WG Decision support systems

WG report Eufrin board meeting
19 November 2015

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WG DSS

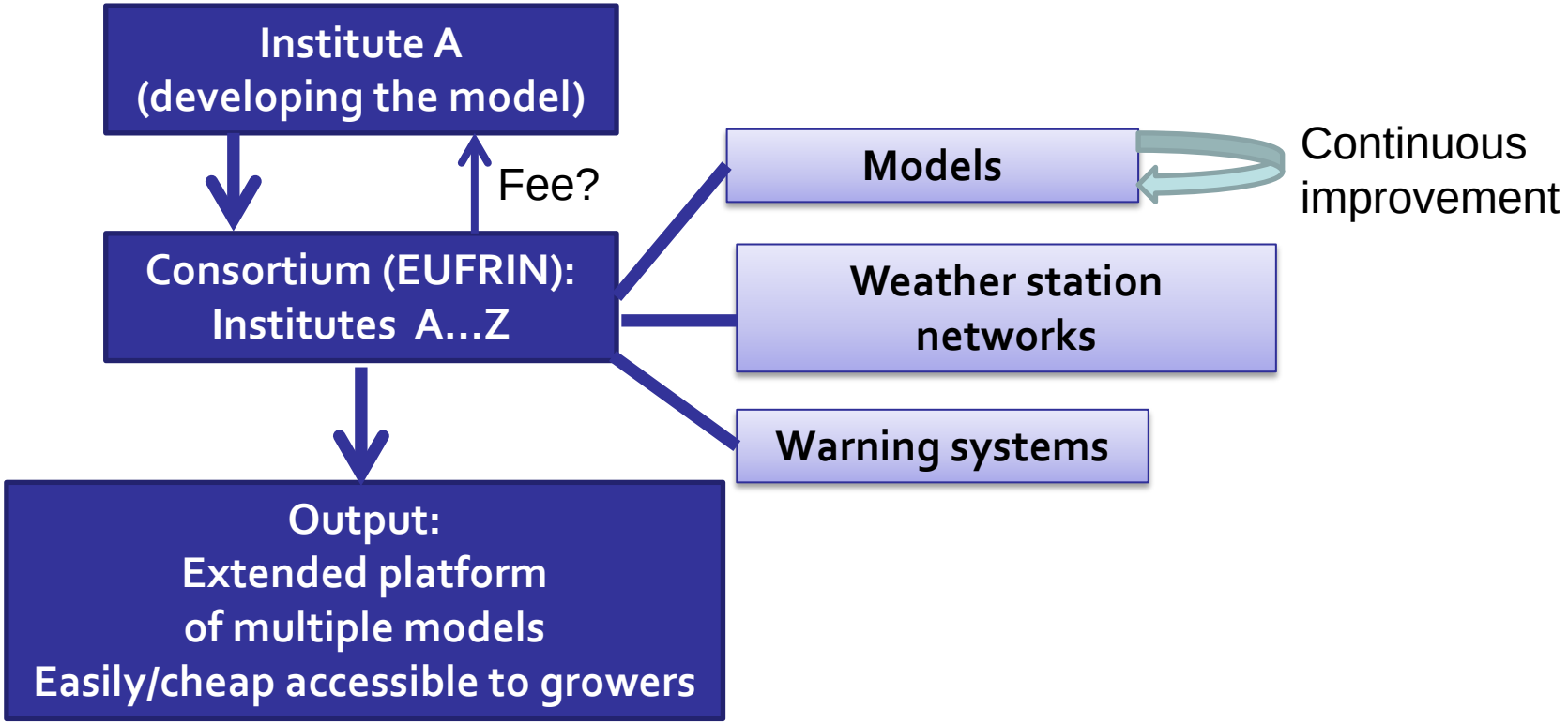
- First WG gathering 3-4 June 2015 in St-Truiden
- 14 attendees from 6 countries (B, I, CH, LT, UK, P)
  in season / close to holidays /short notice
- Further interest shown from 4 more countries

