Vortrag

Adrie Boshuizen, Horti Bureau Wageningen, Niederlande

More measurements, dataprocessing and modelling, managing Big Data in an international context

3. Tagung Krankheitsprognose Obstbau am 29.11.2016

Organisation und Tagungsort:
Julius Kühn-Institut (JKI),
Fachinstitut für Pflanzenschutz in Obst- und Weinbau, Dossenheim

More measurements, dataprocessing and modelling, managing Big Data in an international context
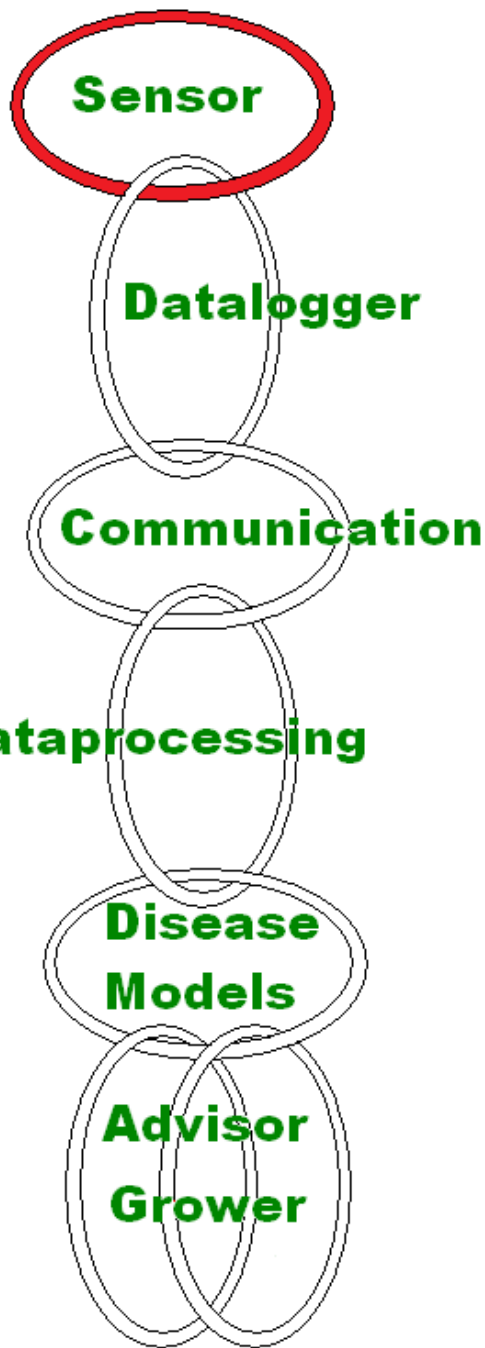
Adrie Boshuizen
Horti Bureau Wageningen
P.O.Box 592
6700 AN Wageningen
The Netherlands
E-mail:horti@bodata.nl

METY station for scab control
design 1989, modernised 2007-2010, robust and durable
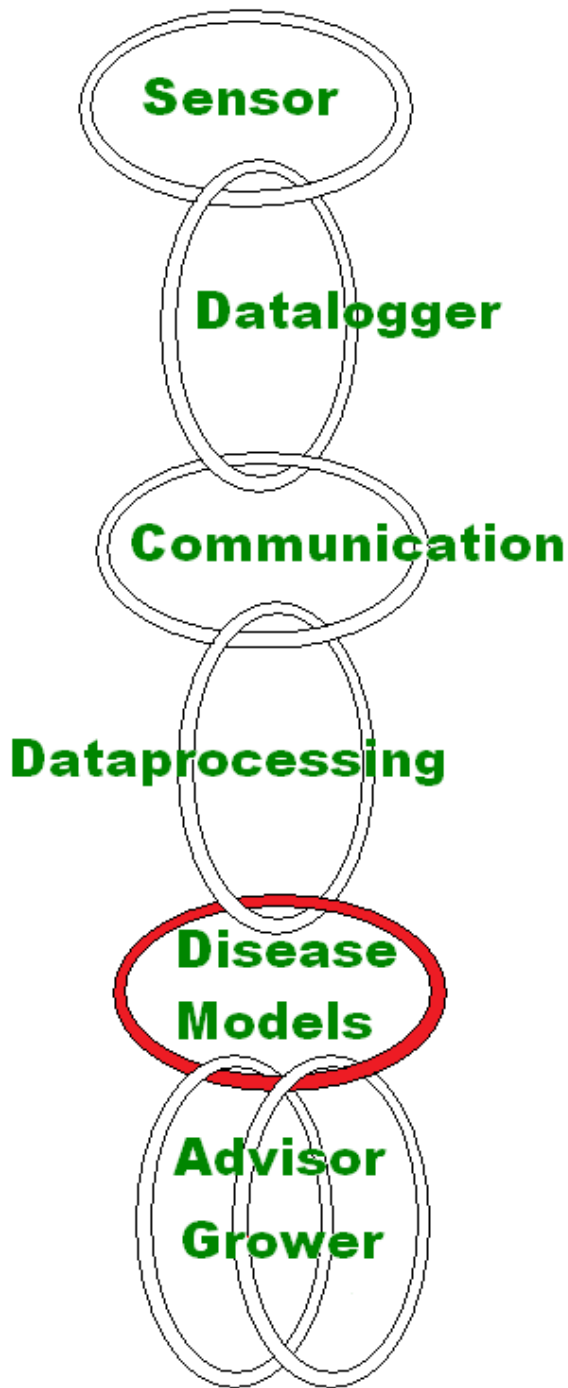
Measurement chain

