Digital technologies for data collection and management

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Data collection and management for policy analysis and research: context

- Changing demands for information
  - societal expectations and policies
- Changes in the sector
  - structural change
  - ICT developments

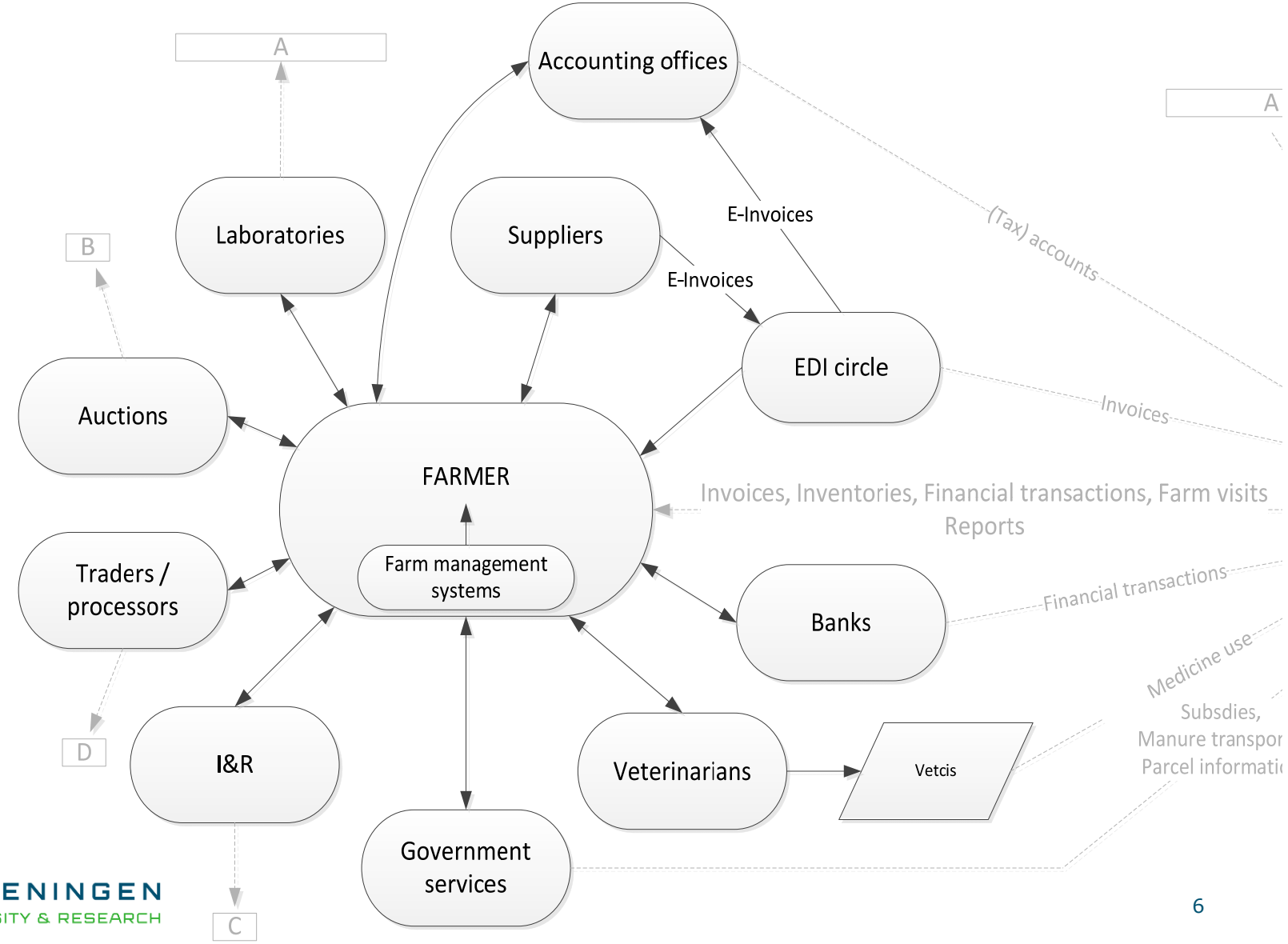
SDG's, Paris' Climate agreement: new policy goals asks for new data

