OPEN DATA

24.-25.1.2017 HYDEREABAD, India - GeoAgro 2017

Workshop: OPEN DATA INITIATIVE

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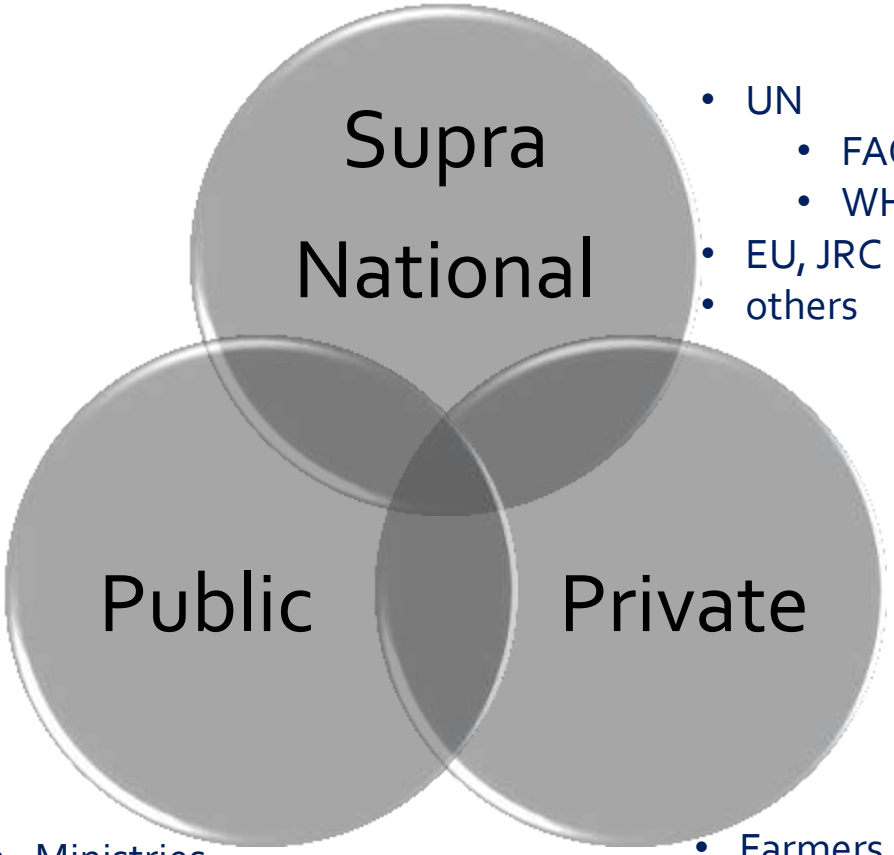
Aim

DATA STAKEHOLDERS

PUBLIC

PRIVATE

EC - INSPIRE



- UN
  - FAO,WAY, ITU
  - WHO, GFAR
- EU, JRC
- others

- Ministries
- Regional and local admin
- Advisory organizations
- Subsidy organizations
- Chambers if av.
- Land consolidation units
- R&D and education

- Farmers, cooperatives
- Agro banks, insurance
- Certification bodies
- Control organizations
- Supply agencies
- Transport sector
- Food – feed industry

