Dutch Open Data on Agriculture

Policy, Practice, Pilot applications

Paris, 18 June 2014, Tim Verwaart

LEI
WAGENINGEN UR

Context of this talk

- A project for the Dutch horticulture sector
- Exploring the opportunities of Open Data
- Aiming to advance market orientation
- Using a common e-infrastructure
- For data collection and data integration
- Presenting the data as Linked Open Data

Project partners:

LEI WAGENINGEN UR

TNO innovation for life

vrije Universiteit amsterdam

Greenport Digital

Content

- Dutch Open Data policy

- Practice: available open data on agriculture

- Information needs of growers and traders

- e-infrastructure for data collection and data integration

- Planning

- Research Questions

Dutch Open Data policy

Conclusions of the National Audit Office (March 2014)[1]

- Government policy: all data must be open, unless...
- Open Data are the norm, but not the practice
- Mostly open data are about what the government knows
- Should also be about what the government does
- Overview is lacking → create an infrastructure
- Create legislation: oblige authorities to actively open data
- Stimulate application of open data (create on ODI)

[1] http://www.rekenkamer.nl/Publicaties/Onderzoeksrapporten/Introducties/2014/03/Trendrapport_Open_data

Agricultural open data in NL

- GIS community is most active
  - www.geonovum.nl
  - Available, for instance:
    - Topographical map
    - All agricultural plots
- CSO: #holdings per township
- Spaceoffice.nl: satellite images
- ctgb.nl (pesticide authority):
  - All admitted pesticides
  (but not in open data format)
- Regional land use plans
- Townships: permits
- NVWA: rules for agrifood import per country, worldwide

Some issues

- International competition
  - Open is fine, but just for us

- Currency: what the sector would like:
  - Outlook on imports and exports e.g.
    - imports expected in Rotterdam
    - product lots qualified for export
  - Current agricultural plot data
  - Current agricultural census data

- Some data is available, but not for free
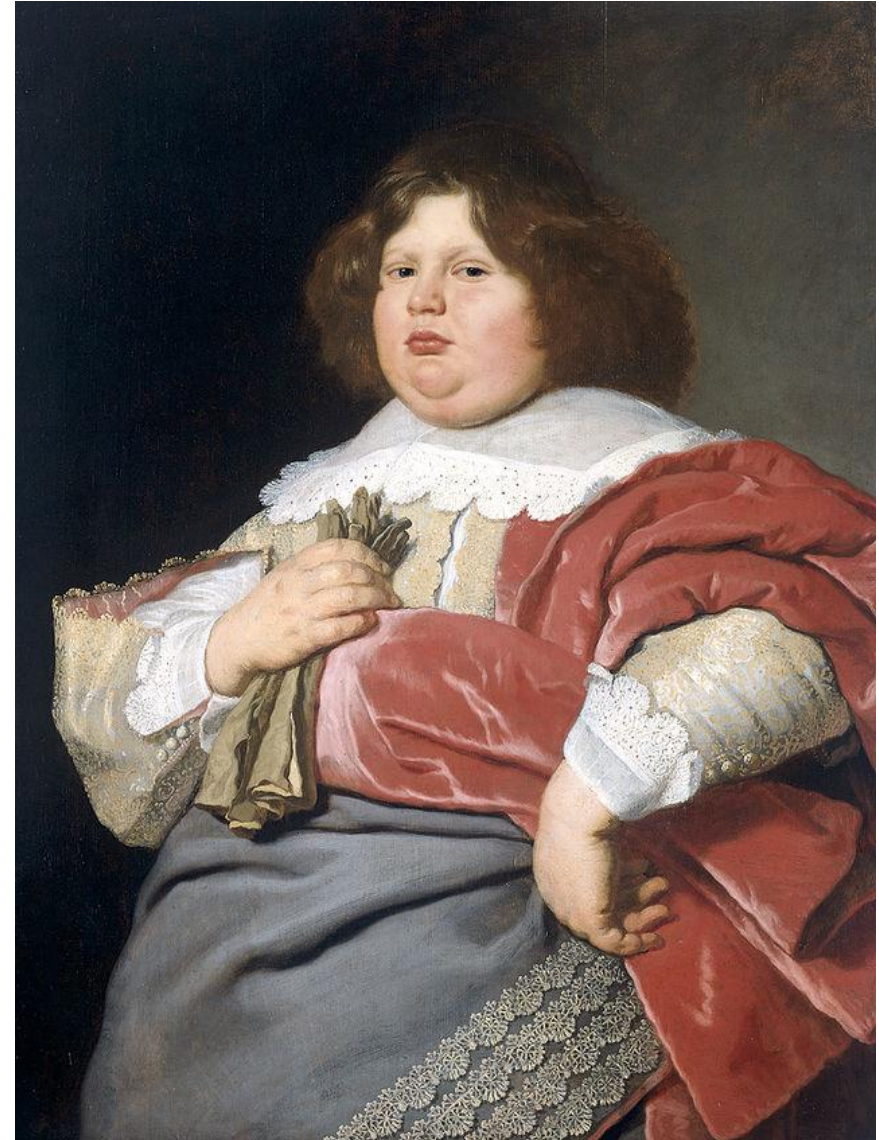 - e.g. land register data on buildings

