SIVECO
Project: Progress™

PROGIS
Software GmbH

Fueger Consulting GmbH

EDELWEISS
GROUP
Hotels & Restaurants

GEOMATIC INTELLIGENCE

eAgriculture

Integrated e-Agriculture solutions for subsidies

Agenda

1. About the SAFER Consortium
2. Expertise in the agriculture area
3. Framework for subsidies integrated payment system
4. Framework for rural development payment system
5. Benefits
6. INOVAGRIA, farm management & INOVAGRIA Weather
7. Awards
8. Our proposal

1. About the Consortium

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Integrated eAgriculture solutions

- Our mission: **SAFER** (*Sustainable Agriculture Food Environment & Risk Management*); bridging the gap between farmers and consumers
- Possibility to operate large quantity of information with a reduced number of people
- Complete transparency regarding fund allocation and system usage
- To avoid situations of double funding, special checks have been implemented in the databases in order to avoid such situations
- Improved usage of human resources by implementing:
  - online application
  - using standard forms
  - automated evaluation system
  - automated selection
  - simple and intuitive reporting

Consortium's structure

- **PROGIS Software GmbH** and **GI** (Geomatics International ICT Technology company with GIS and orthoimages globally and daily with 1m resolution) and **Dipl.Ing. Walter H. Mayer** as Austrian Civil-Engineer for agriculture–forestry-environment and expert at the court for valuation of rural areas);
- **Edelweiss**, a group of companies for animal earmarks and hotels as education center in the Hohe Tauern Nationalpark;
- **Fueger Consulting GmbH** , Austrian Consultancy Company;
- **SIVECO**, large software company specialized in eAgriculture;
- **Local partners – to be selected.**

PROGIS Software GmbH Business Card

PROGIS Software - Austrian ICT & Consultant Company specialize in Agriculture

Areas of competence:

Agriculture: Farmers or group of farmers or entire countries are managed, with GIS and maps, farm-, forest-management, logistics, chain integration, precision farming, land consolidation etc.

Forestry: with GIS and forest maps based on ortho-images forest inventory system based on Relaskop-measurements and automatic stocking- or growth-calculation and the entire forest management is done.

Logistics: Integrates the entire chain from farmers, machines and drivers, suppliers and buyers, service providers and even banks or insurance companies if wanted to optimize all the processes with a trust center® in background.

Environment- and Risk-management: Farmers and foresters influence the environment and natural risks. Optimized model – planned and implemented with WinGIS and EnvirOffice – will create new services.

Fueger Consulting GmbH Business Card

Fueger Consulting GmbH - Austrian consulting firm that focuses on strategic projects which have a **nation-wide scale and a large social impact**.

Broad spectrum of expertise in **customized IT solutions across a wide range of business sectors: eAgriculture, eLearning, eHealth, eCustoms.**

Partnerships- based business model.

Core geography: **North Africa, Middle East, Gulf Region, and the Central Asia.**

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SIVECO Business Card

SIVECO

- the leading software house in Romania
- one of the largest Software Development & Integration companies in Central & Eastern Europe.

Long term development = stability & reliability

- 26 years of growth
- Total revenue: 34 mil. EUR in 2017
- 400+ employees worldwide in 2017

Outstanding customer base and leading references

- +3,550 successful projects in 27 countries in Europe, Middle East, North Africa, CIS area

Over 200 national & international awards

Regional leader in eLearning / Training, eAgriculture, eCustoms, Business Solutions, eHealth, eAdministration, eGovernment, Customized Application Development

SIVECO
Soft care contează

Fueger Consulting GmbH
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International Presence

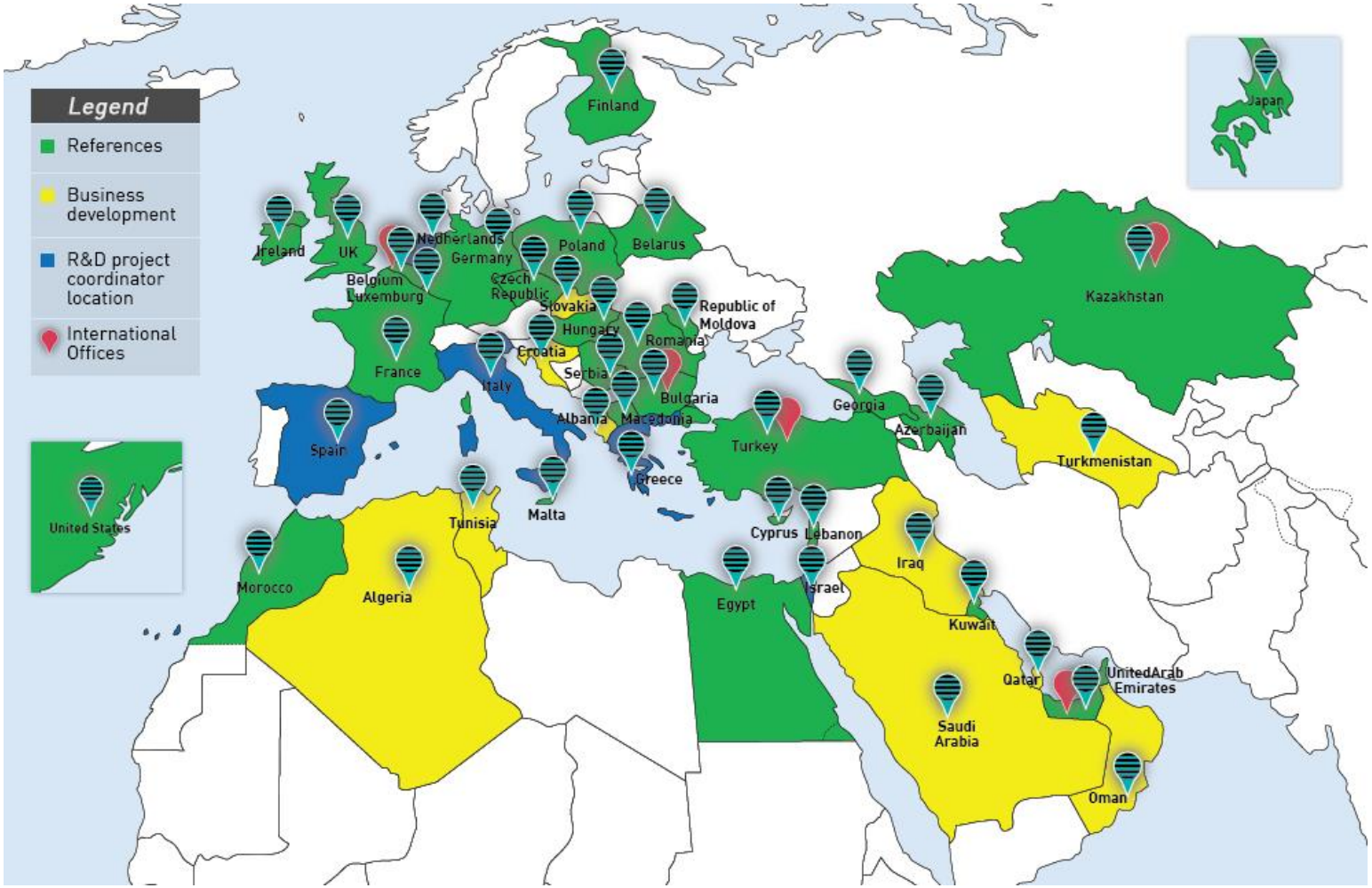
+1700 customer sites

27 countries

4 continents

+3,500 projects

4 international offices:
- ✓**Brussels**
- ✓**Dubai**
- ✓**Astana**
- ✓**Ankara**



Top Quality

Quality Management System according to ISO 9001: 2008 standard - AFNOR Certification

✓**International Star For Quality -** GOLD Category, Geneva, October, 2005

✓**Arch of Europe For Quality And Technology**– PLATINUM Category , Frankfurt, February, 2006

✓ **Informational Security Management System** - according to ISO 27001:2013 standard, TUV Austria

✓ **IT Service Management System -** according to ISO/IEC 20000-1:2011 standard, SRAC CERT

✓ **Environment Management System** - according to ISO 14001:2004 standard, TUV Austria

✓ **Occupational Health and Safety Management System** - according to OHSAS 18001:2007 standard , TUV Austria

2. Expertise in the Agriculture area

Expertise in the agriculture area

SIVECO is the leading developer company of information systems that target the area of Agriculture, covering the following main projects/areas:

1. **Subsidies integrated payment system**
   Client: Romanian Payments and Intervention Agency for Agriculture
   Centralized system for direct payments – land declaration and usage, crops, animals; agro-environment, market regulation, milk quota, etc.

