

National eHealth situation in the Netherlands: history, status, future

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Me...

- Michiel Sprenger, PhD
- Clinical Physicist
- MRI, X-ray, radiotherapy
- Clinical informatics
- Free University MC, Amsterdam
- Joined Nictiz 2008
- Joined Eindhoven Technical University (part-time), 2010



Presentation Outline

- Introduction
- AORTA: national infrastructure
- Status 2012, decisions
- The way forward
- International collaboration
- Conclusions

Areas for IT in HC

- EHR, for professionals **within** institutions
- HIE, for professionals, **between** institutions
- Patient enabling: for **patients** and their relation with professionals

Today's main focus

- EHR, for professionals **within** institutions
- HIE, for professionals, **between** institutions
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Healthcare in the Netherlands

- Multi-enterprise business model:
- 100 hospitals, 4500 GP practices, 1800 pharmacies, 100 locum tenency services for GP's, each responsible for own finance, medical policies, investments, **and IT**
- **Thus: interoperability problems are large on all levels**
- → Urge for standards
- → Much debate ("polder"-model)



IT proliferation in the Netherlands

- Hospitals:
 - PACS 100%
 - HIS 100%
 - Clinical overview: 80%
 - Order management (CPOE): 30%
- General Practitioners: 100%
- Pharmacies: 100%
- Nursing homes: 10%

Nictiz

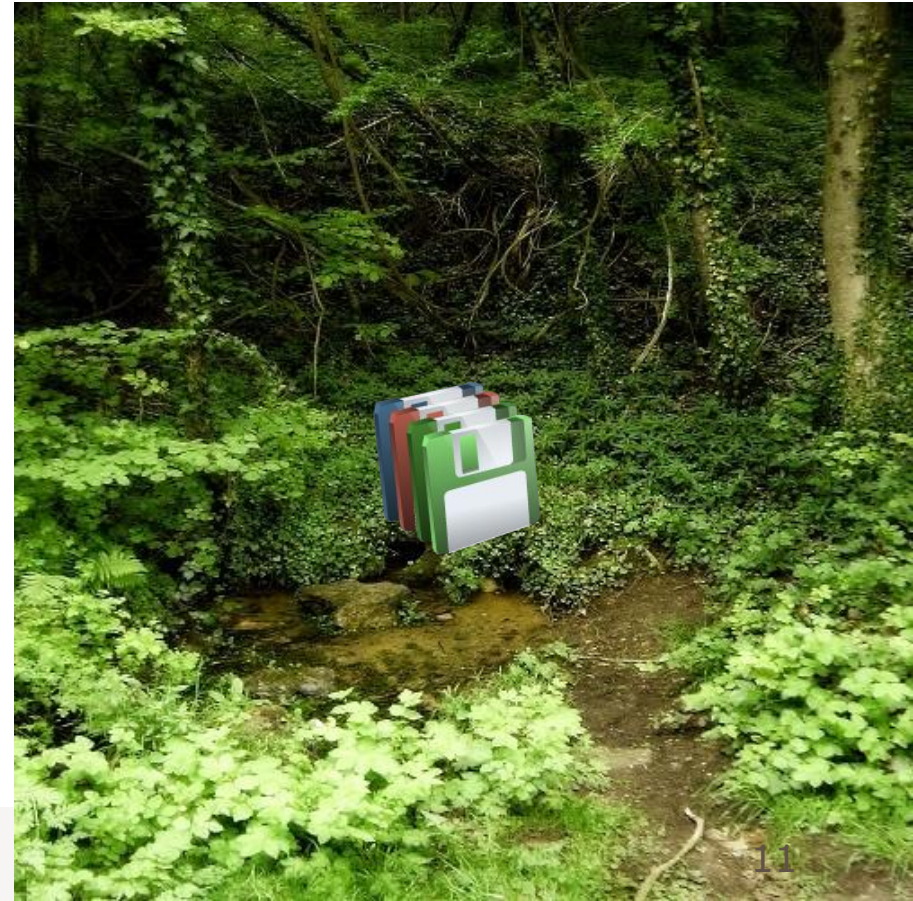
- Founded in 2002
- The national competence center for health IT
- ~100 fte (spring 2011)
- Tasks:
 - Define and maintain standards
 - Offer knowledge & advice
 - Build and run infrastructure (AORTA)
 - Develop care applications on infrastructure