- WG chair: Dany Bylemans (B, pcfruit)
  WG secretary: Luigi Manfrini (I, University of Bologna)

Program first WG DSS

Welcome and outline of the working group 'Decision Support Systems' Why collaborate by a platform to exchange DSS in Europe.
Institute/Country contributions on sensor & sensing techniques with value for fruit
Institute/Country contributions on DSS developed / under development
Property rights / possibilities for multi-country validation of DSS platform (consultant advice, brainstorming)
Institute/Country contributions on networks of weather stations (technical/connection to DSS)
Institute/Country contributions on how DSS are offered to the fruit grower
Droneport, a unique opportunity for remote sensing research in fruit
Conclusions and follow up
Tour in Pcfruit

Goal of the WG



The objective of the WG: give a broader access (“resilient”) to the scientific knowledge in term of geographical diffusion of the models/protocols used in precision horticulture; give the possibilities to obtain more information about the crops studied by better services results; increase the IPM and improve/optimize the productions by better orchard management and awareness.

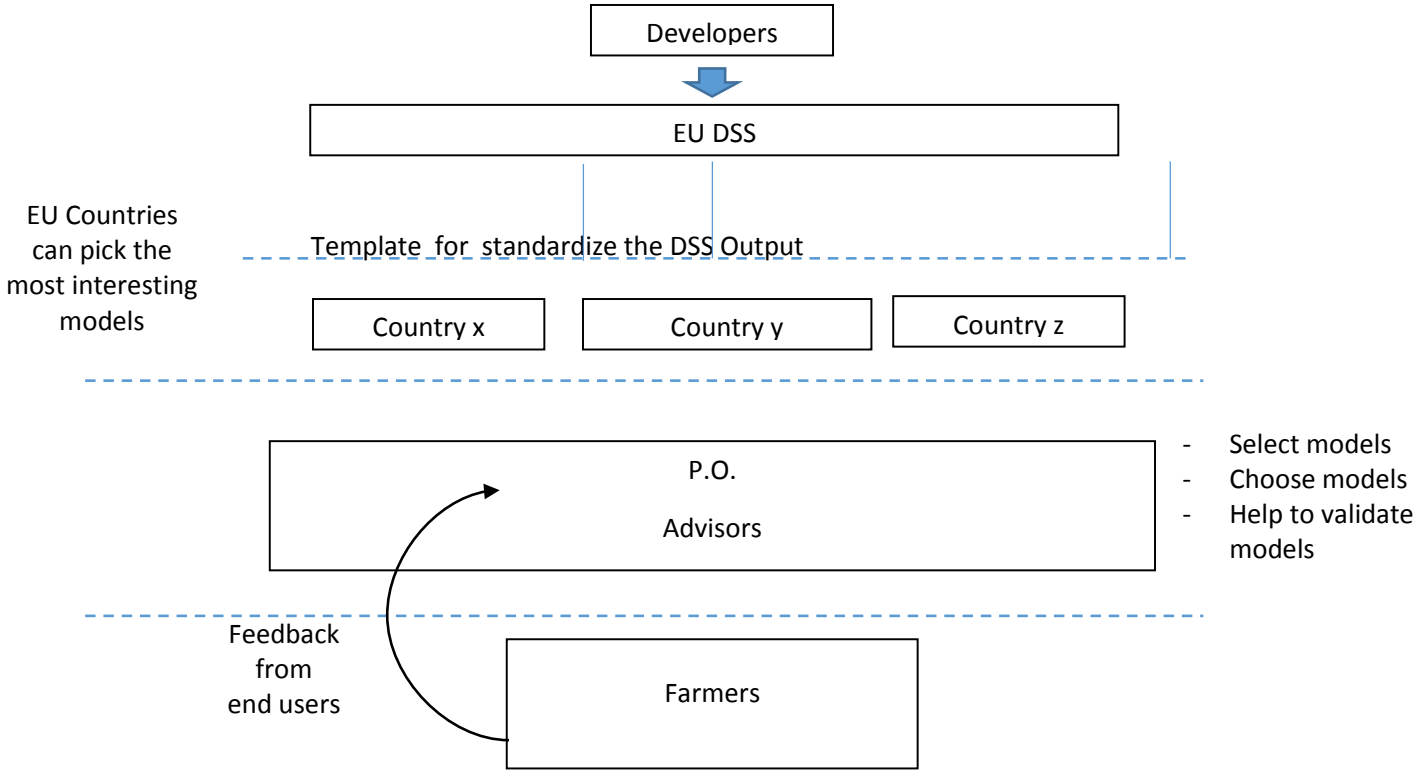
DSS discussed

- Models and protocols on pipfruit size and yield forecasting (Dr. Luigi Manfrini, DipSA-University of Bologna, Italy) *
- Models on soft fruit and apple irrigation scheduling (Dr. Eleftheria Stavridou, EMR, England)°
- PWARO DSS for pear irrigation and fertigation (Deckers, pcfruit, B)
- Use of a crop scanner LIDAR for canopy management (Dr. Eleftheria Stavridou, EMR, England)°
- Visual techniques for fruit counting (Dr. Eleftheria Stavridou, EMR, England)*
- Phenology Models for frost damages (Prof. J. P. de Melo Abreu, University of Lisboa, Portugal) *