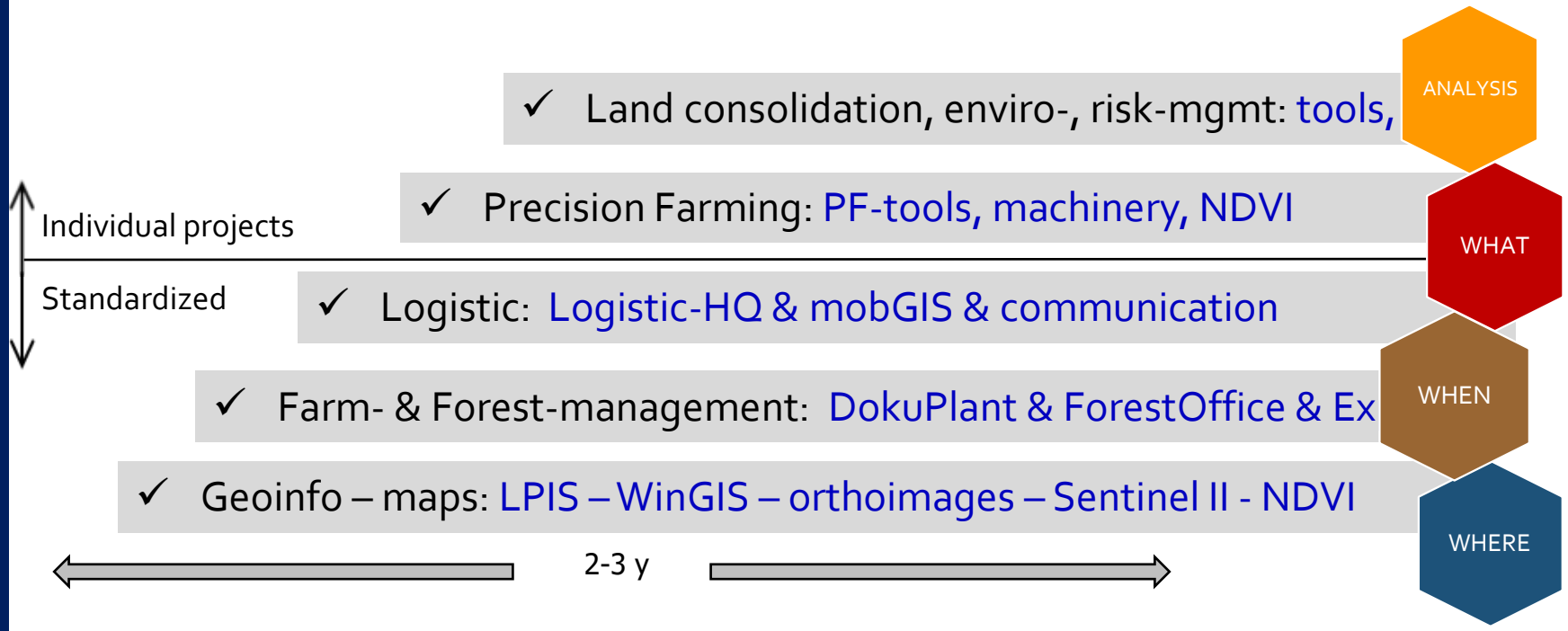
ICT PROCESSES

TASKS

TOOLS

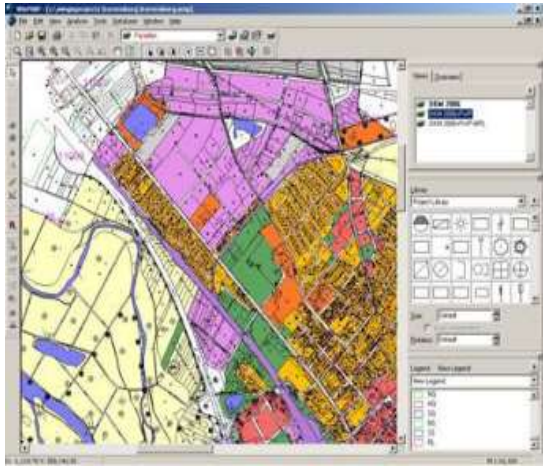
PREPARATION

MILESTONES

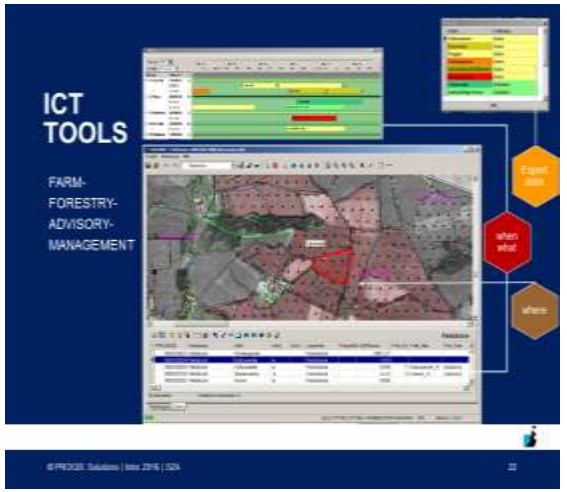


APPLICATIONS AVAILABLE TODAY

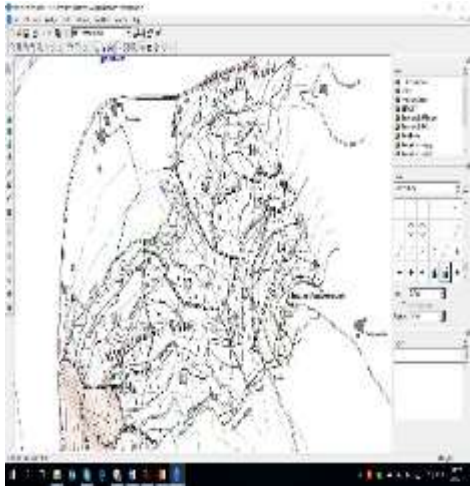
- **WINGIS: Geografical Info System**



- **DokuPlant – Farm-management**

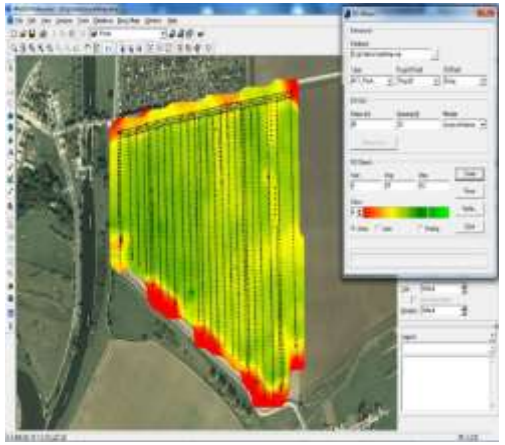


- **ForestOffice - Forest inventory**