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Upfront Choice for health IT (2002)

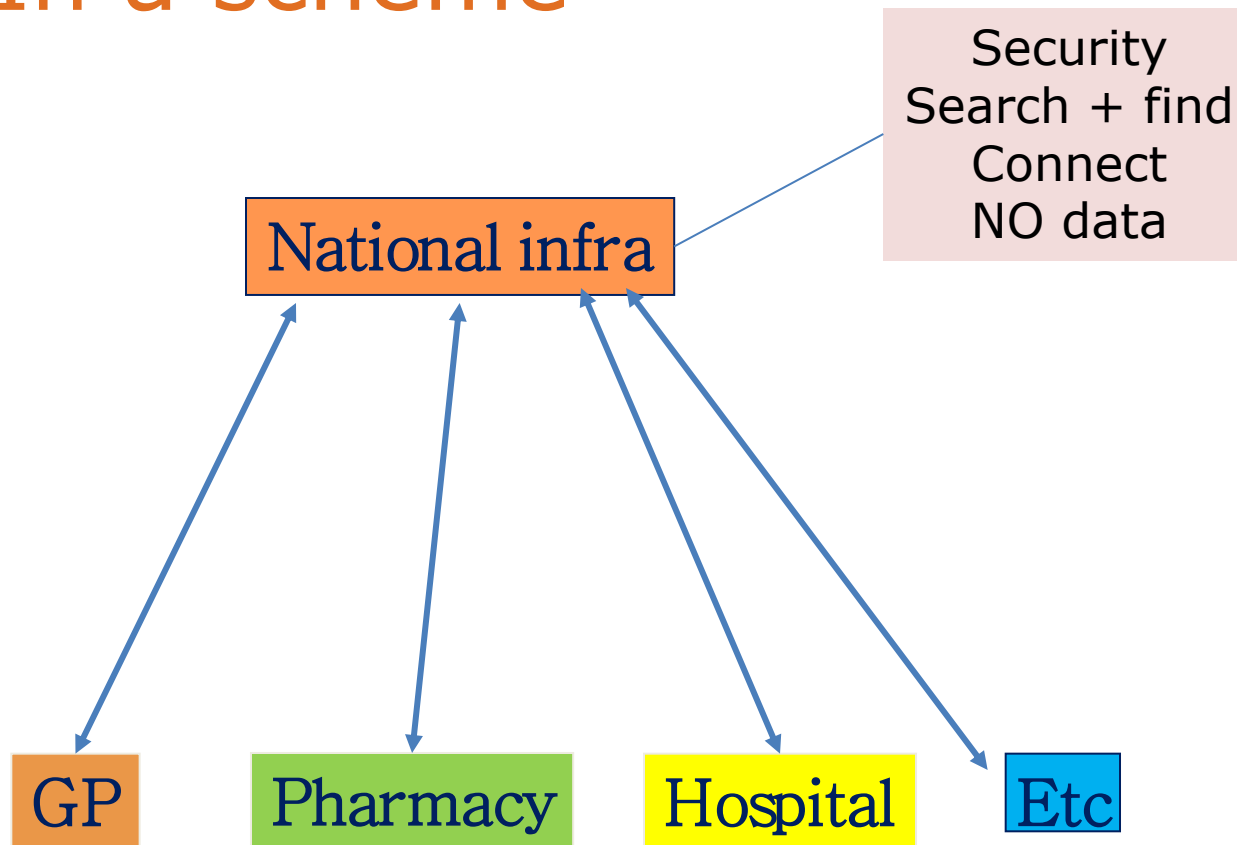
- Leave information at the source
 - Responsibility
 - Unambiguousness
 - Security
- Fits to business situation
- → Connectivity, not “system” building



Nationwide electronic patientrecord ("the EPD")

- It is not a **record**, nor a **system**
- It is an **infrastructure**
- Leaving information at the source
- In the (electronic) working environment of the Health Care Professional or Provider
- Under the responsibility of the source HCP
- Enabling **selective and safe** information exchange between HCP's and between HCP's and patients

In a scheme



- Standardized communication
- Safe communication
- Logging
- Identification: patients, HCP's
- Patient consent registration & handling
- Index function: search, find, transfer

- Per application area:
 - Model for cooperation in healthcare area
 - Information model
 - Technical model & standards
 - Qualification of systems
 - Authorization guidelines
- Bring into legislative framework
- Business model and plan

