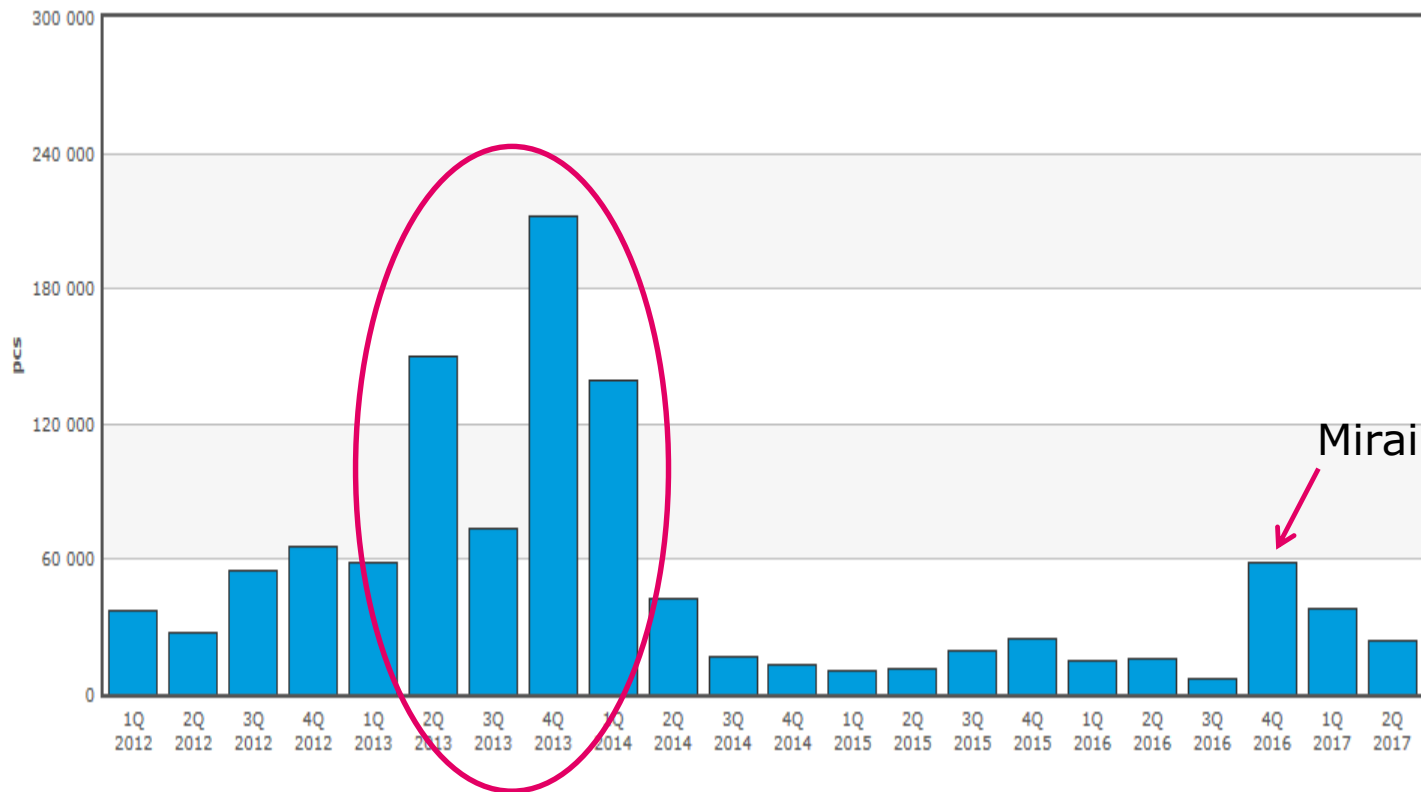
A study showed that something wasn't right with one of the ISPs
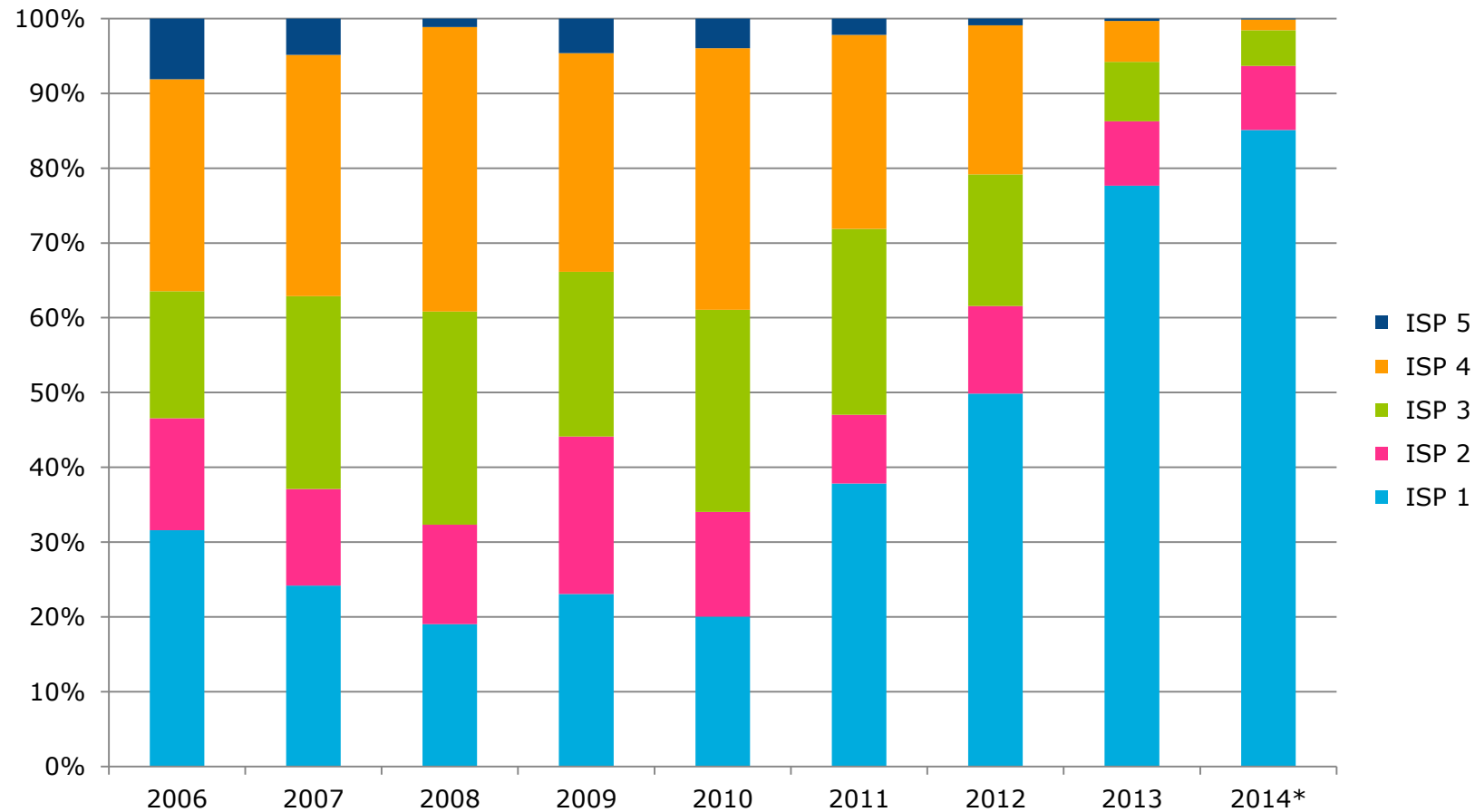
How we handled that?