4 sensors needed for apple scab modelling:

- temperature

- leaf wetness

- relative air humidity

- rainfall

global radiation: added to model irrigation

Disease models

- Disease modelling
  - cooperation (PPO Randwijk, Bodata, Pcfruit)
  - Pcfruit: project qPCR apple scab
  - Validation
- Models for apple scab:
  - Mills -3   – Simscab
  - RIMpro   – RIM fruitweb
  - Welte
- Disease models developed and validated in cooperation:
  - brown rot in pear (*Stemphylium vesicarium*)
  - apple canker (*Neonectria ditissima*)
  - apple powdery mildew (*Podosphaera leucotricha*)

Dataprocessing: Fruit 4.0 project
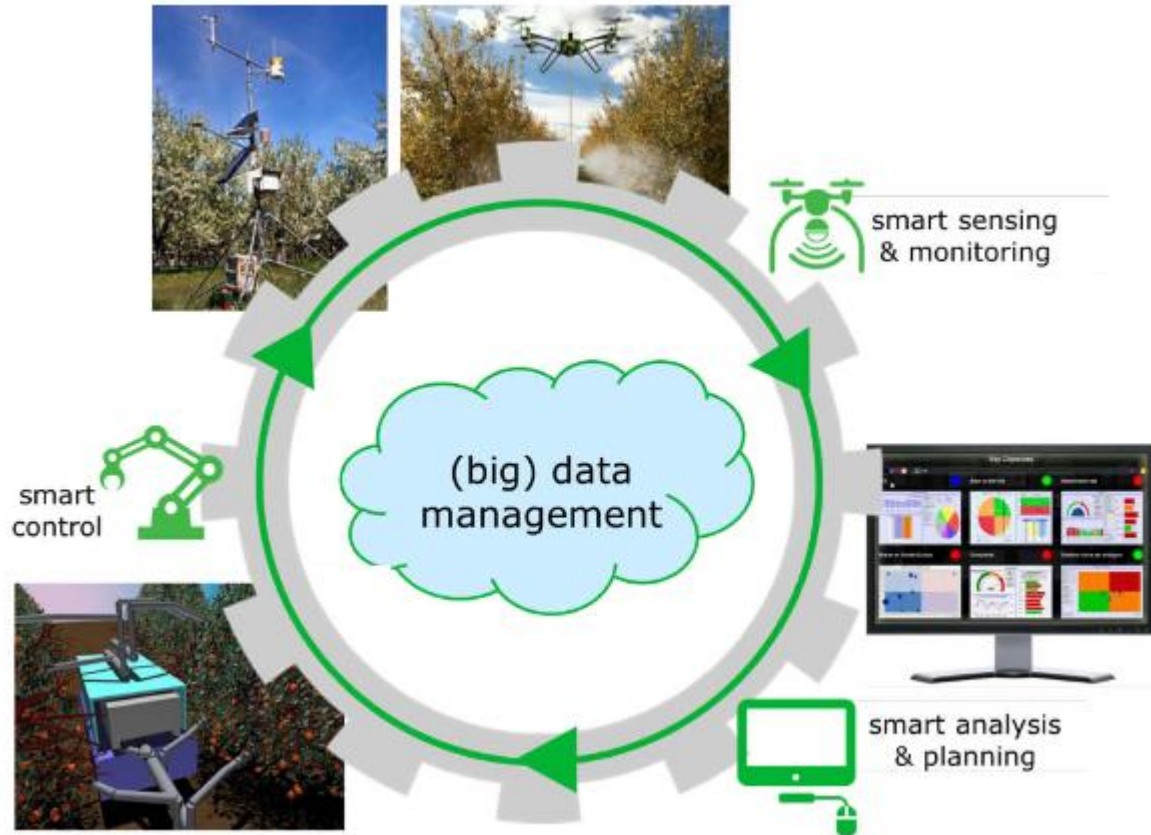
Mety²: more measurements

solar powered

digital (bus) sensors
± 20 till 50 sensors
many sensor options
will they be used ?