Standards

- **HL7v3** for messaging and clinical documents, CDA (www.hl7.org)
- **SNOMED-CT** for semantic unification
Systematized Nomenclature of
Medicine – Clinical Terms
(www.ihtsdo.org)
- **IHE** for implementation guidelines
Integrating the Healthcare Enterprise
(www.ihe.net)
- Many others

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Current situation – national infra

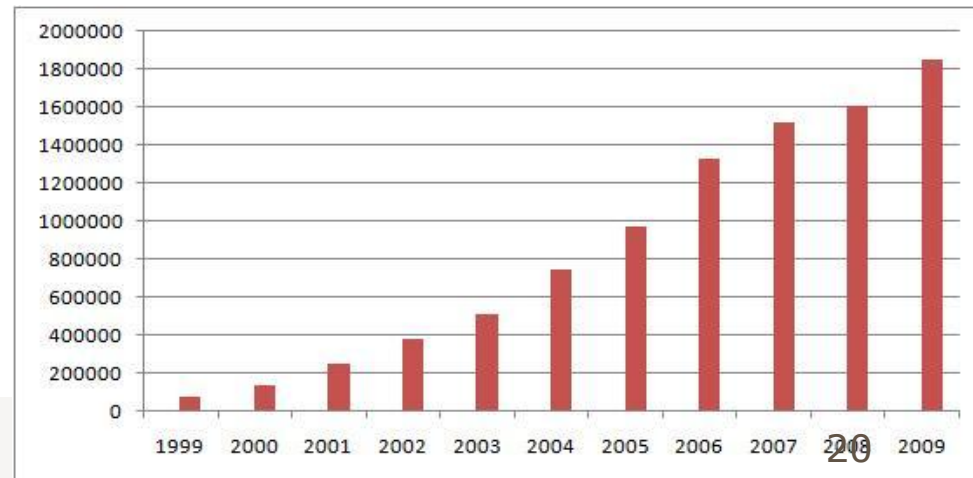
- AORTA: architecture + implementation
- Central hub (“landelijk schakelpunt”) in place
- Decentral software qualified for connection
- Connections (technical):
 - Pharmacies: >50%
 - GP practices: >50%
 - Locum Tenancy Services: >90%
- >8 million patients registered

Current applications

- Overview recently dispensed medication
- Patient summary for locum tenency GP's
- Under development:
 - Radiology
 - Lab
 - Pathology
 - Diabetes
 - Emergency
 -

Current situation – other

- 100M messages /yr, 6/inhabitant
- Medication, lab, discharge
- Growing, 18%/yr
- Old standards (Edifact)
- Safety is doubtful
- Not inter-connected
- But: initiative is important !



Current situation - legislation

- Existing legislation:
 - Privacy protection (WBP)
 - Treatment relation (WGBO)
 - Use of national citizen number in healthcare (BSN)
 - ..
- Extra: legislation for national exchange ("EPD-wet")

EPD-wet

- Rules for national infrastructure and role Nictiz
- Different patient consent procedure: opt-out possible in stead of opt-in
- Obligation to connect and deliver data (completeness guarantee):
 - Pharmacies
 - GP practices

Status legislation

- November 2008: letter to every household, for possible opt-out
- 450.000 opt-outs, 2.8%
- 2009-2011 various debates in
 - House of representatives ("tweede kamer")
 - Senate ("eerste kamer")



Debates in parliament

- Privacy #1 discussion, especially abuse by health care professionals
- Scale: “regionally is safer because smaller”
- Outcomes
 - patient access (watch who sees my data)
 - SMS notification to patients
 - More specific consent – non-consent
- House of representatives votes Yes, 2010
- Senate voted NO April 5th 2011



Consequences

- No law → not a real big operational problem
- But.. no law → no money (from ministry) → infrastructure is no longer public
- Split Nictiz into:
 - National infra operations with other financing
 - Knowledge and standards organisation partially financed from ministry: interoperability enabling, profiling, etc

Decision forward

- From April 11, 2011 uncertainty
- October 26, 2012: decision and agreement with many parties
 - AORTA in private hands (users)
 - Financially made possible by the insurance companies
 - OPT-in for patient consent
 - Separate from Nictiz
 - Led by VZVZ, a new association



Ministerie van Volksgezondheid,
Welzijn en Sport

Better healthcare
through better IT

Nictiz

NRC, 8-11-2012

Uw medische gegevens elektronisch delen?

