

# Linked Open Data for Open Government

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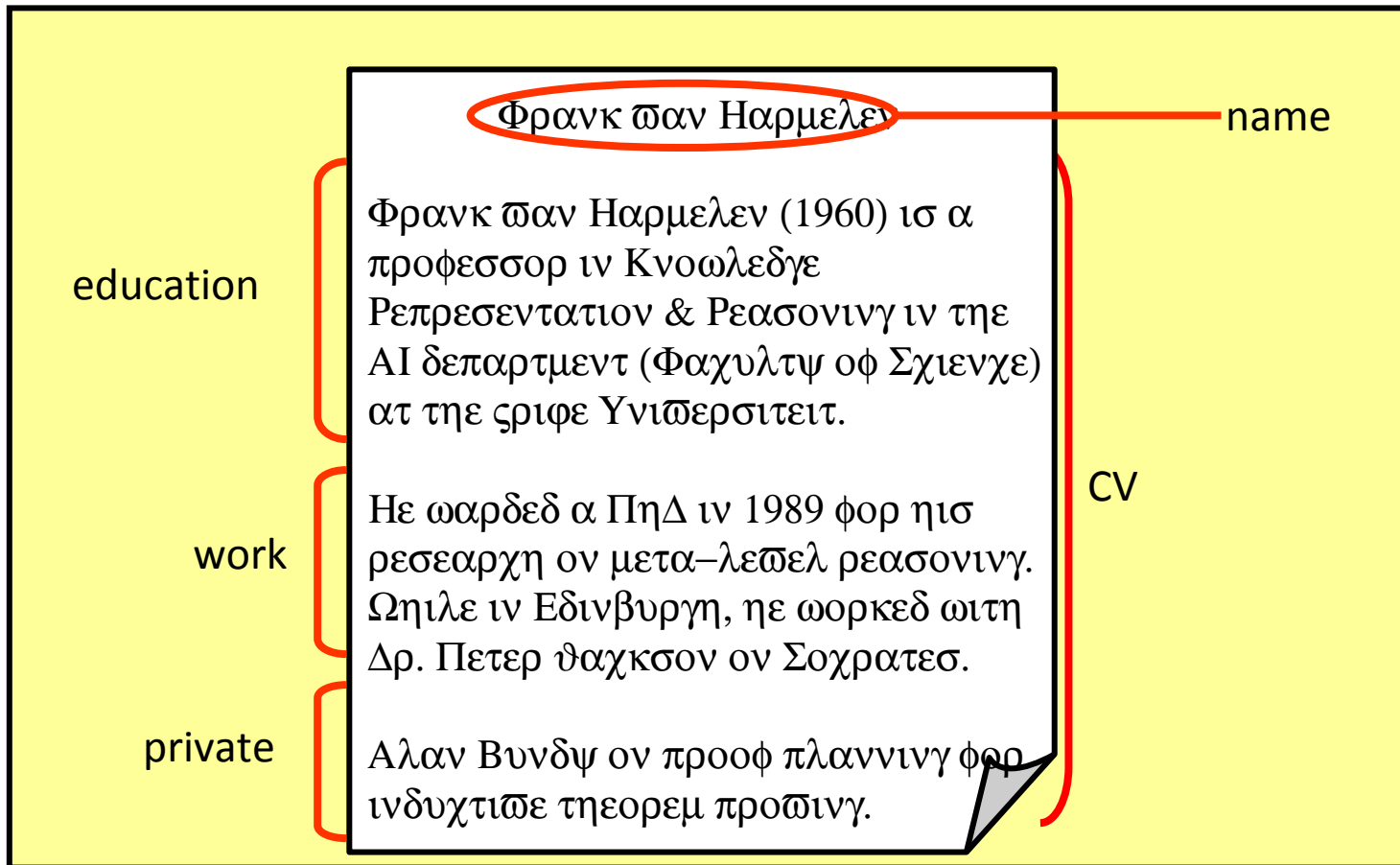
*vrije* Universiteit