- **Technology Integration**

- **Logistics and mobGIS**

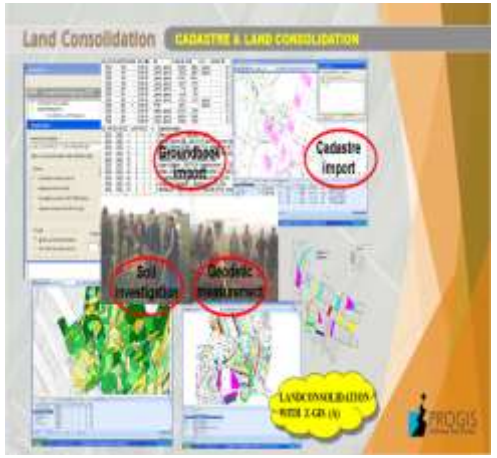


- **Precision Farming (PF) tools**

APPLICATIONS AVAILABLE TODAY

- **Mobile technologies (Apps)**

- **Land consolidation (Apps)**



- **Stakeholder Cooperation (Know How)**

- **Environment and natural risks**
- **(Apps & Know How)**

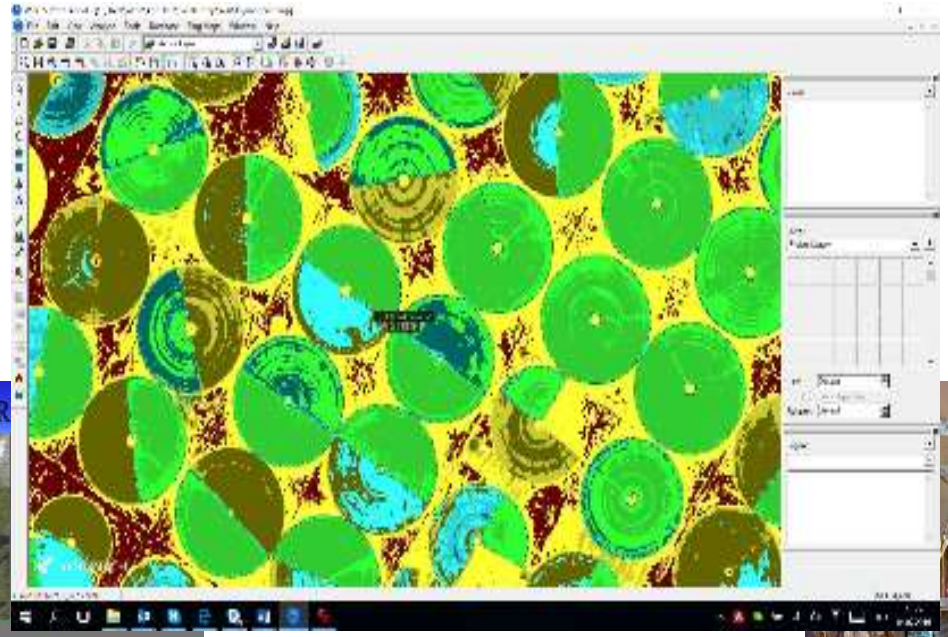
- **Circular Flow Managemnt**
- **+ labs with NIRS technology**
- **+ (Know How)**

- Animal registration - census
- Tagging and documentation of all changes (birth, sales, slaughtering, …)
- GPS based geo-fencing
- Traceability down to consumers
- IoT ssensors for optimized feeding (pH, nutrients)

- **Animal Census: registration, identification, tracing, geo-fencing**
- **(Apps & Know How)**