- European policies are (being) adapted:
  - Common Agricultural Policy: Cross Compliance, Greening
  - CAP Rural development: innovation, risk management, viability, sustainability)
  - Nitrate directive; Water directive
- Policy evaluation has a need for data on these topics

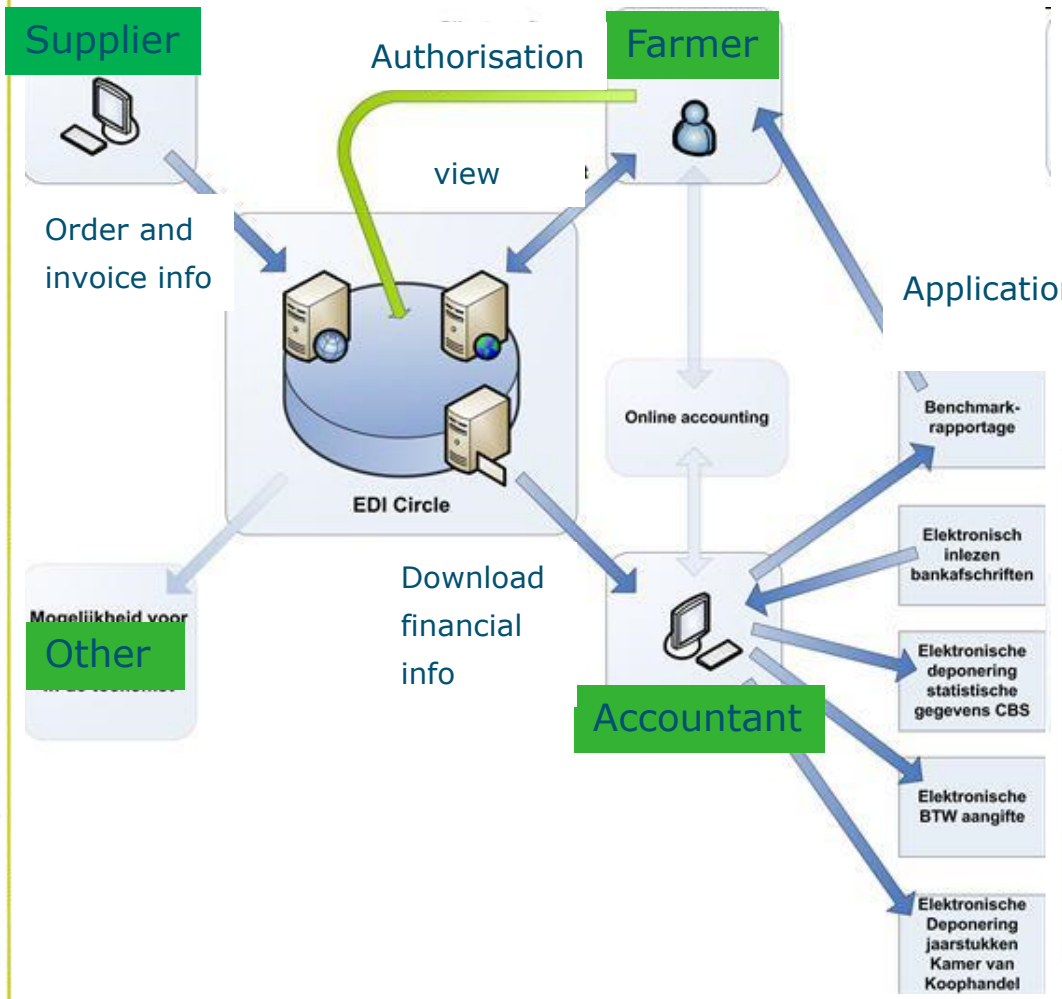
Changes in the sector - Information

- ICT (information and communication technology)
  - Farming becomes data-intensive
  - Open data and big data
- Transparency and ‘full accounting’ in food chains
  - More and more data recording in farms for food processors (in addition to own management)
  - On food safety and on environmental performance