# Linked Open Data

1. What is LOD: Semantic, Linked, Open
2. Uptake of LOD
3. Overheid & LOD
4. How to get there from here

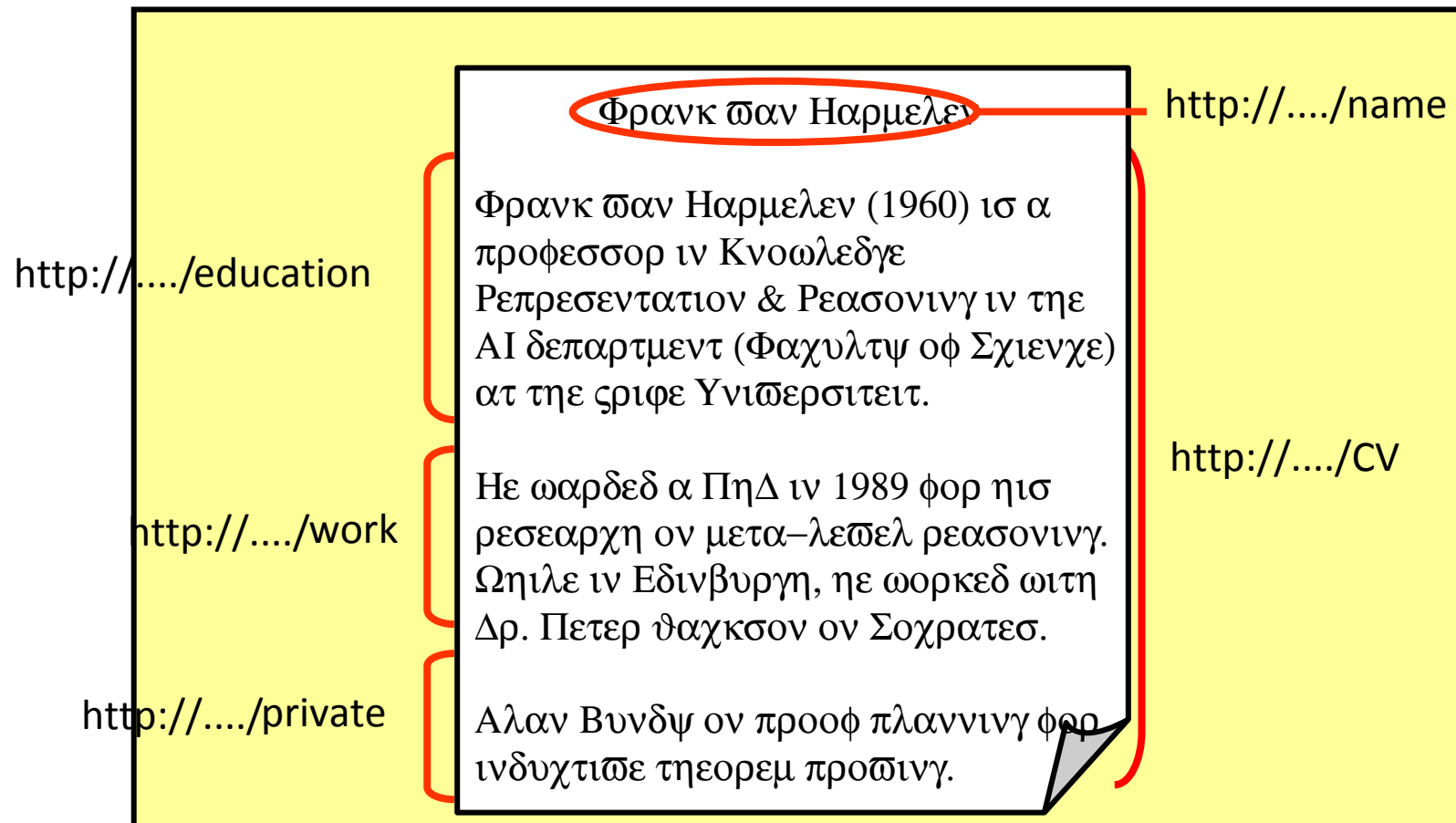
# Semantic, Linked, Open

What does it feel like to be a computer?