- We invited the ISP to a meeting
  - » Showed what we had noticed
  - » Asked, why is that
  - » Discussed with the ISP what to do about the situation
- The ISP changed it's abuse processes
  - » We saw in Autoreporter change back to normal
  - » No administrative, regulatory intervention was needed
    - It is, after all, every ISPs own benefit to take care of their information security

Behind our success: Pure luck or something smarter?

Secret Sauce

- Yes, we are a regulator, but we see ourselves also highly as a service organization
  - » CERT and NCSA functions are easy for everyone to see as a service
  - » It is good to remember that also NRA serves the whole society
  - » Our mindset is to provide positive support to the community
    - Focus is, what can we give, not what we can get
    - Assistance first, compliance when storm has calmed

- Without data we're useless
  - » ISPs are obliged by law to report on specific incidents
  - » The rest tell us on voluntary basis
    - In practice, 99.9 % of all cases
  - » "World" expects us to mitigate the problem – "Finland" expects us to provide help

Behind our success: Pure luck or something smarter?

- Co-operation is essential
  - » Without a deeply networked community   we wouldn't be strong
  - » Sharing experiences and lessons learned creates a positive spin that will feed itself
  - » Will only function properly if a sufficient level of trust is established between the parties

- Information security legislation, sometimes seen as a restriction, is actually an enabler for us and the Finnish network owners
  - » Very strict law on privacy both at work & home, but also efficient tools for solving incidents

Secret Sauce

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@CERTFI
@KivekasHeidi

www.ncsc.fi
www.ficora.fi

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