- DSS on pear soluble solids on pear (Prof. J. P. de Melo Abreu, University of Lisboa, Portugal)°
- SOPRA pest Forecasting model (Dr. Dominique Mazzi, AGROSCOPE, Swiss) *
- Earwig Management Tool (Tim Belien, PcFuit, Belgium)*
- Forecasting system for pests and diseases control IMETOS (Alma Valiuskaite, University of…, Lithuania) *
- DronePort – UAV test & Business Centre (Peter Dedrij, Belgium) *
- Other open source models

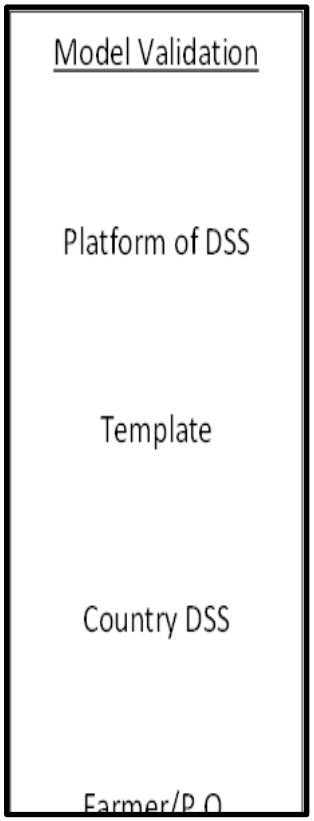
Discussion points

- Which type of models/protocols can be integrated in the platform and how they can be calibrated, corroborated, exchanged and validated among the different countries in Europe.
- How will it be possible to create a models/protocol database and in which country will these be available?
- The possibility to develop models/protocols suited to the end user. This can be created with a feedback control to overcome needs and gaps by the developers and/or could be standardized by a creation of a template that can be filled with all the parameters by the users.
- Which can be the standard form (language and template) for exchanging all the data in the models (weather data, phenology information, growth curves, etc.)
- Which crops will be under studies?
- Who could act as potential partners.
- Examples of exchanging platform (example for this WG) as for "BIOMA" a software framework designed and developed for parameterizing and running modelling solutions based on biophysical models.
- Examples of similar initiatives in others EU projects/organizations (need to be check from some of the researchers) (See action points)

How would it work?



Potential EU project



Stakeholder

Institutes

P.O./Farmers

Developers

Advisors

Government

Agrochemical Company

Consumer

Traders

Ready for a TN? H2020 project?
Next meeting: Q1 2016, TBD