2. **Rural development subsidies payment system**
   Client: Romanian Agency for Financing Rural Investments
   Centralized system covering Payments for rural development, investments, training, irrigation, etc.

3. **Integrated system for Budget, Investment, Procurement and Contracts System**
   Client: Romanian Ministry of Agriculture
   Centralized system at the level of Ministry of Agriculture.

Expertise in the agriculture area

4. **Integrated management system for land improvement activities**
   Client: Romanian National Agency for Land Improvements
   Centralized system that manages its own land improvements in the public or private state domain (geographic location, repair management, land use improvements, etc.)
5. **The Integrated system for agricultural registers**
   Client: Romanian Local Public Administration structures, i.e. City halls
   Integrated management system for declarations of private agricultural farms (declaration, payments, etc.)
6. **Integrated system for farm management – INOVAGRIA (own product)**
   Client(s): Farmers
   System for managing the activity of an agricultural, vegetable or animal farm
   INOVAGRIA Meteo – mobile app for weather forecast and specialized agro parameters. The application provides warnings and recommendations with regards to agricultural works

3. Framework for subsidies integrated payment system

Framework for Subsidies integrated payment system

System covers the following:

- Farmer's declaration, surface area used, animals held
- Payments for farmer request (examples):
  - area and crop schemes
  - support for agroenvironment
  - support for organic farming
  - animal schemes
  - animal welfare scheme
  - national schemes (eg: fuel subsidy)
  - market measurements and milk quota
- Payments are founded both from the national funds and European funds (European Agricultural Guarantee Fund and European Agricultural Fund for Rural Development)

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Framework for Subsidies integrated payment system

1.45 million farmers in the database

1 million payment requests processed annualy

3 billion Euro yearly payments

Key facts
Subsidies integrated payment system for Romania

1,670,000 agricultural physical blocks (1 agricultural physical block includes minimum o parcel), 61% of the total agricultural area

6th country in Europe, after France, Spain, Germany, UK, Poland and before Italy, in terms of agricultural area

Payments for 11 million animals

+ 750,000 external users

+ 4,000 internal users

Main functionalities of the system

- Online application submission
- Farmer Registration - farmers, farms and agricultural holdings;
- Taking over the farmers aid applications and of any other applicants for area and animals aid payments
- Records of geographic and alphanumeric data regarding the areas declared by farmers
- Register of all the documents received from farmer or generated in the system, regarding aid application
- Performing both administrative controls and on-the-spot-checks
- Calculation and authorization of payments per farm, including quality control and audit activities
- Effective execution of payments to farmers
- Payments accounting - standard accounting procedures based on the expenditure and revenue accounts

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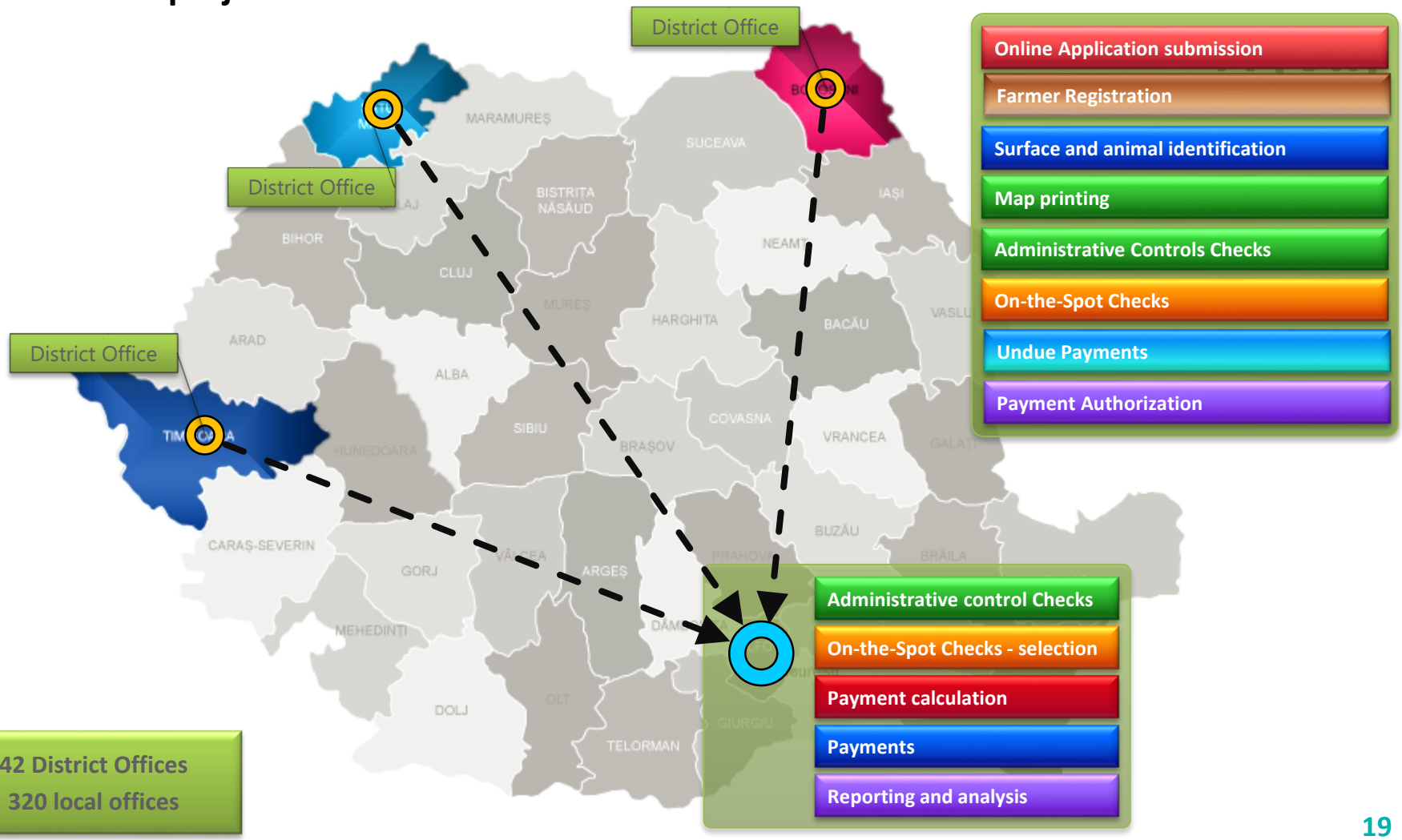
Framework for Subsidies integrated payment system