Alleen met uw toestemming!

Elektronische uitwisseling van medische gegevens

In de afgelopen jaren is gewerkt aan de invoering van de landelijke elektronische uitwisseling van medische gegevens via de zorginfrastructuur (voorheen het landelijk elektronisch patiëntendossier). Via dit systeem kan de zorgverlener (zoals huisarts en apotheek) die u behandelt, uw actuele medische gegevens opvragen en inzien.

Per 1 januari 2012 is de verantwoordelijkheid hiervoor van het ministerie van VWS overgedragen aan de Vereniging van Zorgaanbieders voor Zorgcommunicatie (VZVZ). Deze organisatie heeft in overleg met de belangenorganisatie van patiënten (patiëntenfederatie NPCF) afgesproken het systeem voor elektronische uitwisseling van medische gegevens zonder steun van de overheid voort te zetten.

Alleen met uw toestemming

Vanaf 1 januari 2013 worden alleen nog gegevens uitgewisseld van degenen die hiervoor toestemming hebben gegeven aan hun zorgverlener. Als uw zorgverlener is aangesloten bij het systeem dan zal hij u vragen of u ermee instemt dat uw gegevens kunnen worden uitgewisseld. U kunt uw toestemming altijd weer intrekken. Bent u in de afgelopen

jaren door uw zorgverlener aangemeld bij de zorginfrastructuur? En heeft uw zorgverlener u voor 2013 nog niet om toestemming gevraagd? Dan kunnen uw gegevens vanaf 1 januari 2013 niet meer worden uitgewisseld via de zorginfrastructuur. U kunt ook na 1 januari 2013 nog toestemming geven. Uw gegevens mogen dan worden uitgewisseld vanaf het moment dat u toestemming hebt gegeven.

Meer informatie

In de folder 'Uw medische gegevens elektronisch delen? Alleen met uw toestemming!' vindt u uitgebreide informatie. Deze folder vindt u op de website www.vzvz.nl/informatiepunt, op www.rijksoverheid.nl en in de praktijk van de deelnemende zorgverleners. Voor vragen en meer informatie kunt u ook telefonisch contact opnemen met het Informatiepunt voor Zorgcommunicatie, telefoon 070 - 317 3456.

VERENIGING
VZVZ
ZORGAANBIEDERS VOOR ZORGCOMMUNICATIE

Lessons learned

- Decouple standardisation from implementation
- Scale on the right level:
 - **Organise** regionally (where cooperation in healthcare really is)
 - Scale **infrastructure** as large as you can
 - **Standardise content** nationally and EU-wide if you can

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New profile Nictiz

- Knowledge & advice
- Promoting the process of interoperability
- Quality of IT solutions / monitor implementations
- Coordination
- ~40 fte

Knowledge & advice: 5 areas for Nictiz

1. Organise events, meetings, classes
2. Answer questions and build knowledge database
3. Organise partner programs
 - Hospitals
 - Regional networks
 - ...
4. Measure & publish on national situation
5. Connect to international community



Promoting interoperability

- Bring groups together:
 - Health care providers
 - Regional organizations
 - Software industry
 - Knowledge centers
 - SDO's
 - Profiling organizations (IHE, Continua)
- Construct profiles
- Test interoperability
- Monitor implementation

Role of Nictiz

- Standardize **content** on national level
- Support transparency between **infrastructures**

Content

- Re-use AORTA HL7v3 messages in different context / infrastructures
- Develop CCR/CCD based “standard data set” for the Netherlands
- Etc:

Infrastructures

- Support running infra's:
 - OZIS clusters (Edifact)
 - Secure messaging
- Support independent AORTA based "national" infrastructure
- Support development of XDS based affinity domains, make transparent (radiology, cardiology, others)

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International collaboration

- epSOS: cross-border interoperability pilot
- ANTILOPE: unification in Europe on interoperability definitions and testing
- Watch and assist in EIF development from EU