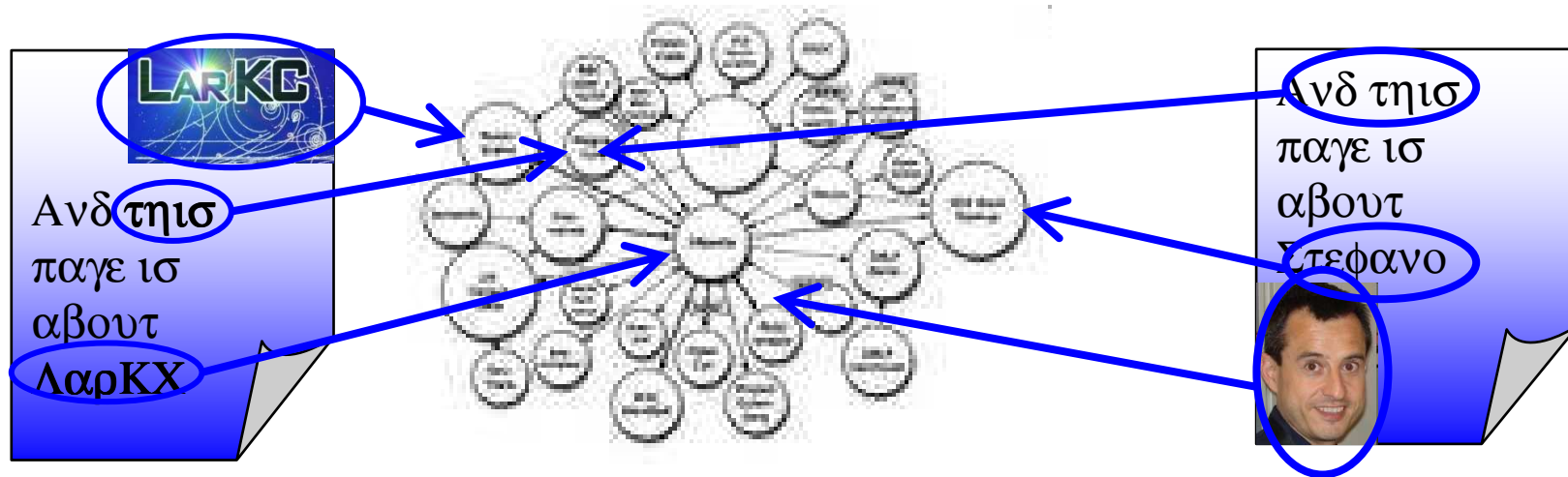
# Semantic, **Linked**, Open

What does it feel like to be a computer?