Reference project in Romania



Framework for Subsidies integrated payment system

General flow

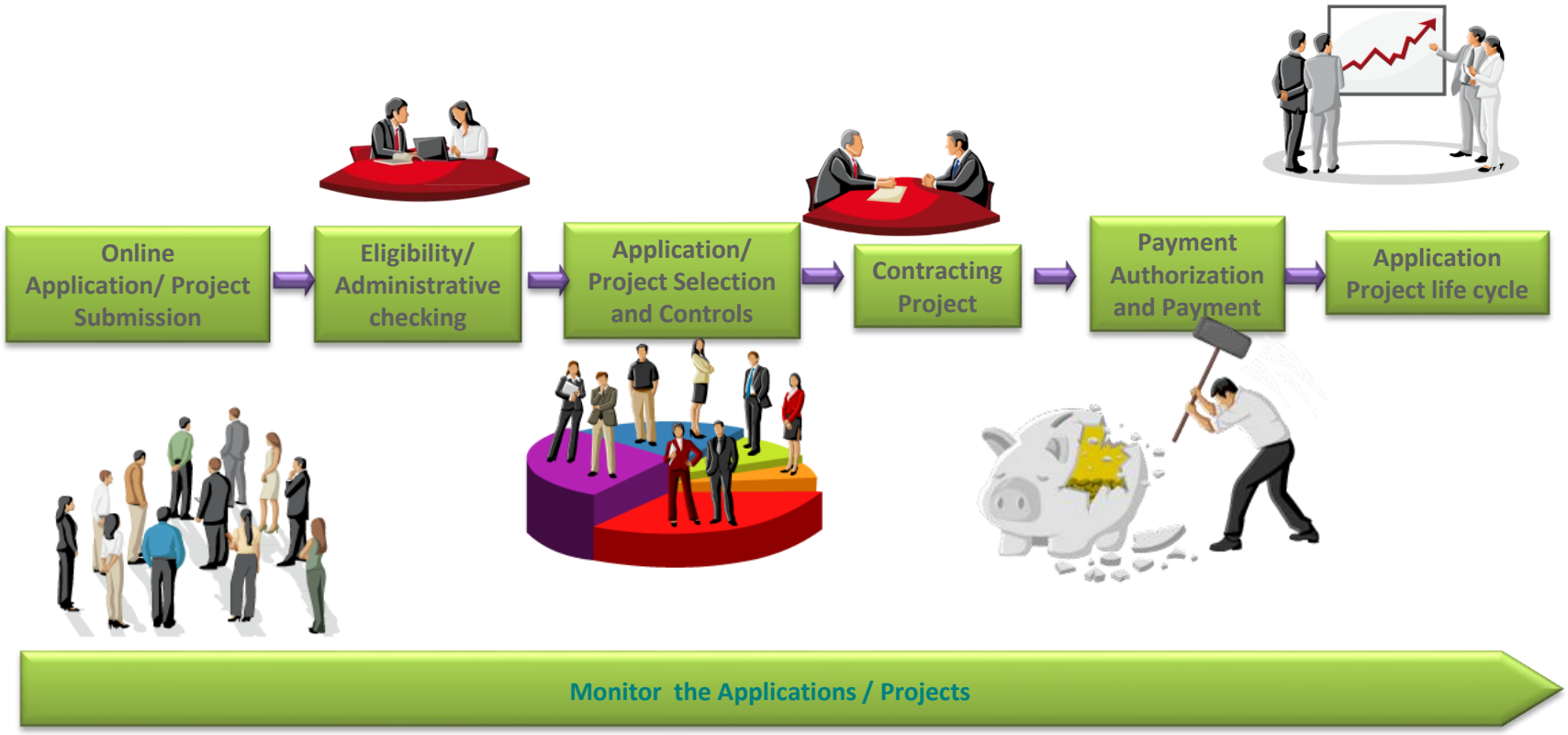
- Online submission of Applications
- Farmer Registration
- Land Parcel Identification
- Eligibility/ Administrative checks
- Application selection and Controls
- Paymanet Calculation
- Payment Authorization & Payment Execution
- Business Analysis
- Farmer Account

Monitor the Applications life cycle

4. Framework for rural development subsidies payment system

Framework for rural development subsidies payment system

General flow



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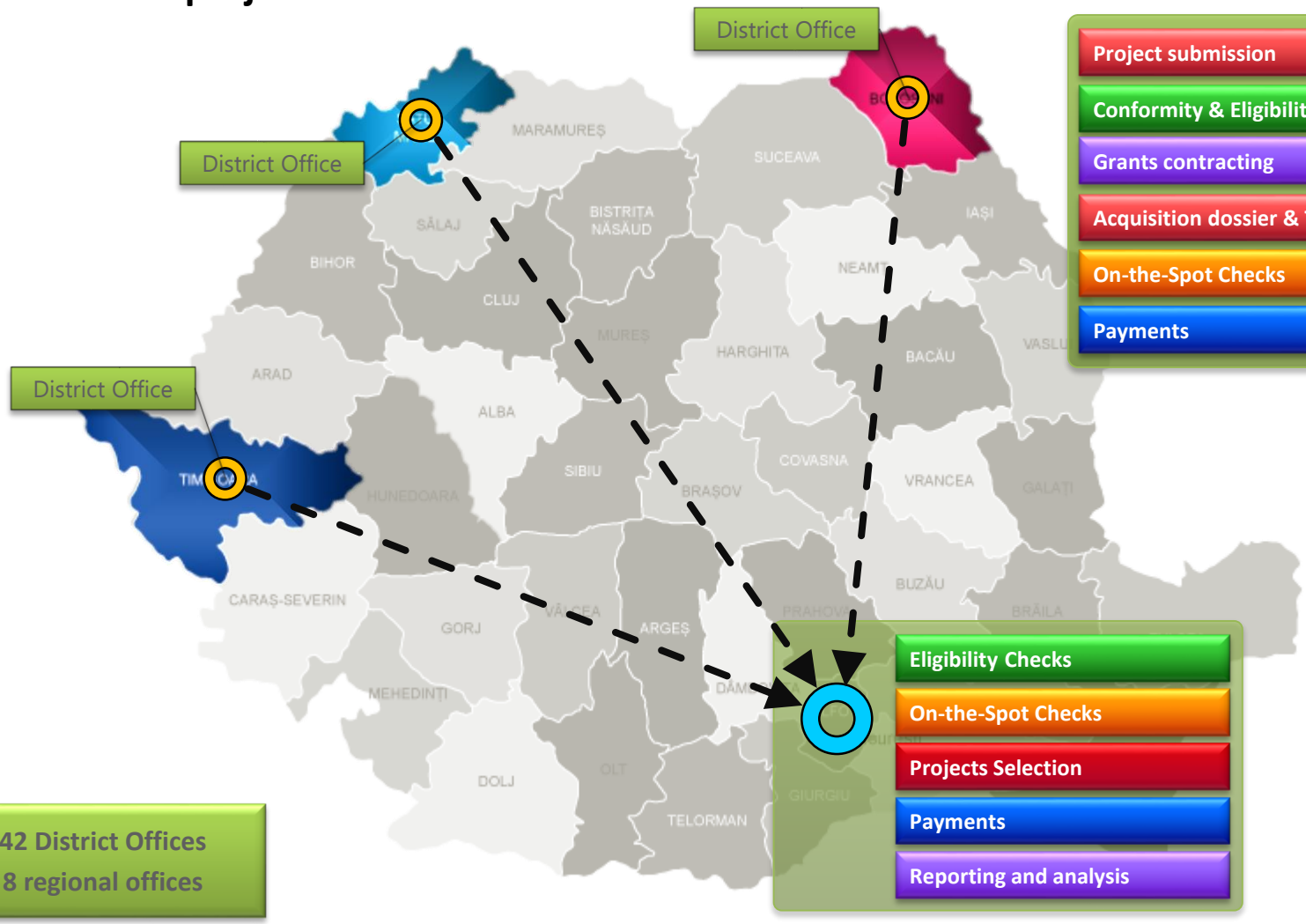
Framework for rural development subsidies payment system

Reference project in Romania



42 District Offices
8 regional offices

Framework for rural development subsidies payment system

The system covers the following:

- Requesting funding for the submitted project
- Payment for (examples):
  - investment projects in the rural area for farmers
  - supporting semi-subsistence farms
  - setting up producer groups
  - setting up non agricultural activities
  - support for the creation / modernization of fruit growing holdings
  - first forestation of agricultural land
  - support for the creation and development of micro-enterprises
  - encouragement of tourism activities
  - village renewal and development, improving basic services for economy and rural population and upgrading of rural heritage
  - implementation of local development strategies

5. Benefits

Benefits

- **Rigurous control of the fund allocation**
- **Transparent system** that facilitates access to information
- Facilitating **citizens' access** to governmental services
- **Unique identification** and registration of farmers

Benefits

- **Automated detection of non-compliant applications**, from incipient phases
- **Non-conformities detection and control**
- **Avoid situations of double funding**, special checks can be implemented in the databases in order to avoid such situations
- **Improved usage of human resources** by implementing:
  - ✓ online application
  - ✓ using standard forms
  - ✓ automated evaluation system
  - ✓ automated selection
  - ✓ simple and intuitive reporting

Benefits

- **Centralization of information** for collecting, processing, interpretation and reporting to interested parties
- **Reduce the bureaucratic** activities of the employees in favor of strictly professional ones
- **Easy access** of solicitants or beneficiaries to the electronic information
- **Substantial reduction of waiting time** of beneficiaries of the subsidies

6. INOVAGRIA – farm management system

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Why a software application for farmers?

Effective costs management :

- costs associated with the consumption of materials (fuel, seeds, fertilizers, herbicides)
- costs with staff assigned to specific agricultural activities

Lack of specialized solutions that **allow integration with existing ERP / financial accounting / payroll**

Efficient planning of agricultural works

Tracking the work activities during execution and compare to the planned

Planning and implementation on time of crops operations is carefully thought processes of the target market segment.

The main problems faced by farmers are:

Profitability analysis by correlating costs with revenues, including income from grants

Respect the rules on fertilization of agricultural land policies so as to ensure compliance with acceptable concentrations in Europe

Management of land owners and lease contracts and payments owed to those contracts

Compliance with the rules on crop rotation for each type of crop farming to increase productivity

INOVAGRIA

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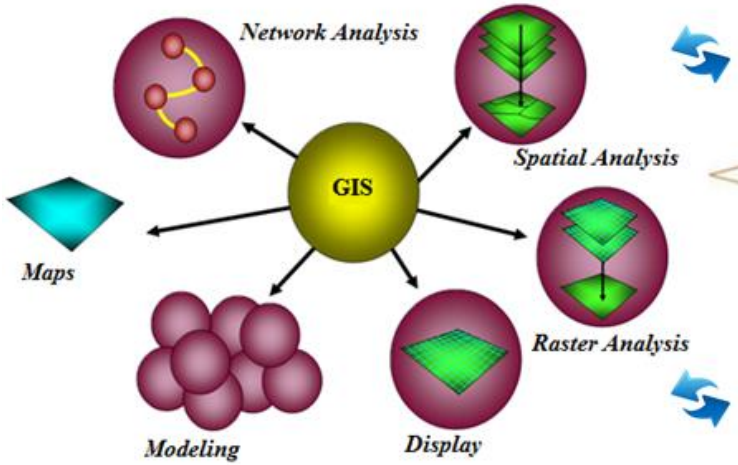
INOVAGRIA
farm management system

Planning Agricultural activities

Agricultural Works Execution

Management of storage and conditioning activities



Agricultural Land Administration

Progress reporting for Agricultural Activities

Mobile

Lease contracts

Monitoring Agricultural Machinery

Sensors

Cost Monitoring

INOVAGRIA

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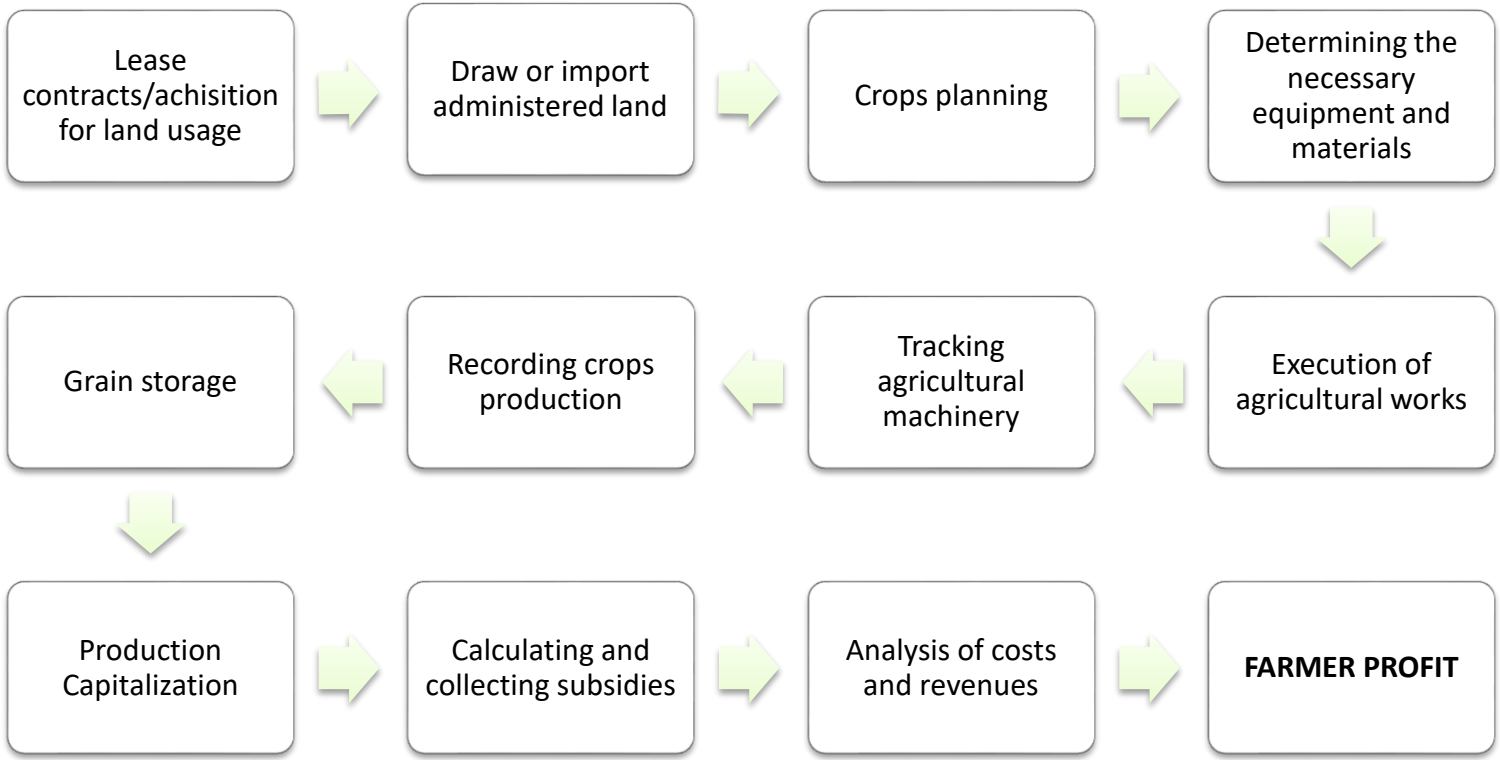
INOVAGRIA
farm management system

Farmland	• View and Map location • Checking land features on the map
Lease contracts	• Easy access to important data in lease contracts • Checking and remaining payments made under a lease contract
Agricultural activities Management	• Easier crop planning • Checking achieved values
Fertilization Management	• Tracking the level of individual land fertilization and calculating additional requirements depending on the varieties of culture
Crop Rotation	• Identification of future crops recommended, based on the crops history and crop rotation scheme that it has been set by the farmer
Normative Management	Automatic calculation of necessary materials, human resources and equipment depending on the type of culture and administered surfaces
Subsidies management	• Automatic calculation of the level of subsidies to be received from APIA according administered surfaces
Integration with agricultural machinery	• View registered information of equipment present on agricultural machines: on a map, route traveled, fuel consumption, etc.