Information need

- Current information
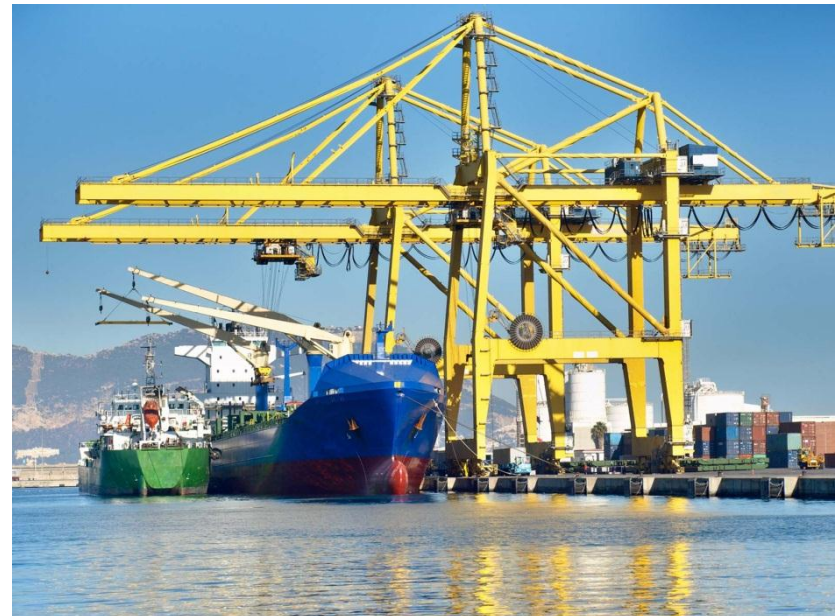- More detail w.r.t. product and region
- Consumer data

- Listen to the consumer
- Facts and opinions
- Available on Social Media
- Discover:
  - Topics
  - Trends
  - Alerts

What supply is expected?

