Data integration in Dutch FADN

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Overview

- Changing needs for farm level data
- Flexible system to adopt to changing needs
- Use of (electronically) available data for better quality data and higher efficiency
- Some examples

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Background sustainability monitoring in the Netherlands

- Societal concerns about agricultural production
- Policy objectives broader than economic results
    - Minimum standards
    - Specific sustainability objectives
- National policies: transition sustainable agriculture, policy sustainable livestock sector, vision on circular agriculture
- Integrated assessment of policy measures (environmental economic evaluations)

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Sustainability topics in Dutch FADN

- Energy use and GHG emissions
- Manure and nutrient balances
- Use of antibiotics
- Use of pesticides
- Water quality
- Innovation
- Nature management
- Other income sources

Large overlap with Farm to Fork objectives

Combination of input data and calculation rules

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Philosophy of Dutch FADN

- 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 **several statutory tasks**
  - **Adaptation** of data collection to new policy needs
- Principles (data collection)
  - **Collect once use multiple times**
  - Minimize (administrative) **burden** of farmers
  - Use as much as possible (electronically) **available data**
  - **Fact based** and **Interpretation free** recording

Fact based and Interpretation free recording of data

- Assembling a broad set of data
- Recording of data without to much interpretation at the moment of data collection
- Use cases determine the processing and interpretation of data
- Gives flexibility in the use of data
- Distinction what is collected at the farm, what is reported to the EU (farm return) and what is published by the EU (standard results)