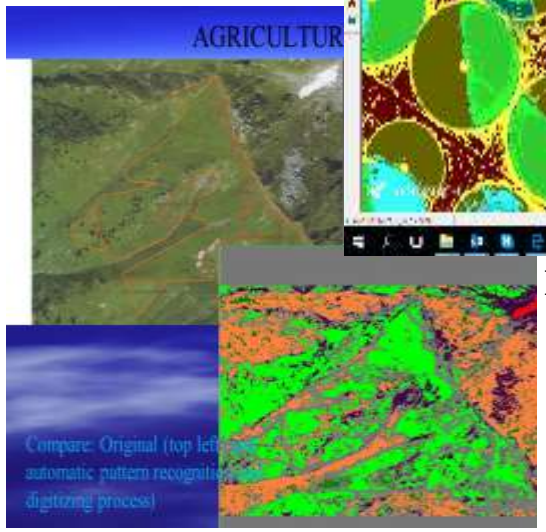
2017 new apps & buss.models

NEW: all 5-10 days new pics, globally, see the growth on your phone



NEW: EC Sentinel II - growth-index

NEW: see all details



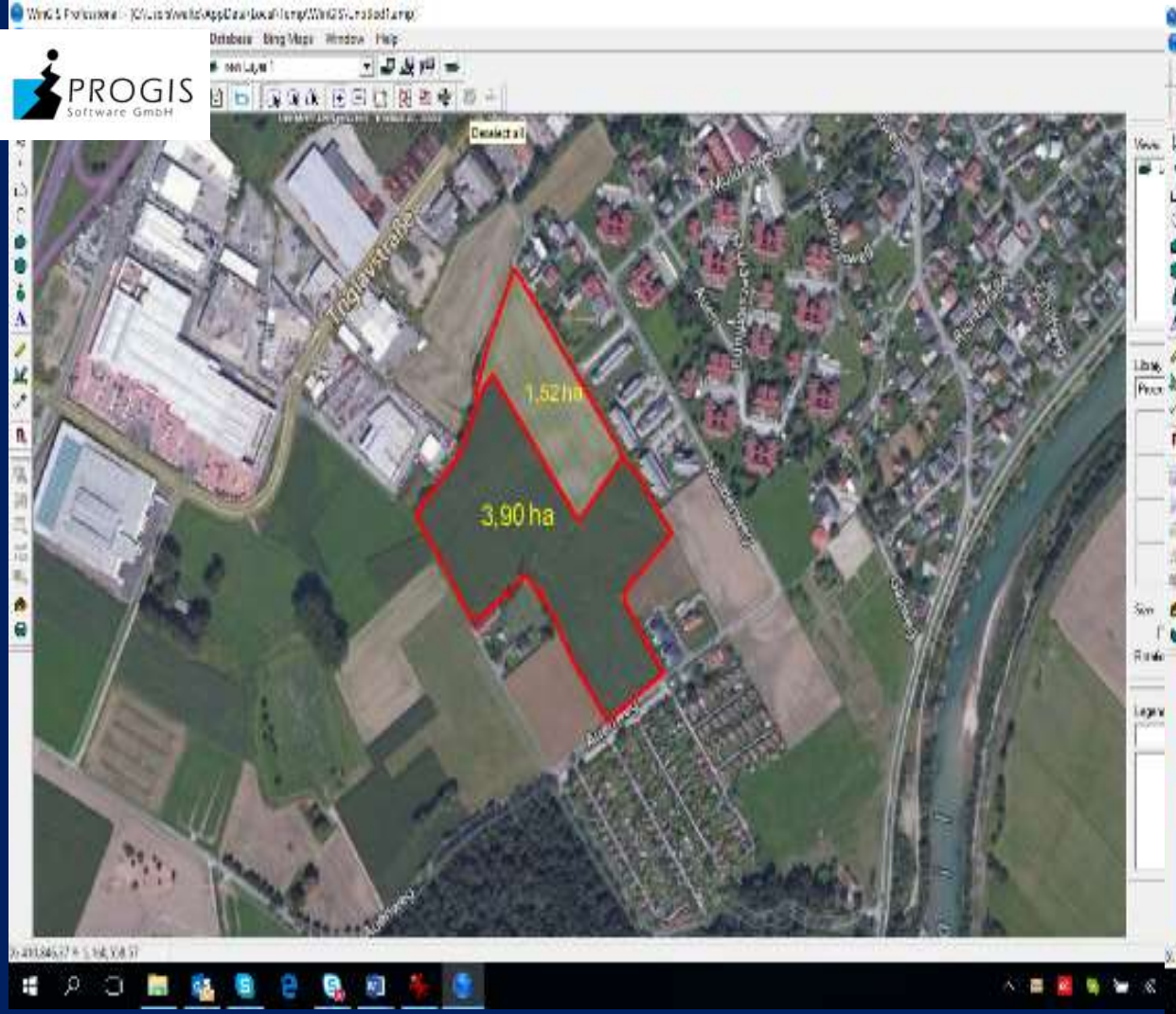
NEW: IDIMA pattern recognition

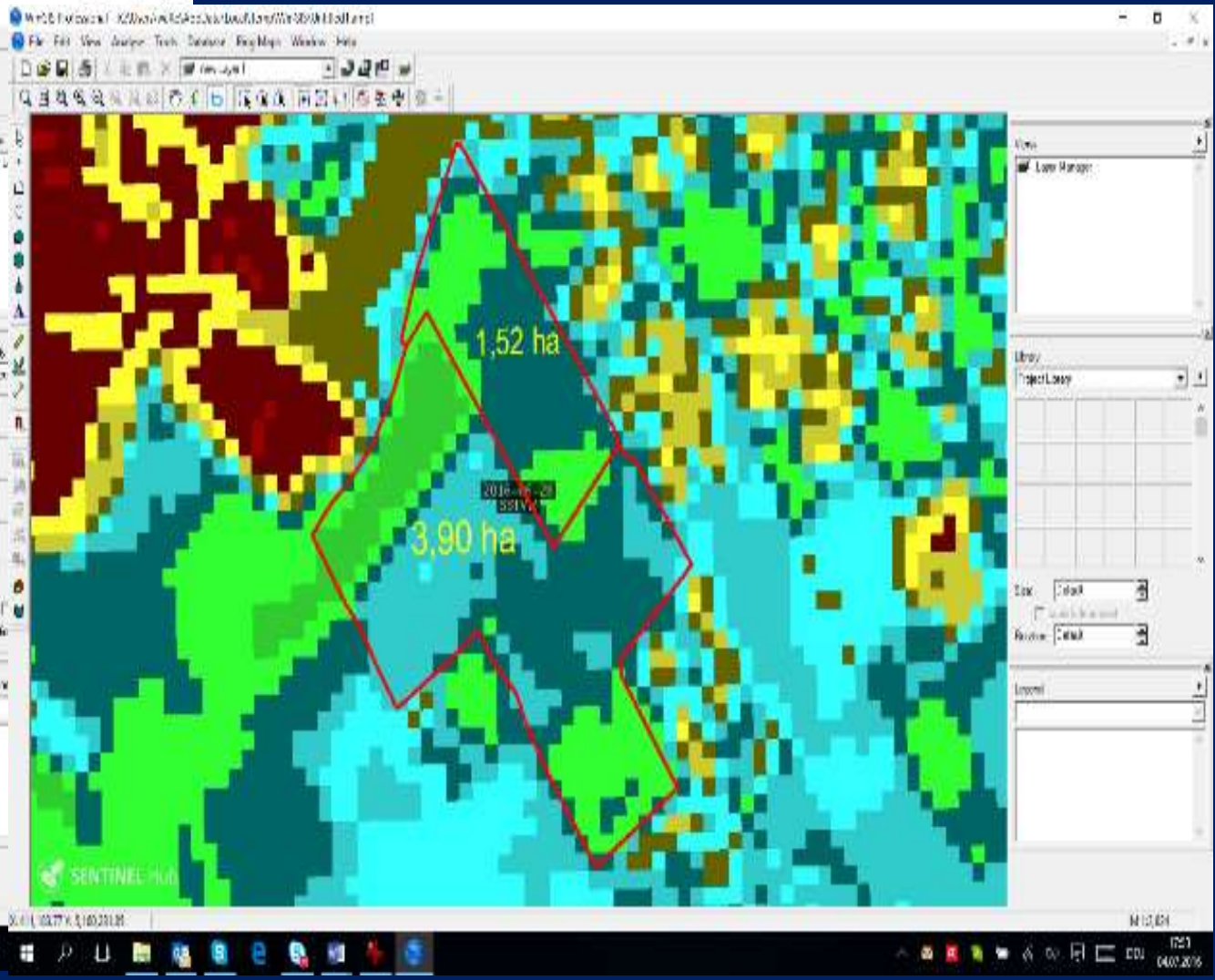
NEW: Farmer´s gourmet

NEW: Franchised food chain: "Gourmet"
Farmer as entrepreneur + i-net + logistics

- Technology & organizational consultancy – entire countries or on demand
- Education models, postgraduate education: farmers, advisors, Universities

40 years ICT in agriculture – forestry – environment – natural risk management
500 man-years of experience





EC SENTINEL II

Orthoimage 25cm + LPIS polygons

NDVI Index all 5-10 days!

IDIMA PATTERN RECOGNITION

Original picture – BING image 25 cm ortho-retified - Austrian Alpine farm in Styria (red lines: you see also the incorrect manual digitizing process!!!)