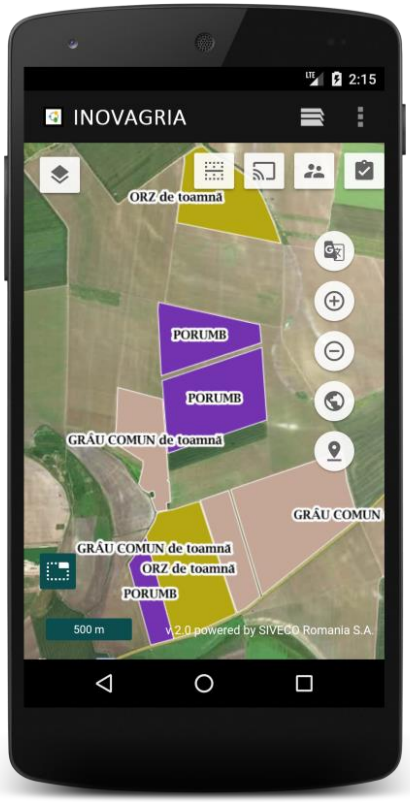
INOVAGRIA

INOVAGRIA farm management system

Workflow across applications



What are the benefits of INOVAGRIA solution?



- The possibility of integration with ERP software or other existing solutions
- Integrated solution with existing electronic systems on agriculture
- Increasing the profit
- Affordable solution and mobile environments: tablet, Smartphone

- Identification of material and fuel losses
- Crops evolution registration
- Assessment of the water in case of drought and irrigation works necessary
- Identification of land with low production
- The characteristics of the soil by fertilization history

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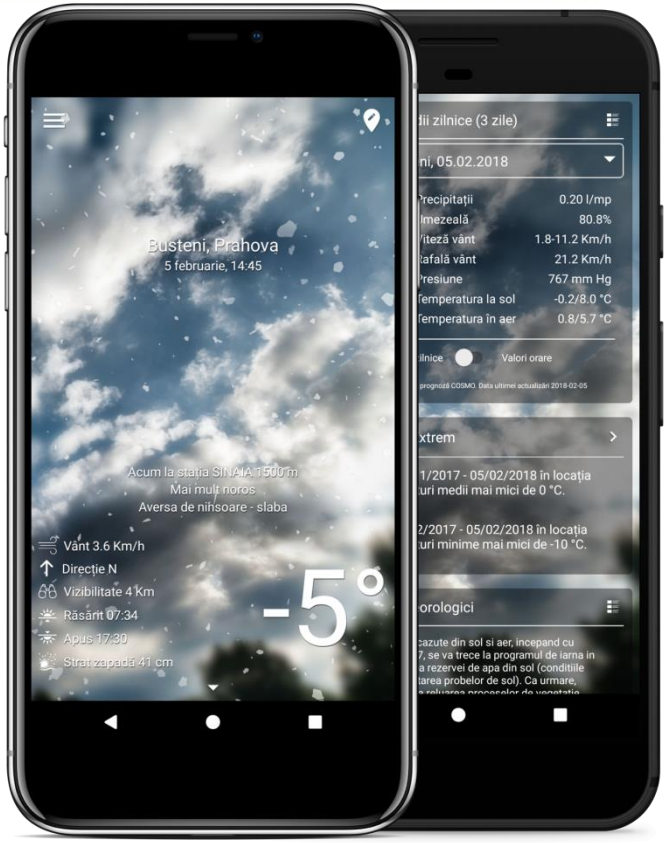
INOVAGRIA – Weather

- Weather and specialized agrometeo information for any location in Romania, anywhere, anytime, directly on the phone
- Meteorological parameters measured from hour to hour for each weather station
- Specialized forecast for the next 24 hours and 10 days
- Agrometeorological Bulletin
  - features agrometeo
  - the state of crop vegetation
  - specialized recommendations
- Recommendations spraying phyto-sanitary products at hourly level for the next 3 days
- General and immediate warnings at the local level
- Risk phenomena (heat, cold, frost)
- Meteorological history



INOVAGRIA

7. Awards

Awards

European IT & Software Excellence Awards

- **Winner** of the Government Solution of the Year category: Implementation of the Processing System for Rural Development Applications at the Payment Agency for Rural Development and Fishery, 2013
- **Winner**, in the Vertical Market category: IT system at the **Romanian Payments and Intervention Agency for Agriculture**, 2010

Computerworld Honors Program, Washington

- **Nominee** "Computerworld Honors Program" – Agency for Payments and Intervention in Agriculture, 2011

International Project Management Association

- Finalist in the Big-Sized Projects category: IT system at the Romanian Payments and Intervention Agency for Agriculture, 2009

Our proposal

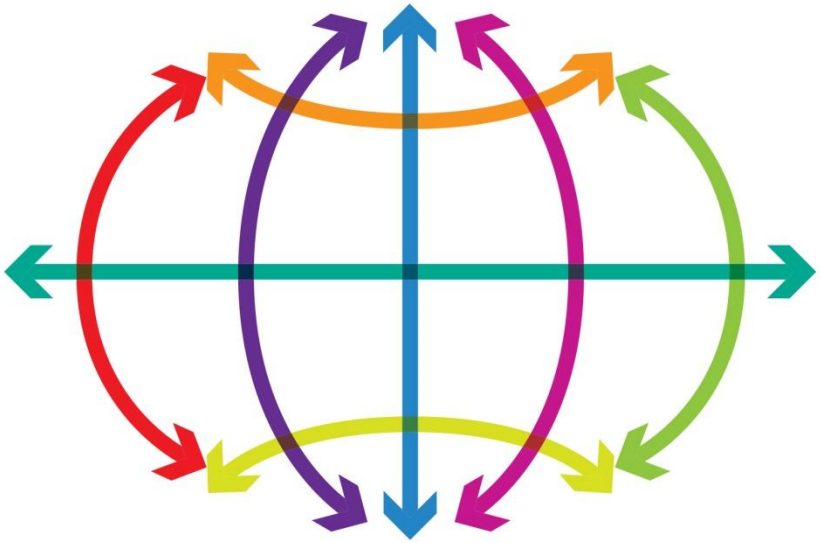
1. **Offering our extensive expertise and experience** to replicate and develop complex nation-wide projects in the area of eArgiculture;

2. **Supporting digital transformation** - Our solutions will help enable the digital transformation of the agricultural sector;

3. **We are inviting the Agricultural Bank of Egypt to join the SAFER consortium** and support the agricultural sector of Egypt for the transition towards the 21st century.

4. **Offering an advantageous method of financing (Softloan)** through Austrian funds.

Thank you!