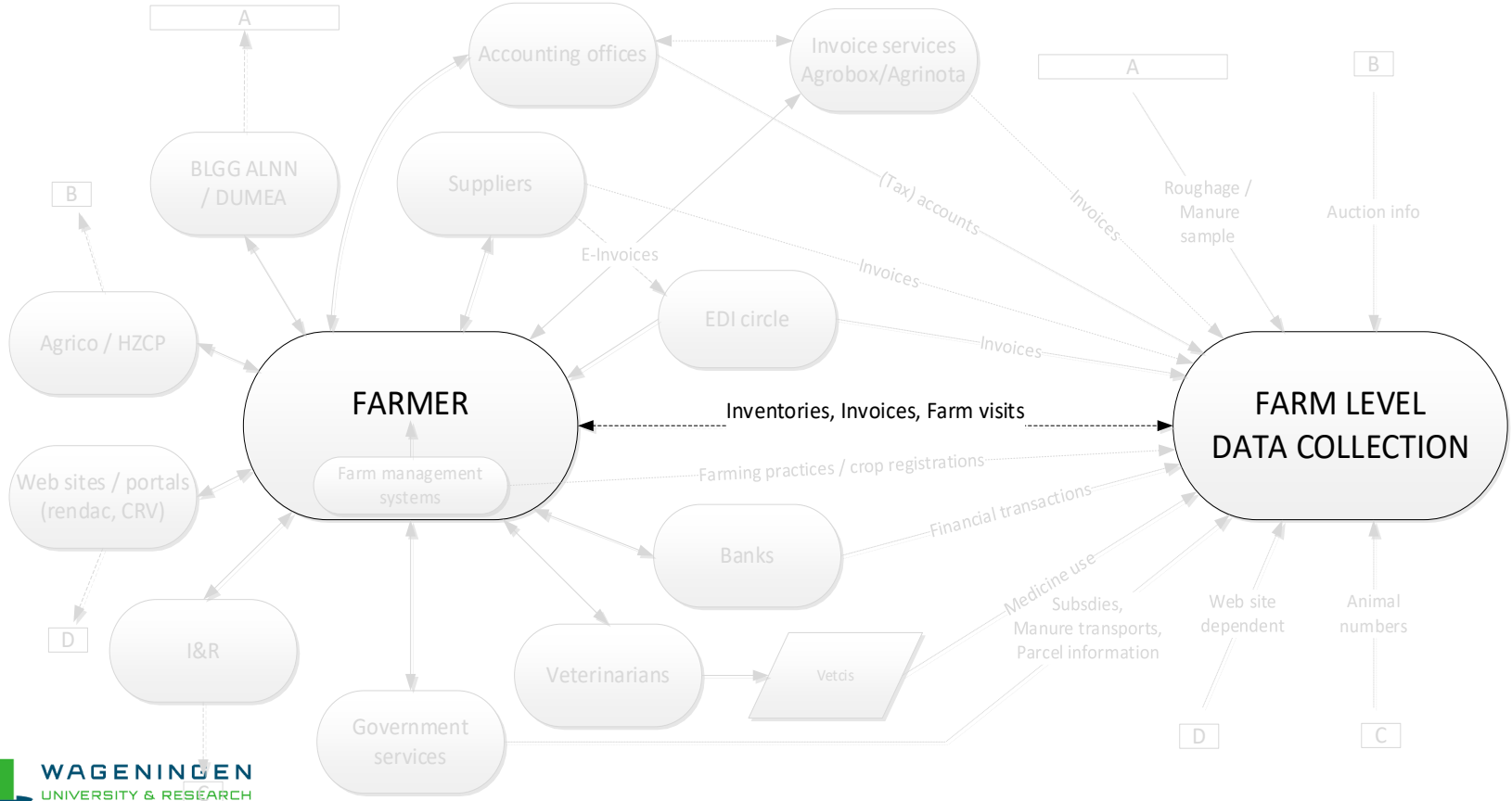
Use of external data

- Accounting process as a starting point, improvement where efficiency gains or extension of data can be achieved
- Type of availability
  - Paper
  - Electronic pdf's
  - Web sites / portals
  - XML/UBL or other electronic format

increasing digitization

- Considering:
  - Number of farms for which the data is available
  - Cost / benefit analysis: saving of time and required investment
  - Quality mechanisms in place

Data collection – the traditional way



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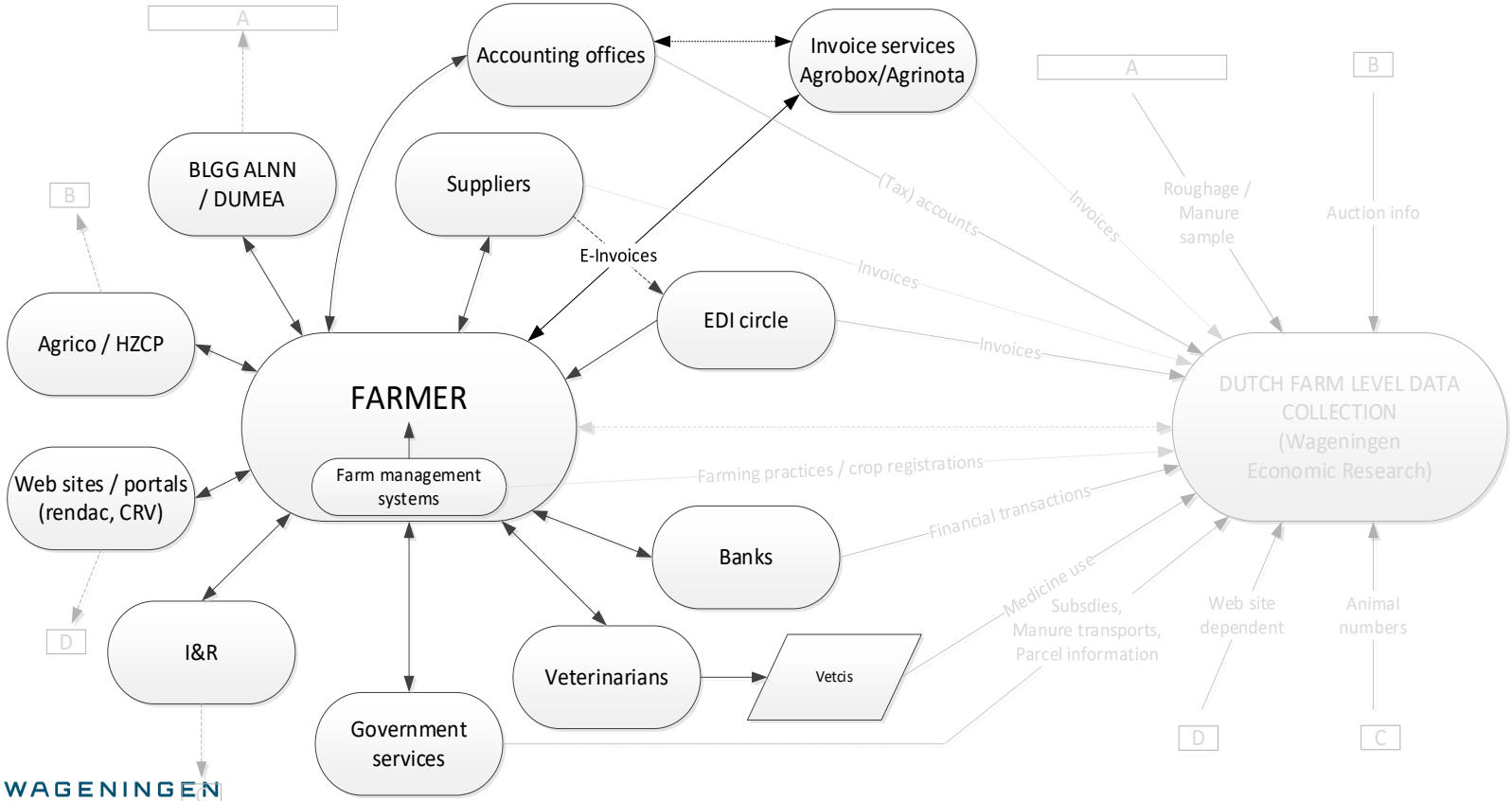
Information flows in the sector