Examples:
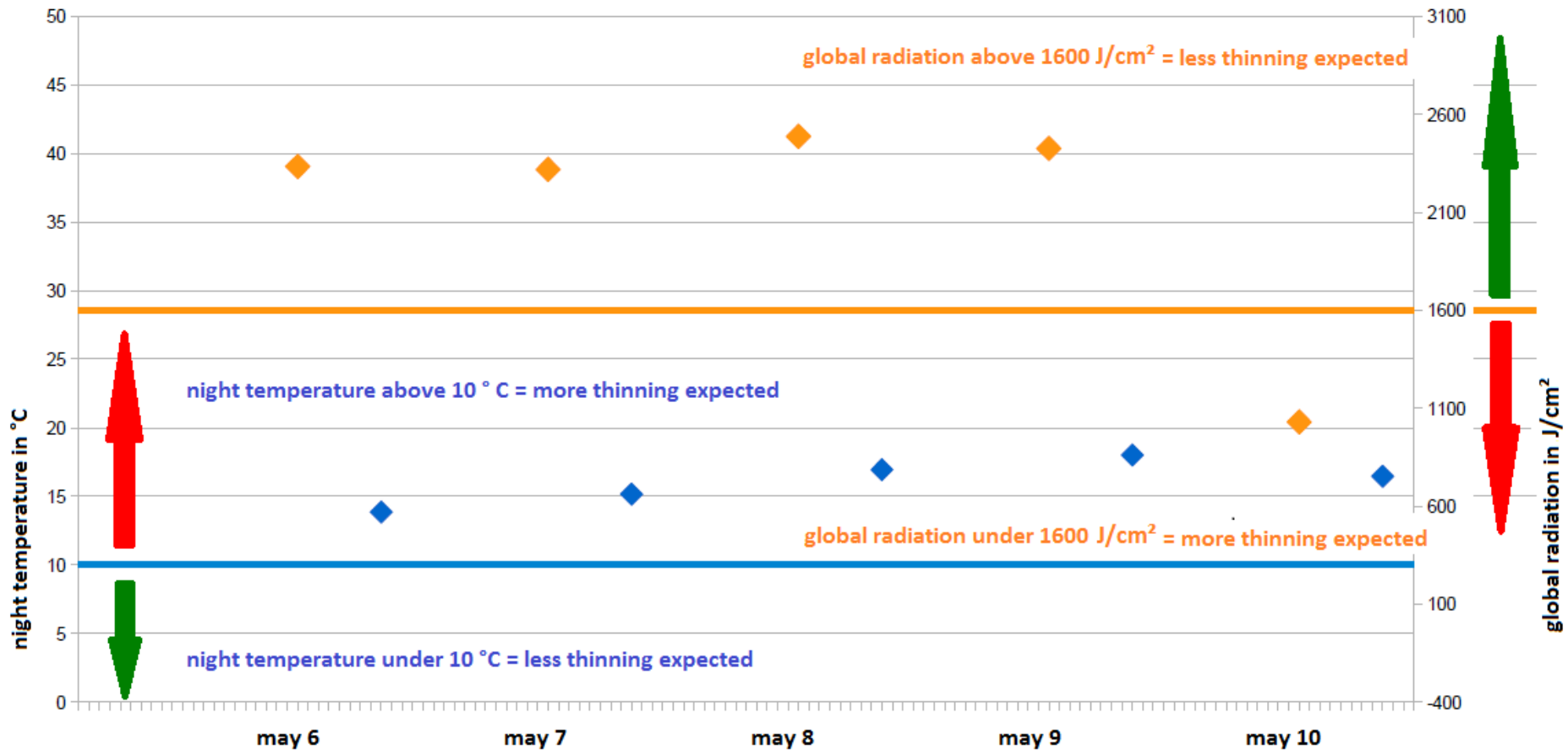– LLWS/LLTS(Peter Triloff)
– second LW sensor
– new LW sensor (Thies)

Irrigation scheduling: extra soil measurements and more modelling

Carbon balance: modelling the Brevis thinning effect for global use

Clever model Randwijk 2016

Conclusions

the number of measurements will multiply in the coming years

the number of models used will grow further

international data exchange for model use will grow

it will be difficult to keep data processing in sync **= Big Data**

(international) cooperation might enhance progress