- Listen to Open Data sources
- Cropping plans
- Import declarations
- Export licences
- Transport data
- Weather forecast
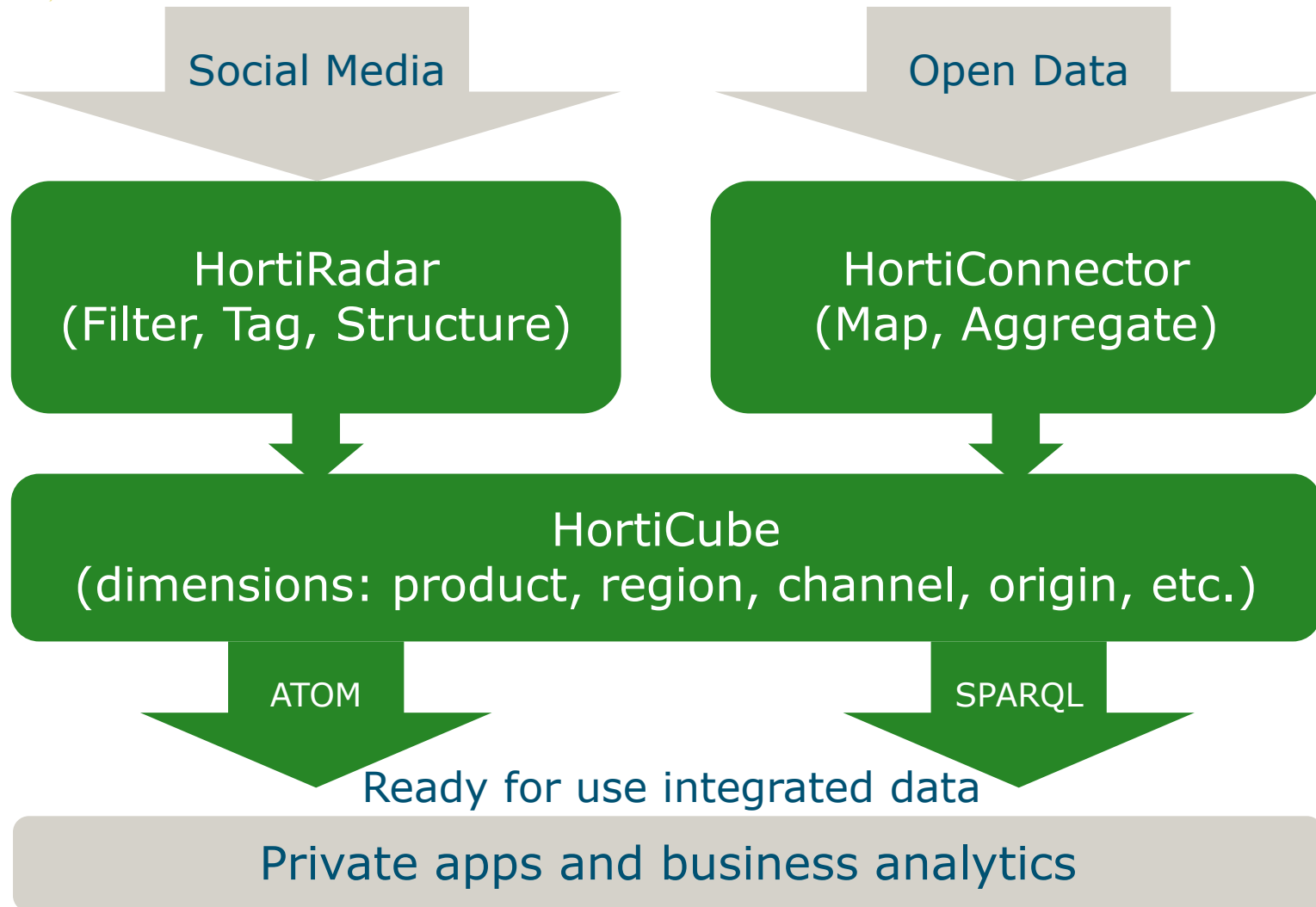- Domestic & foreign markets

Project vision

- A common e-infrastructure
- For market data collection
- By growers and traders
- Pre-compatitive
- Standard interfaces
- No analysis, just data

Pre-competitive e-infrastructure

Social Media

Open Data

HortiRadar
(Filter, Tag, Structure)

HortiConnector
(Map, Aggregate)

HortiCube
(dimensions: product, region, channel, origin, etc.)

ATOM

SPARQL

Ready for use integrated data

Private apps and business analytics

Planning

- Pilots in 2014:
  - Top 10 products Twitter in Dutch
    (fresh fruits & vegetables and flowers & plants)
  - Early reports on areas and seed usage
    (onions and ornamental crops)
- Develop full prototype of the e-infratructure in 2015-2016
- Additional pilot applications
- Supported by a consortium:
  - Traders and farmers org's
  - FFV and ornamental

Research questions

ICT:
- Semantic technologies based filtering and sentiment analysis of Social Media
- Complex Event Processing in Social Media en Open Datadata flows
- Actionable representation of metadata on sources and mapping processes
- Intelligente methoden for dynamic privacy protection in Open Data flows

Content:
- Intelligent integration of statistics and Open Data flows (predict statistics)
- Combined use of product information and geo-tags to integrate data
- Datarepresentation standards and mapping of product taxonomies, etc.
- Use of crowd sourcing to create mappings

Legal and governance:
- Legal issues on data use, privacy, and competition
- Governance and decision making on content and standards
- Organization of a "trusted party" to manage data quality and data protection
- Business model exploitation and extension of the e-infrastructure

Innovation network development:
- Current and desired data awareness in the sector
- Living labs to develop awareness and innovation networks
- Integration with private ERP systemen
- Relationships between trends/events across dataflows

Discussion?