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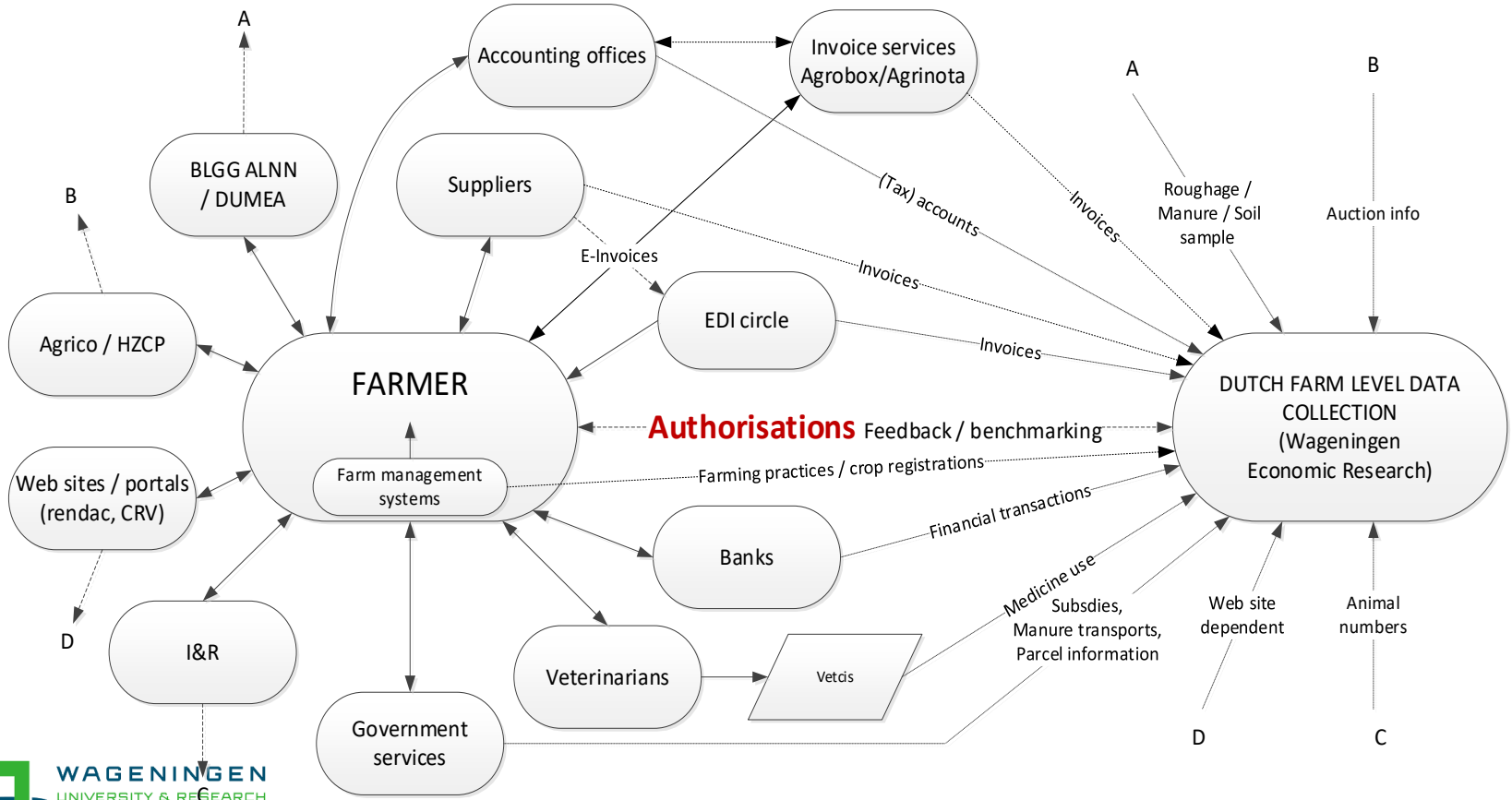
Adopting to new information flows