Information flows in the sector



Commercial: Edi-circle

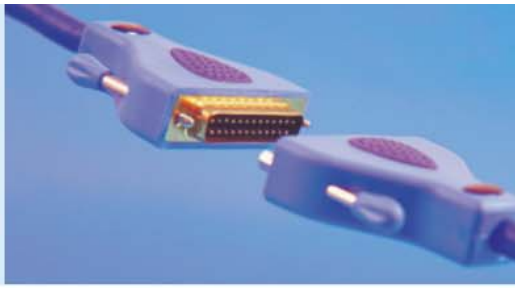


Robotic accounting

Webservices RVO (web site for illustration)

Webservices

Ondernemers die dieren houden, mest vervoeren, mest exporteren of gewaspercelen gebruiken, leveren gegevens bij ons aan. De gegevens worden in systemen opgeslagen, zowel bij de ondernemer als bij ons. Met zogenoemde webservices kunnen gegevens automatisch uitgewisseld worden. Softwareleveranciers kunnen het bedrijfsmanagementsysteem dat wordt gebruikt zo inrichten dat de verbinding en uitwisseling mogelijk is.

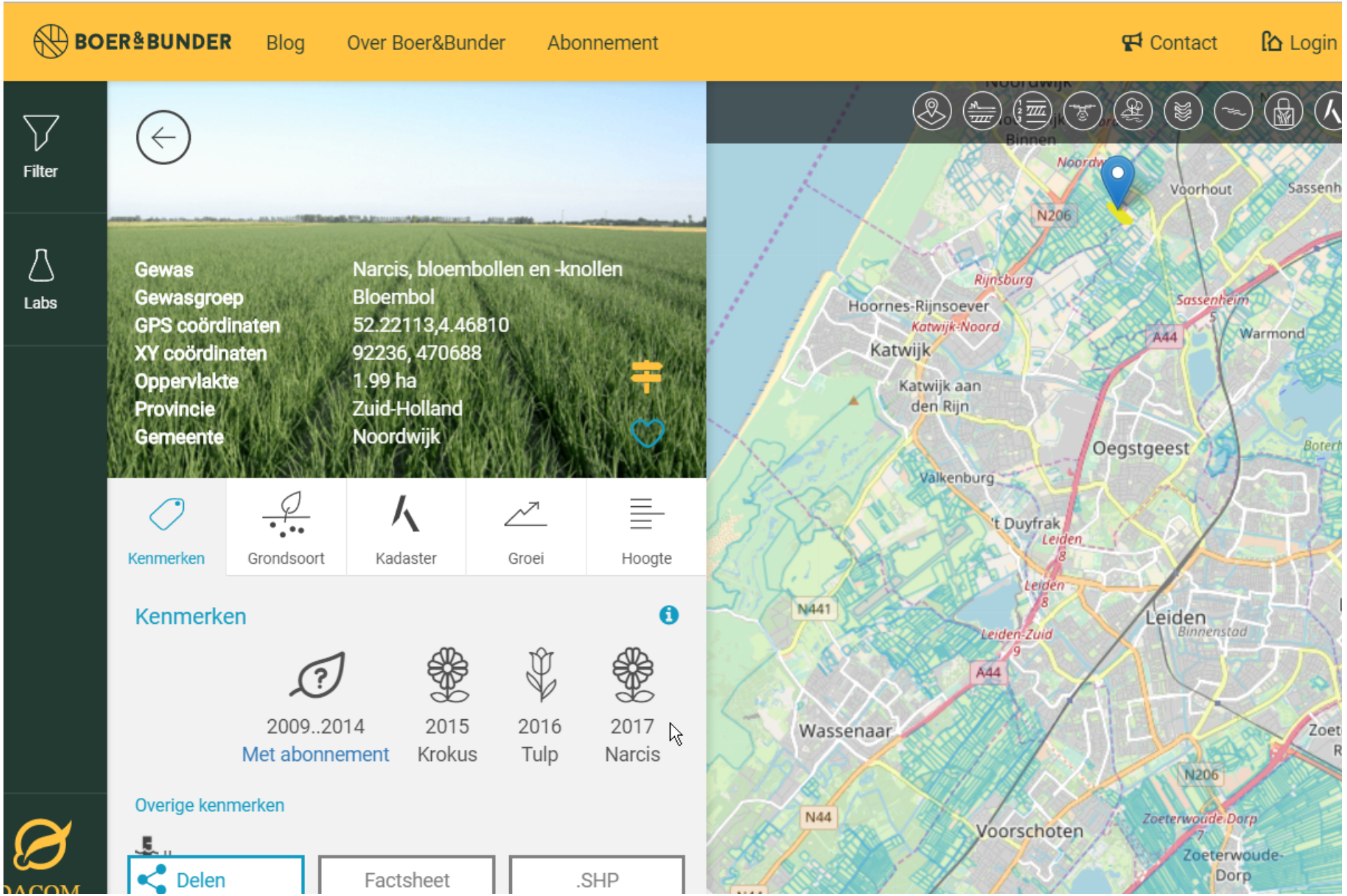


Alle informatie over dit onderwerp

Bent u softwareleverancier en ontwikkelt u software waarmee gebruikers vanuit het bedrijfsmanagementsysteem rechtstreeks gegevens kunnen uitwisselen met onze systemen? Op deze pagina vindt u specificaties, berichtenboeken en configuratiebestanden voor de verschillende webservices die bij ons mogelijk zijn. Voor een goede communicatie met onze webservices is het belangrijk dat de gebruikers van uw software deze up-to-date houden en dat ze actuele browsers gebruiken.

- › Analyseresultaten zuiveringsslib en compost
- › Analyseresultaten dierlijke mest
- › Vervoersbewijs zuiveringsslib en compost
- › Vervoersbewijs dierlijke mest
- › Identificatie en registratie van dieren (I&R)
- › Centrale databank dieren
- › e-CertNL mest
- › Voergegevens
- › Geo-webservices