SIVECO Romania

www.siveco.ro

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Farmer Registry

Farmers Registry

Farmers registry – system for management of data regarding farmers, at the level of:

- residence address
- banking information (account, bank)
- data regarding the type of the request submitted
- possibility of pursuing transactions (Audit Trail)
- integrated with the registration system for financing requests
- parcel information (precise location using map coordinates, alphanumeric parcel characteristics and all related data)
- GPS measurements of farmer parcels

Farmer Registry

Farmers Registry

Specific characteristics:

- allocating an unique ID to each farmer
- import and management of the farmer's personal data (individuals or legal entities)
- details related to agricultural holdings
- list for parcels included in the farmer's agricultural holdings
- banking account details
- possibility of pursuing transactions (Audit Trail)
- integrated with the registration system for financing aid requests
- management of all famer parcels with attributes and spatial features

Farmer Registry

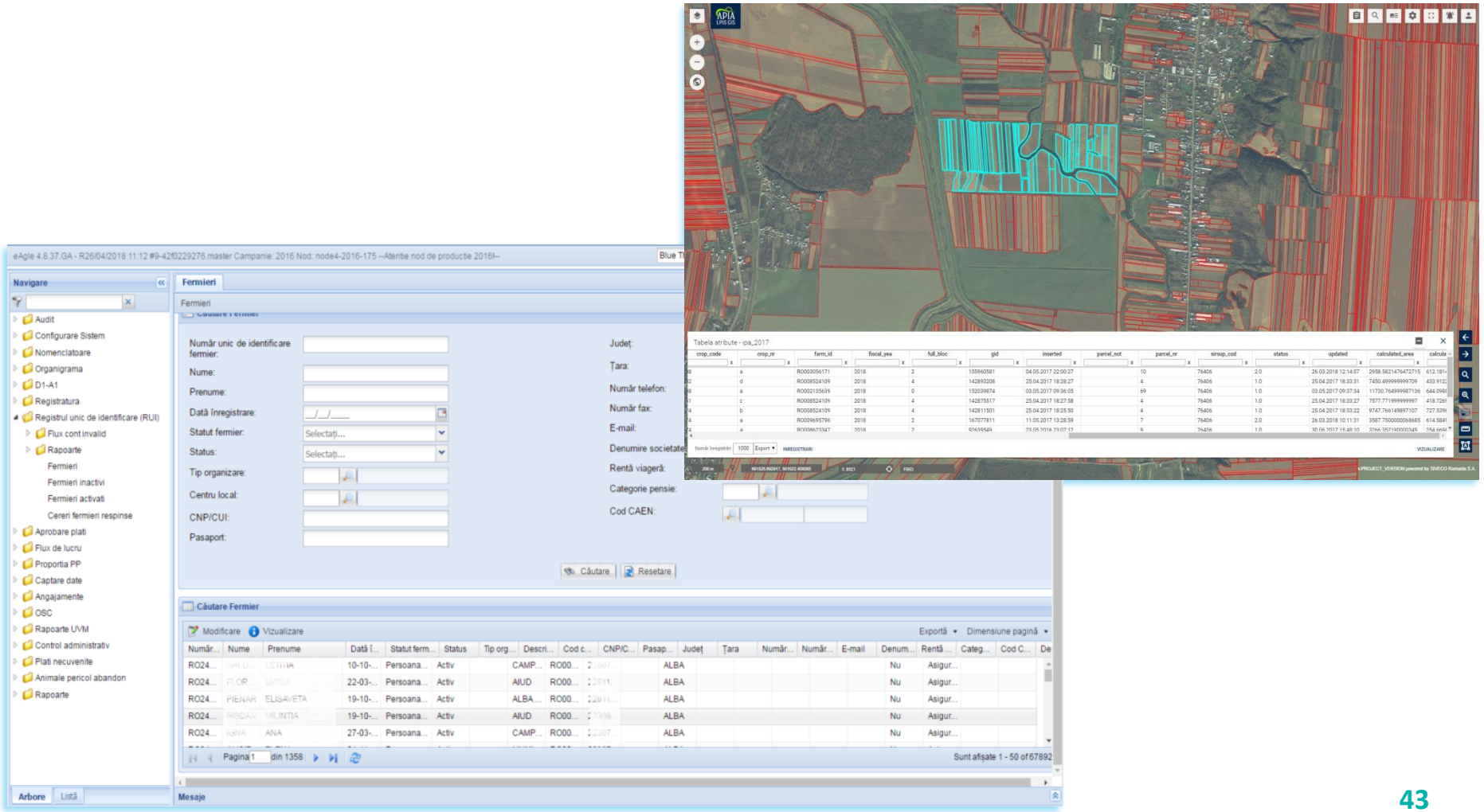
Farmers Registry

Workflows:

- Registration of farmer`s data
- Modifying farmer`s data
- Registration of a request pertaining to a new farmer
- Change request for a farmer already included in the database
- QA/QC for spatial data precision
- Reference layer management (yearly campaigns)
- Farmer data control (GPS, Remote Sensing, Imagery Compliance, Spatial and Alphanumerical cross-checks between farmer data, Inconsistent data checks)