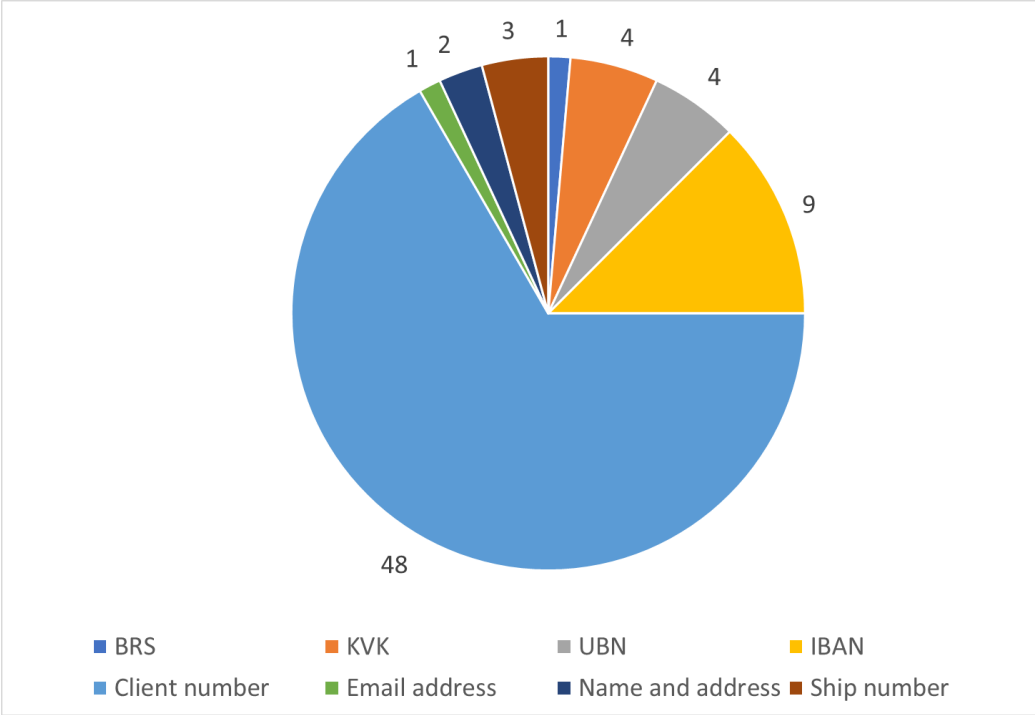


Access to external data

- Only with the explicit authorisation of the farmer
- Collect once and use multiple times but with the consent of farmers
- Efficiency gains for the farmer and data collector
- Contact with the farmer is necessarily to withdraw the right information
    - IDs are not the same in each system
    - Standardising IDs complicated due to increasing complexity of farms

Data exchange and interoperability

- Variety of formats and ID’s
  - Formats: csv, xml, excel, pdf, web service
  - ID’s see graph
  - Many 1-to-n relations due to complexity of farms
  - Authorisation management is key activity



Administrative Data from RVO (Ministry Agency)