IDIMA [IDentification of IMAges]

WINGIS + BING + IDIMA

A classification module creates an objective classification

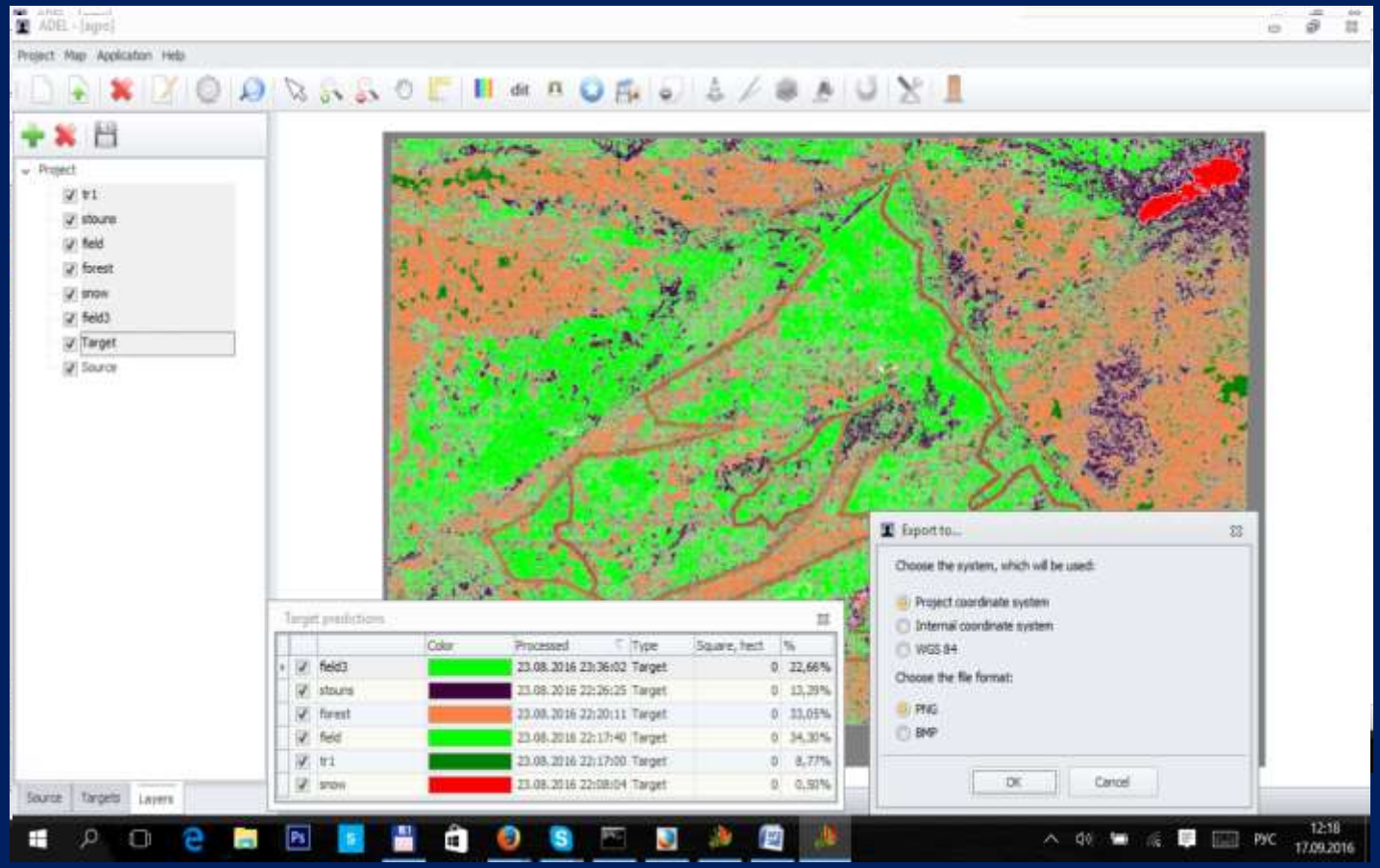
Loading source image & define projection & coordinates