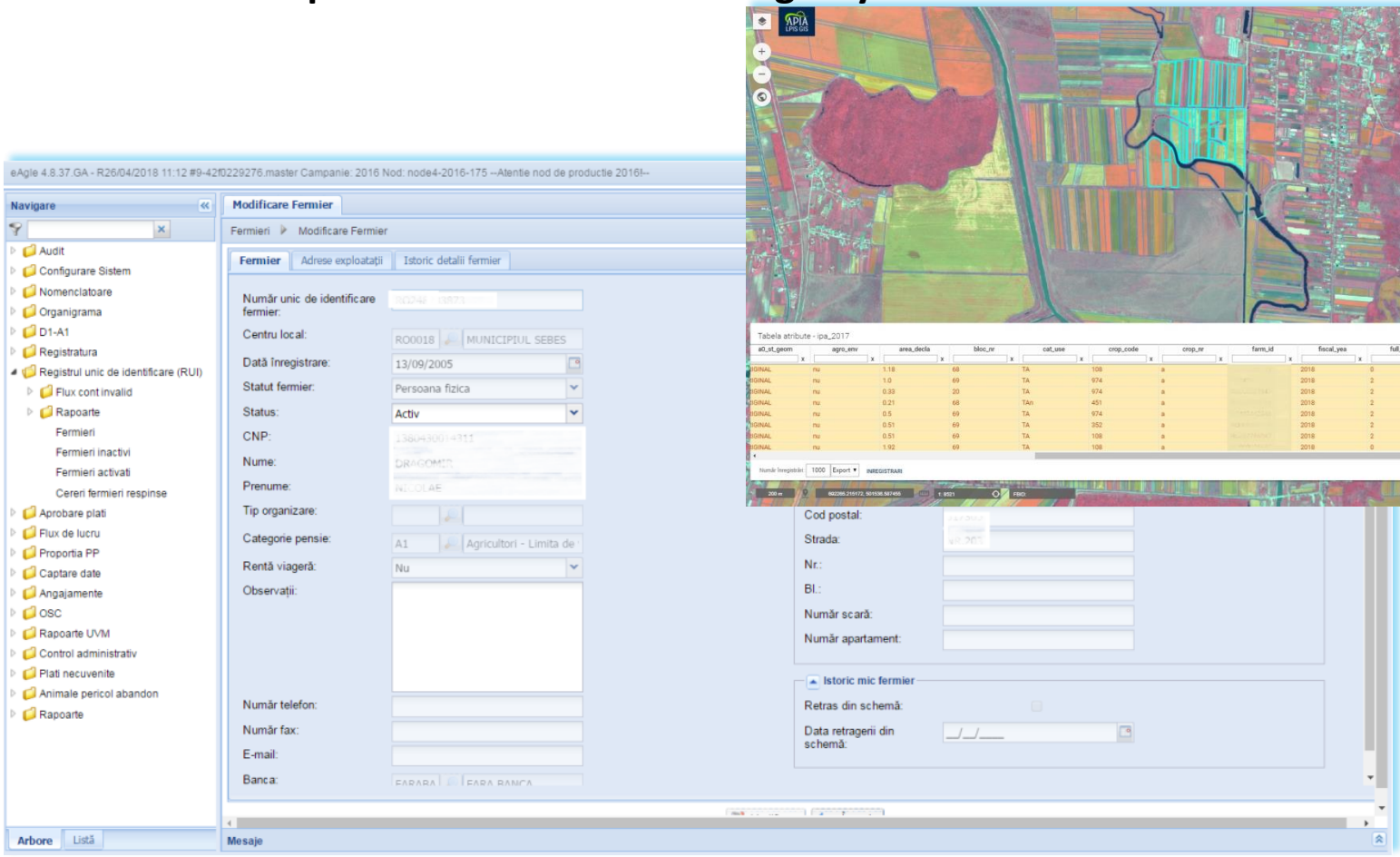
Farmer Registry

Farmer data representation in Farmer Registry and GIS Module



Farmer Registry

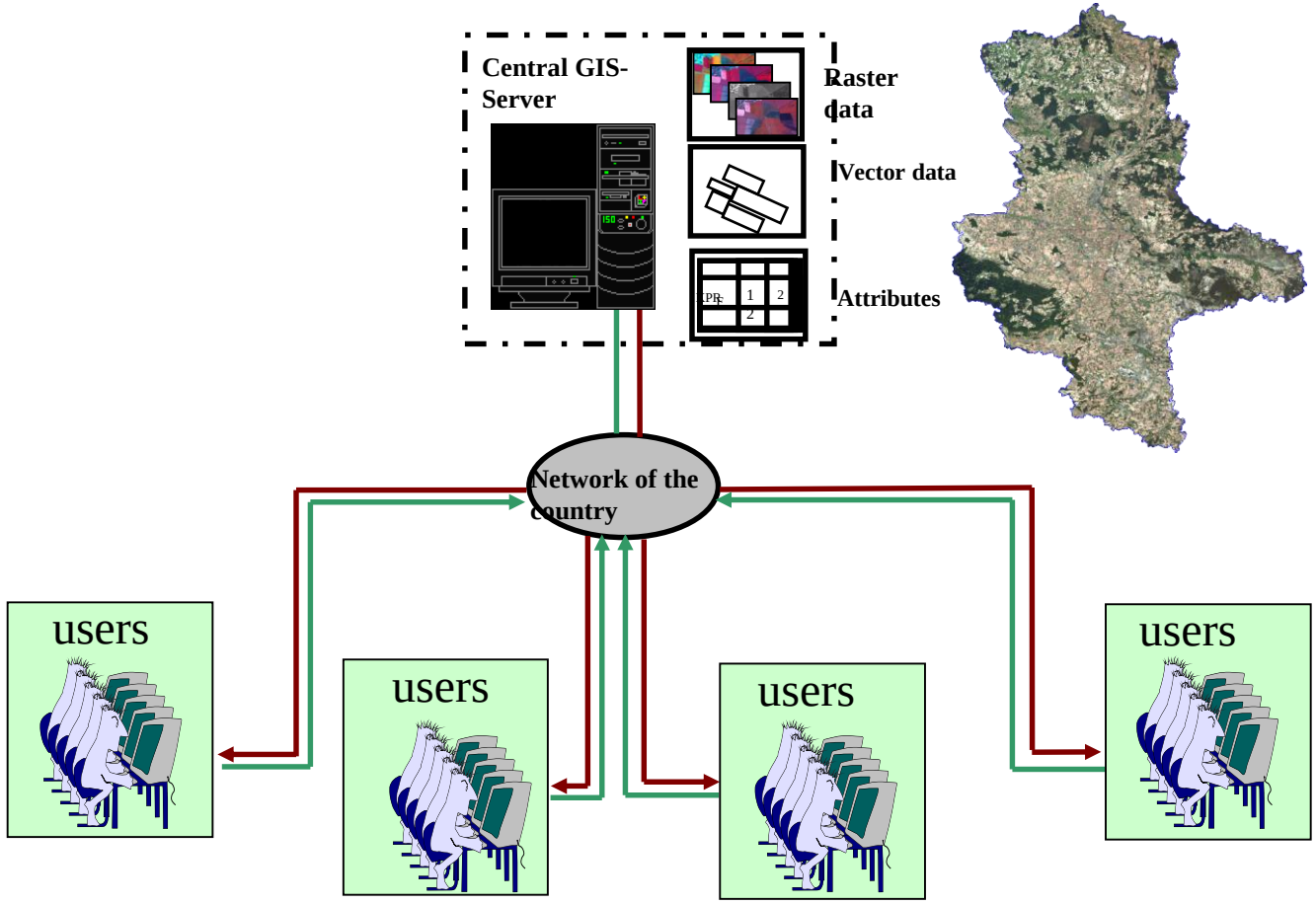
Farmer data representation in Farmer Registry and GIS Module



Land Parcel Administration System

- developed based on SIVGIS - proprietary product of SIVECO
- complete management of agricultural and non-agricultural areas within GIS system (Geographic Information System)
- integration with the ortographic plans or satellites images
- change of the physical blocks and parcels, in accordance with the findings following the controls
- maps printing (base maps, physical blocks and parcels, ortographic images)
- complete integration with the other modules of the Subsidies Integrated Payment System

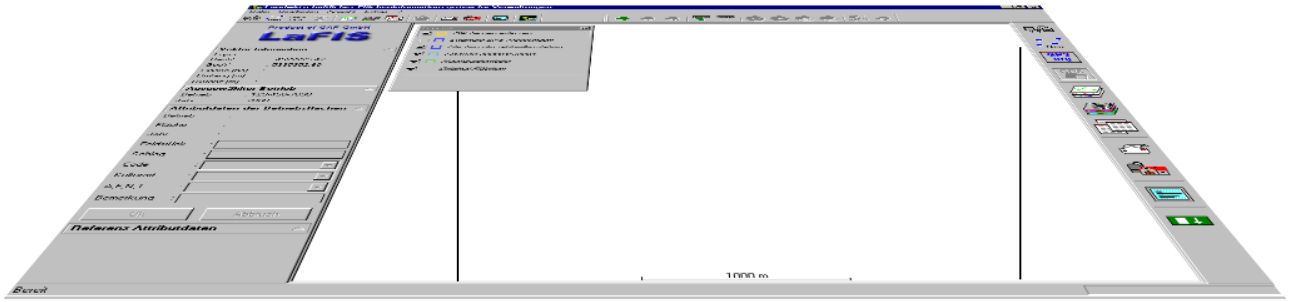
Land Parcel Administration System

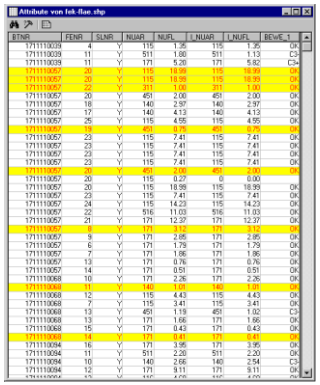


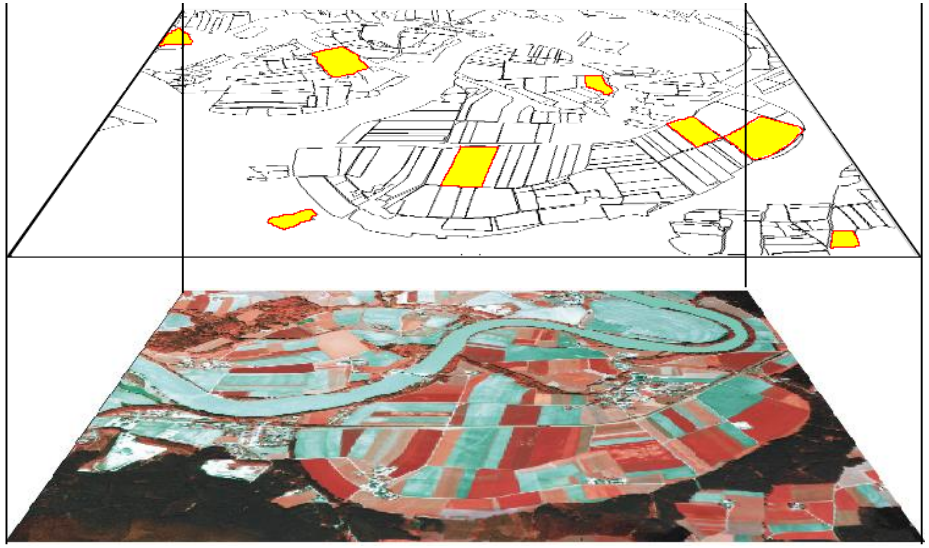
Land Parcel Administration System

Based on layers principle

- ✓Administrative data (roads, rivers, ...)
- ✓Vegetation data
- ✓Protected areea
- ✓Animal farms
- ✓Vegetable farms