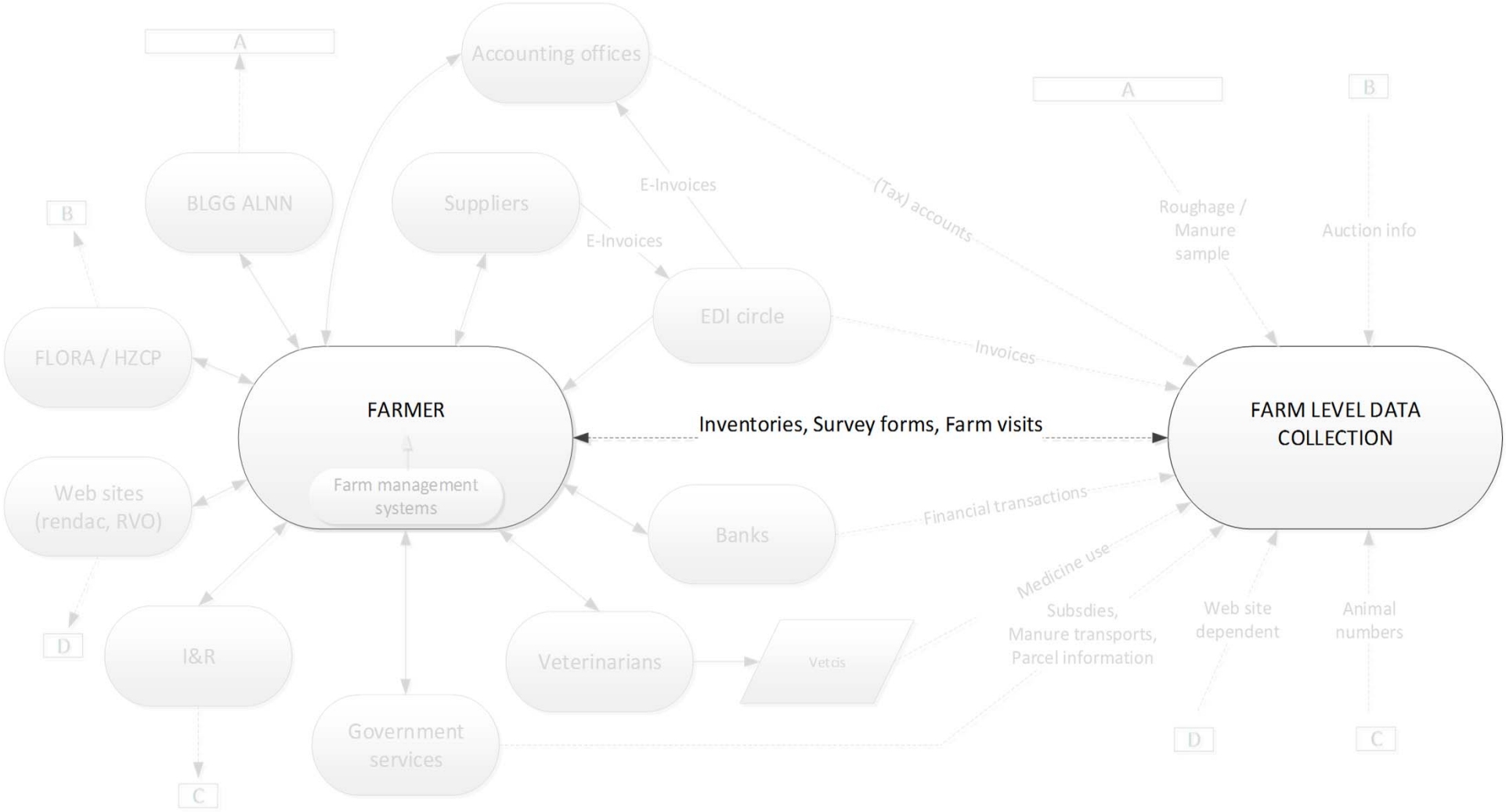
Parcel information open source data



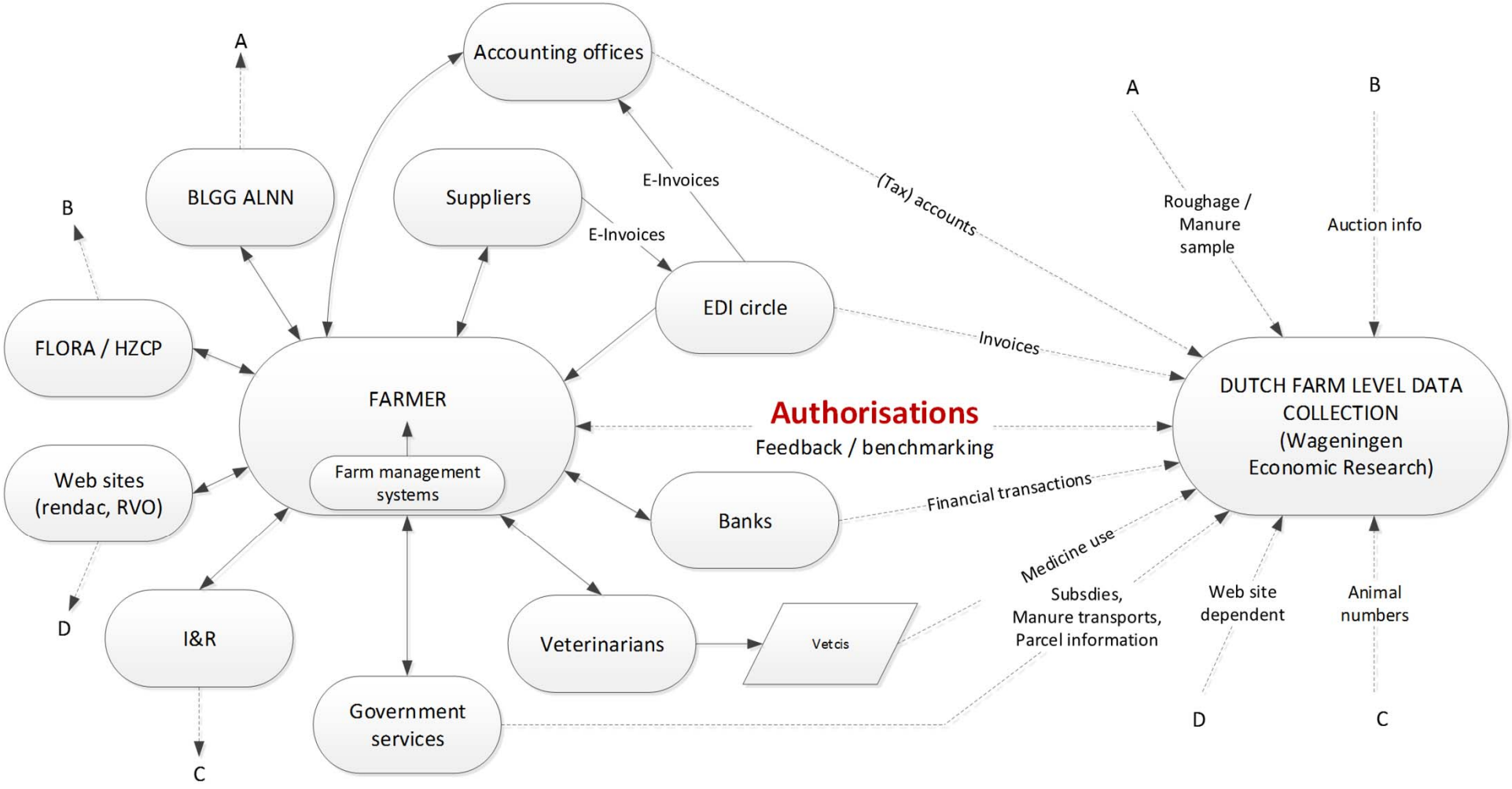
Administrative: Data from RVO (Ministry Agency)

- Derogation
  - Ha grassland, Ha arable land, P status, derogation, some other manure management strategies
- Parcel registration
  - Crop, size, soil type
- Animal numbers from I&R
- Subsidy payments
  - Greening entitlements
- Manure transports

Data collection – the traditional way



Farm level data collection



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Philosophy of Dutch farm level data collection

- Collect farm level data on a wide range of **sustainability issues** to provide **policy and research relevant data**
- Integrated data collection
  - As a base for other statutory tasks
  - Adaptation of data collection to new policy needs
- Principles
  - Collect once use multiple times
  - Minimize (administrative) burden of farmers
  - Use as much as possible (electronically) available data
  - Provide useful information for all stakeholders

Data-management with data warehouse

- Bring together data from multiple sources into a single database
- Integrate data from a variety of sources on the basis of classification schemes (metadata).
- Single query engine can be used to explore and present data.
- Maintain data history, even if the source transaction systems do not (performance, reproducability)
- Improve data quality, by providing consistent codes and descriptions, flagging (or even fixing) bad data and reducing manual processing

Concluding remarks

- Availability and demand for agricultural information is growing
- New policy needs on sustainability performance requires new ways of data collection, for example extension from economic accounting to environmental accounting
- Need to use external data sources to control administrative burden and assure data quality
- Increasing availability of relevant (open source) data which are beneficial for policy analysis and research
- Higher demands for data processing and data management

Further questions?

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