Selecting parameters for classifying Consistent Structure

Automatic classifier mode creates a classified structure

Setting targets for creation of thematic raster maps

Exports the raster map for the automatic vectorization



OPEN DATA STATUS

Economic – Ecologic - Social

- I am educated and practical working farmer and forester
- Managing own farm/forests and > 5.000 ha for clients
- Consultant in agro-forest-environment since > 30 years
- In the 70/80th Apple and Acer distributor - Austria E-EU
- PROGIS: technologies for farmers + the entire chain

- PRINCIPLES:
- Farmers are not interested that all use their data
- When we divide private ownership of land and information of it, we will loose total responsibility

FOODIE:

Farm
Oriented
Open
Data
In
Europe

EC funded project
2014 – 2017
grant 621074
6 Mio € project

CHALLENGE

The agriculture sector is a strategically unique sector which should ideally be constituted by a network of interacting organizations. In carrying out their activities, such stakeholders have to manage many different and heterogeneous sources of information, such as:

- definition of policies,
- valuation of ecological performances,
- development of sustainable agriculture, crop recollection, and definition of timing and pricing,
- plagues detection.

In this context, future agriculture knowledge management systems not only have to support the direct profitability of agriculture or the environmental protection, but also have to combine and coordinate the efforts and the behaviours of the agri-food industry, consumers, public administrations and wider stakeholders communities.

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FOODIE

FARM-ORIENTED OPEN DATA IN EUROPE

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CIP-ICT-PSP-2013-7 Pilot Type B

Cost implication

- 28 governments in EC Europe
- develop 63 times a more or less similar application:
- LPIS land parcel information system and IACS (Integrated Agricultural Control System) – country by country slightly different subsidy management systems
- 63 teams a min. 15-20 people = 1.000 experts or more develop these systems since around 20 years
- (63 groups x 20 people x 20 years x 12 months/year x 4.000 € /month) x 1,25 (+25% for general costs excl. hardware) = € 1,5 bio €
- FOODIE project has € 6.000.000 for all participants within 3 years, of it 3 Mio grant!
  - It is not possible to produce a Swiss army knife with this amount!

Thoughts and Recommendations

- **IT company needs data**
- **Farmers need data too**
- We both need **easy access** to "infrastructure data", reasonable priced
- **Without data - no support** for farmers (smallholders)
- **Service Sector can not be developed** (advisors, machine services, …)
- The way out: **cooperate with private structures** and aggregate data, create data cooperatives and trust centers
- **Government will be out** (1) cadaster and car-routing and (2) orthoimages and BING/Google examples) if they not change
- **Farmers can negotiate the use of the data** but also the benefit

Recommendations

- **Aggregation brings power** (economic and ecologic and risk control) and we can negotiate with one organization
- **Legal and ethical issues** have to be taken into consideration
- Data **not only from farmers** – aggregated data bring total new values..
- Data **can come from public organizations** – paid already – open and free (easy to use!!!!!)
- Farmers data can be open but **anonymized** - but must not be free
- Data is not only for local but also **national and international** use
- We have data for trade with responsibility WTO, for agro = **who is responsible??**
- FAO could do it but has not yet a structure to run this

Recommendations

- **International treaty** is needed
- GODAN mentioned also international treaties and local treaties
- When data are **not available, it will create a major divide** – who has data and who not?
- What about communities, villages etc.- we need also **smart rural areas** – not only smart cities – we have smart continuums to have
- What about the so called **commons** – not yet discussed?
- Our **structures do not fit** anymore to solve complex problems: Potatoe: (1) FAO (2) UNIDO (3) WHO ……..(X) WASTE …..
- … same on national level
- Example **weather-stations** – negative-scenario!!!!

QUESTIONS
ANSWERS