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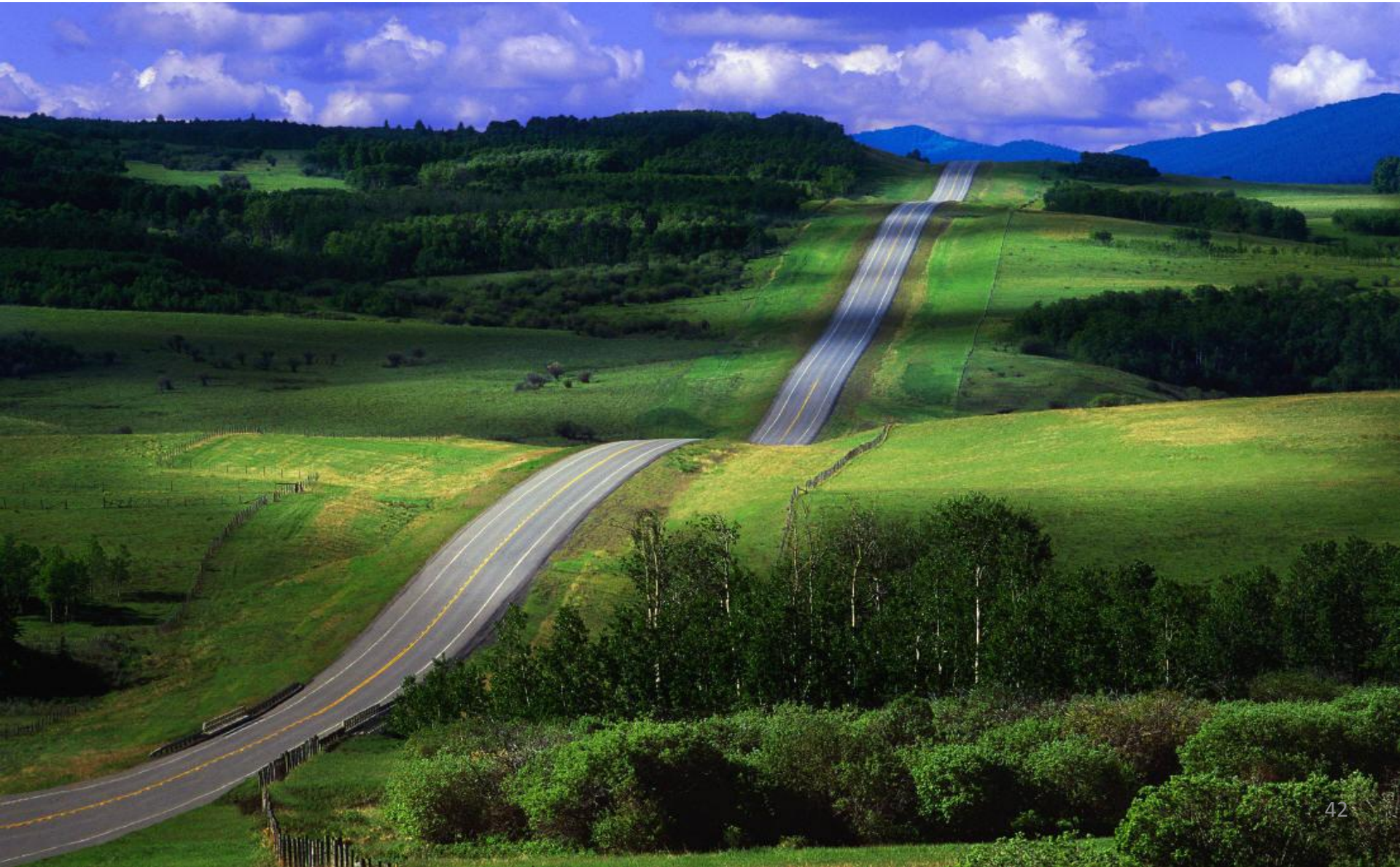
Over-all conclusions in NL

- Technology is NOT the solution
- Decouple standardisation from infrastructure (development, implementation and operation)
 - Scales are different
 - Kills the independence, and thus hampers interoperability
 - There is always more needed (than in one infrastructure available)

Conclusions in the Netherlands (2012)

- Build one competence center that
 - Offers knowledge & advice
 - Coordinates
 - Stimulates
 - Fosters consensus processes
 - Publishes and maintains consensus outcomes
- But does NOT build one particular solution





further information...

- www.nictiz.nl
 - Plans, activities, newsletters
 - Project-info Nictiz / Nationwide
 - Standards
 - Reports
- www.epsos.eu
- sprenger@nictiz.nl