- Subsidy payments
  - Greening entitlements
- Parcel registration
  - Crop, size, soil type, rent / ownership
- Manure transports
- Derogation
  - Ha grassland, Ha arable land, P status, derogation, some other manure management practises

NUMBER OF ANIMALS

Samenvatting Rundveestaat

Dier categorie	Omschrijving	Aantal dieren								
			Toename			Afname				
		Begin	Aankoop	Geboorte[a]	Overgang	Overgang	Sterfte[a]	Verkoop	Einde	Gemiddeld
100	Melk- en kalfkoe	65	0	0	16	0	0	10	71	67,5
101	Jongvee < 1 jaar	30	0	62	0	30	2	34	26	26,7
102	Jongvee > 1 jaar	19	0	0	30	16	0	8	25	24,7
Totaal		114	0	62	46	46	2	52	122	118,9

Dier categorie	Omschrijving	Aantal dieren								
			Toename			Afname				
		Begin	Aankoop	Geboorte[a]	Overgang	Overgang	Sterfte[a]	Verkoop	Einde	Gemiddeld
101a	Vrl. jongvee < 1 jaar	30	0	29	0	30	2	3	24	25,0
101b	Mnl. jongvee < 1 jaar	0	0	33	0	0	0	31	2	1,7
102a	Vrl. jongvee 1-2 jaar	18	0	0	30	18	0	8	22	23,3
102b	Vrl. jongvee > 2 jaar	1	0	0	15	13	0	0	3	1,4

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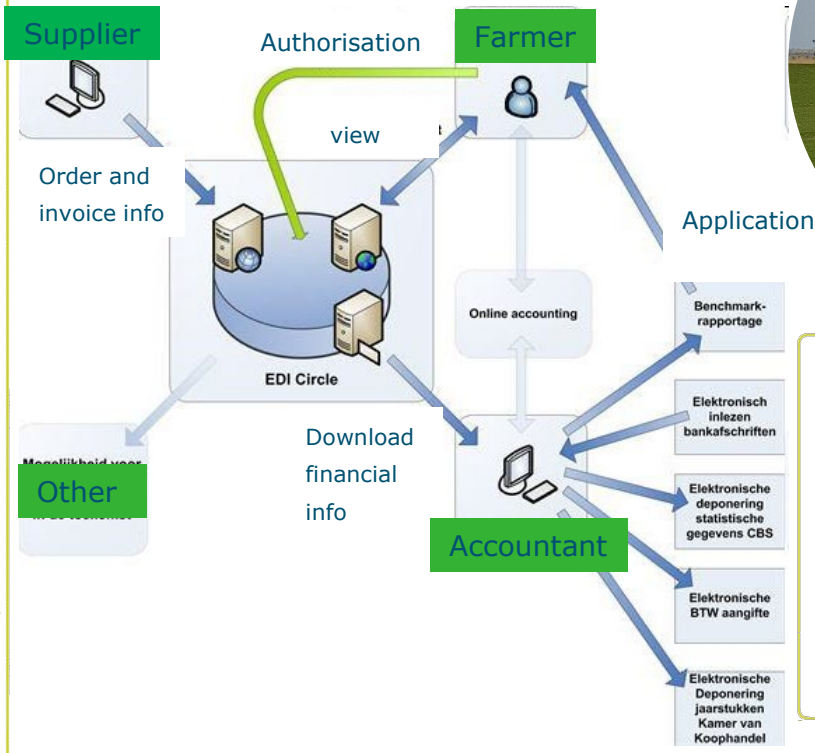
Supplier
Authorisation
Farmer
view
Order and
invoice info
Application
EDI Circle
Online accounting
Benchmark-
rapportage
Elektronisch
inlezen
bankafschriften
Elektronische
deponering
statistische
gegevens CBS
Elektronische
BTW aangifte
Elektronische
Deponering
jaarstukken
Kamer van
Koophandel
Download
financial
info
Other
Accountant

Concluding remarks

- Availability and demand for agricultural information is growing
- New policy needs (on sustainability performance) made easier with new ways of data collection
- Need to use external data sources to control administrative burden and assure data quality
- Solution depends on **availability of data and local circum**stances
- Higher demands for data processing and data management

Discussion

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