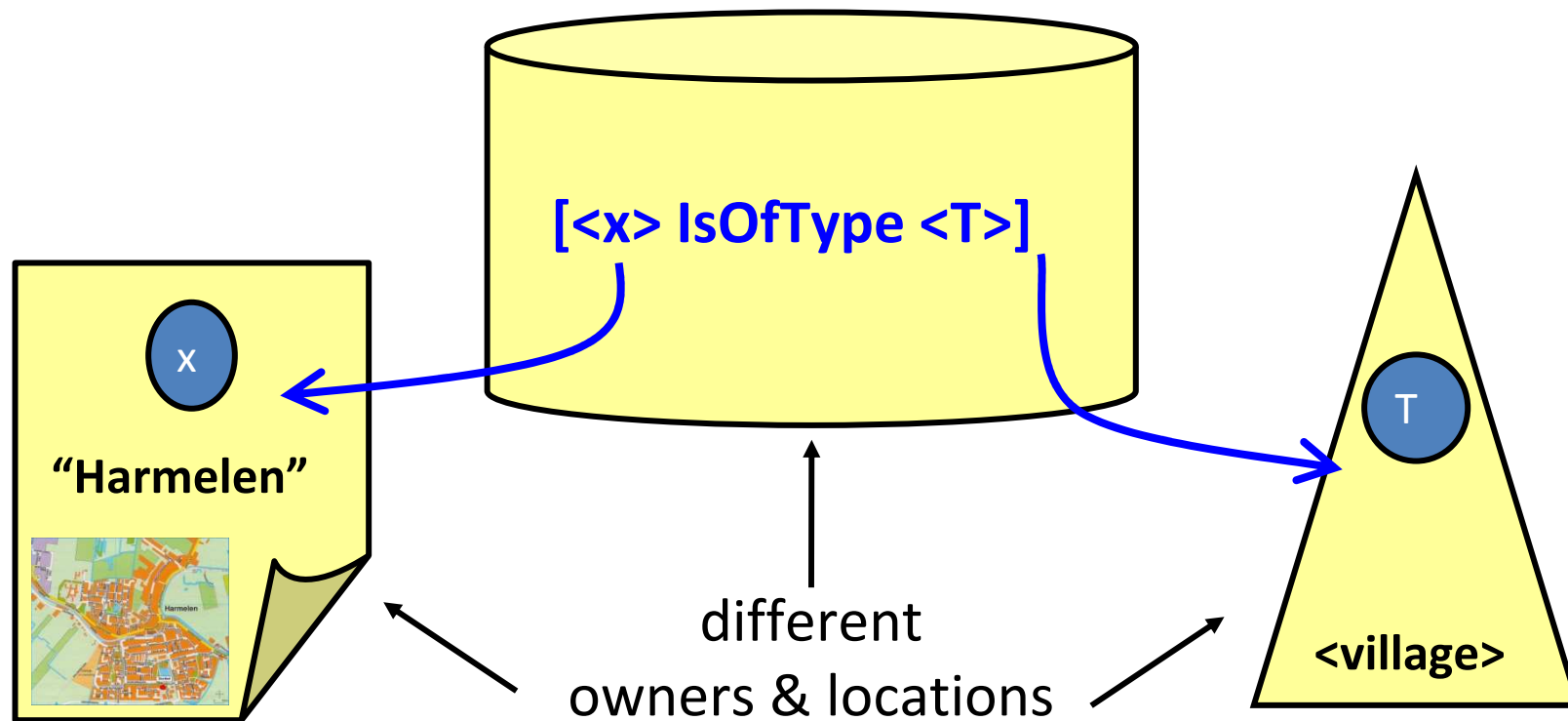
# Semantic, **Linked**, Open

On the Web,  
anybody can link to anything



# Semantic, **Linked**, Open

On the Web of Data,  
anybody can say anything about anything



# Semantic Web Recipe

1. Give all database items a (web-)address
2. Give all database relations a (web-)address
3. **Link** database items to shared vocabularies  
(each term in the vocabulary has a web-address)
4. **Link** between items in different databases
5. **Link** between terms from different vocabularies

# Semantic, Linked, **Open**

## Data Formats

Open Standards, Web-enabled: XML, RDF

## Communication Protocols

Open Standards, Web-enabled: HTTP, SPARQL

## Shared vocabularies

- FOAF for social relations
- GeoRSS for geospatial data
- Dublin Core for documents
- COVO for statistical datasets
- SKOS for categories & concepts

You choose....  
Fact or Fiction?



# Fact or Fiction for [overheid.nl](http://overheid.nl) ?

## Status in US: [data.gov](http://data.gov)

in one year

- growth from 47 datasets to 250.000 datasets from 250 agencies
- 200+ applications built by third parties
- 97.6 million hits, but much of it not in RDF, not web-enabled

Students of RPI in 8 months:

web-enabled 6.4 billion facts, created applications for:

- plotting postal service expenditure against performance
- plotting wildland fires against agency budgets (effectiveness)
- uncover interstate migration from tax forms
- plot family income against medicare claims
- compare agency budgets across three public budget datasets
- plot social networks of people visiting the White House

# Fact or Fiction for overheid.nl ?

## Followers from data.gov

6 Other nations establishing open data

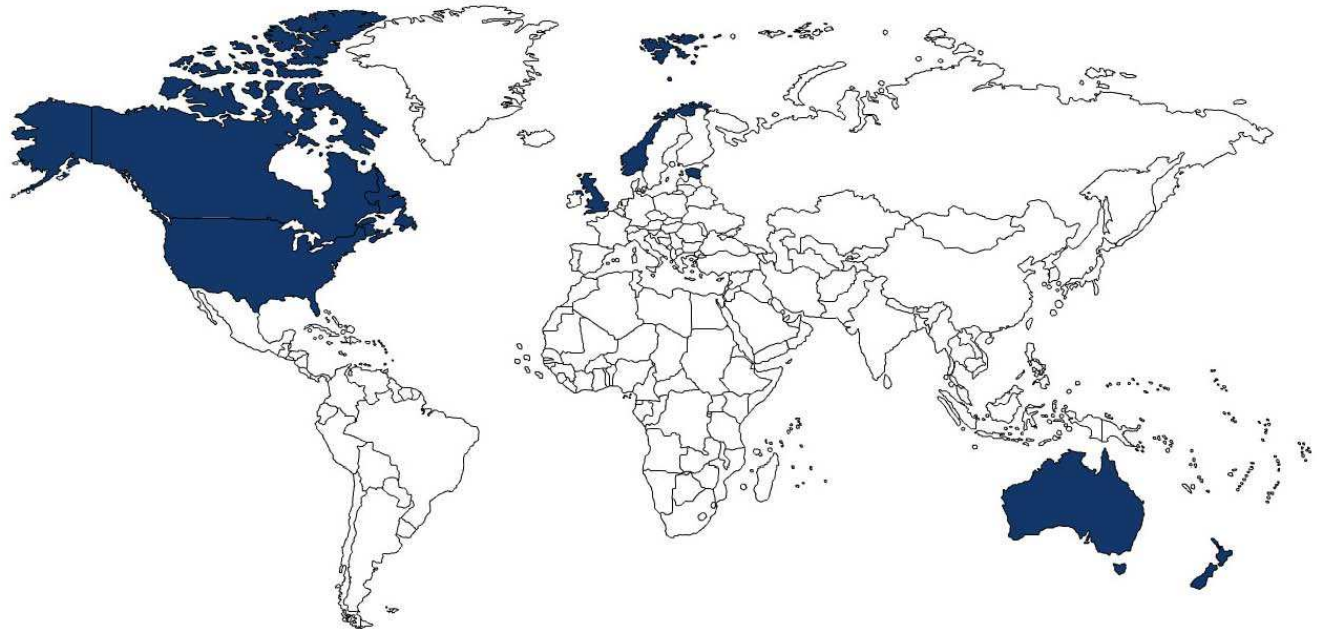
Canada, Ireland, Norway, Australia, New Zealand

8 States now offering data sites

California, Utah, Michigan, Massachusetts, Washington, ...

8 Cities in America with open data

San Francisco, New York City, Austin, ...



# Fact or Fiction for overheid.nl ?

## Status in UK: [data.gov.uk](http://data.gov.uk)

started in early 2010 with 3000 datasets

faceted search

include Ordnance Survey data

- map safety of bicycle routes
- inform home buyers about their new neighborhood.
- school finder (UK, NL)
- nursery finder
- pollution alert
- fix my neighbourhood
- regional expenditure map
- <http://www.wheredidmytaxgo.co.uk/>

# Fact or Fiction for overheid.nl ?

## Who's next?

already data at the World Bank: [data.worldbank.org](http://data.worldbank.org)

informal initiatives in Scotland, Austria, Germany, Denmark, ...

informal initiatives at the European Commission:

Eurostat [ec.europa.eu/eurostat/](http://ec.europa.eu/eurostat/)

European tendering [ted.europa.eu](http://ted.europa.eu)

Semantic Interoperability Centre [semic.eu](http://semic.eu)

# How to get there from here?

- ★ **put your data on the web at all:**  
any format, anywhere  
(get around the social issues, organisation, burocrazy, etc)
- ★★ **use a machine readable format**  
(avoid PDF or a scanned fax)
- ★★★ **use an open format**  
(eg csv, no proprietary format like excell)
- ★★★★ **give a URL for each of your data items** (eg: “city”)  
and to each of your data-properties (eg: “population”)  
(enables people to point to it)
- ★★★★★ **link out to shared vocabularies**  
(by “city”, I mean the same as when they say “city”)

Op de agenda van Obama & Brown !



Op de agenda van Rutten ?