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Business Analyzer

Key facts:

- Ensures the analytical and synthetic data processing, in real time
- Provides flexibility regarding the manner of arranging the desired data within reports
- Creates top-down/ bottom-up analyses
- Creates on-the-spot reports by selecting the chosen indicators
- Selects the data needed to be analyzed over various criteria
- Uses data from different sources
- Ensures table and graphic formats
- Supports the decision making process
- Performs quick analysis of a large volume of data
- Dynamically defines selection criteria

Business Analyzer

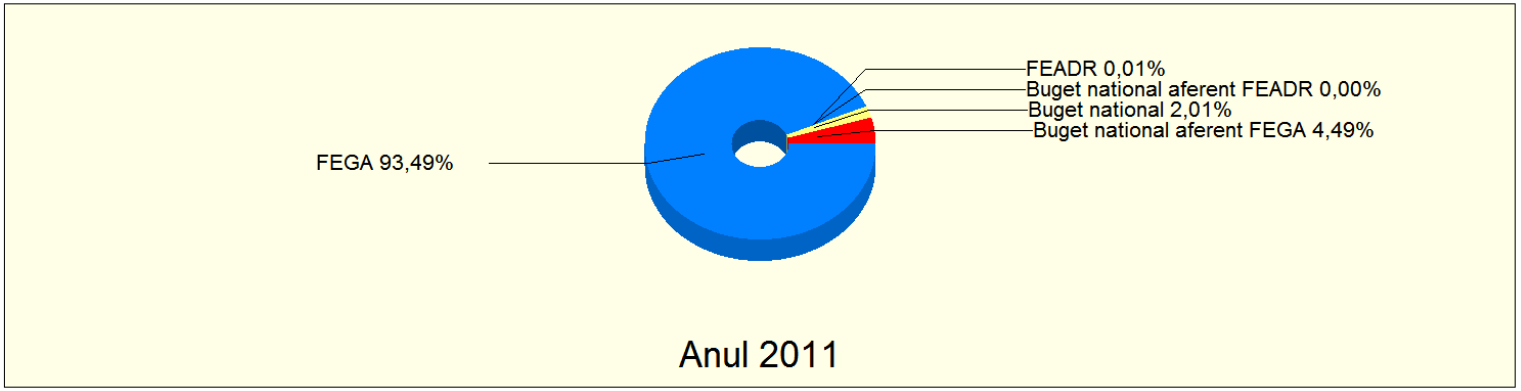
Analysis scenarios:

- pursuing the evolution in time
- analysis “What if…?”
- comparative analysis TOP-DOWN/ BOTTOM-UP
- comparative analysis forecasting scenarios

Analysis of executed payments detailed on payment schemes

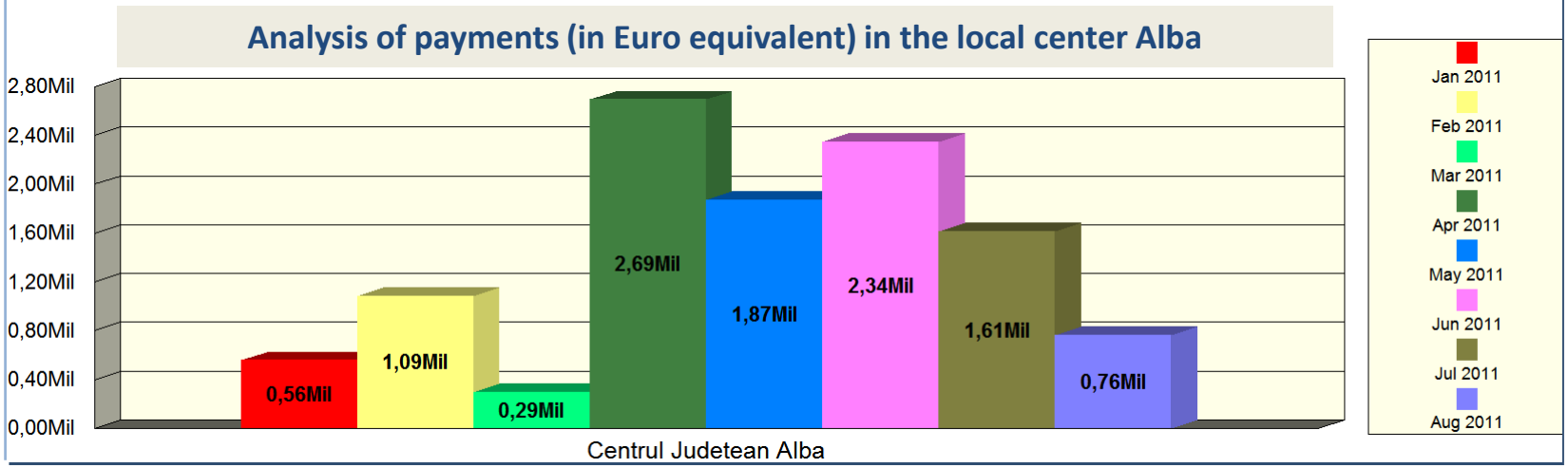
Total Tip document / Valoarea platilor efectuate in RON / Total centre judetene	Anul 2011	Jan 2011	Feb 2011	Mar 2011	Apr 2011	May 2011	Jun 2011	Jul 2011	Aug 2011	Sep 2011
− Total fonduri de plata	599.508.754	21.955.497	70.408.043	37.426.538	28.497.147	30.646.036	41.836.841	88.882.108	61.990.220	75.447.115
+ Buget national aferent FEGA	26.896.499	33.209		3.480.422	153.559	173.050	431.791	2.874.252	417.154	1.060.416
+ Buget national	12.045.453	1.056.836	700.923	421.580	109.635	55.084	408.765	1.777.810	188.438	1.136.982
+ Buget national aferent FEADR	11.152		3.288	374	178	371	458	1.972	3.146	483
+ FEADR	48.726		14.931	1.646	480	1.218	2.067	8.985	13.303	2.026
+ FEGA	560.506.923	20.865.452	69.688.901	33.522.516	28.233.295	30.416.314	40.993.760	84.219.089	61.368.180	73.247.208

Structure of total payments made, detailed on payment funds



Analysis of executed payments detailed on county centers

Total fonduri de plata / Valoare totala plati efectuate (echivalent EURO) / Total Tip document	Anul 2011	Jan 2011	Feb 2011	Mar 2011	Apr 2011	May 2011	Jun 2011	Jul 2011	Aug 2011	Sep 2011
− Total centre judetene	142.401.129	5.215.082	16.724.001	8.889.914	6.768.918	7.279.343	9.937.492	21.112.140	14.724.518	17.920.930
+ Centrul Judetean Vaslui	97.030.024	640.675	11.617.810	5.428.713	1.113.209	2.441.657	3.897.135	15.054.924	10.432.277	12.577.650
+ Centrul Judetean Alba	13.341.692	557.036	1.085.238	293.820	2.694.804	1.874.244	2.344.738	1.612.671	763.356	2.115.785
+ APIA -Centrul Judetean Arges	15.220.558	1.348.802	2.932.557	820.298	1.876.438	1.084.880	2.082.112	2.114.069	1.612.735	1.348.667
+ APIA Centrul Judetean Arad	16.498.426	2.668.570	1.083.691	2.335.685	1.083.924	1.875.663	1.612.697	2.327.873	1.897.416	1.612.407

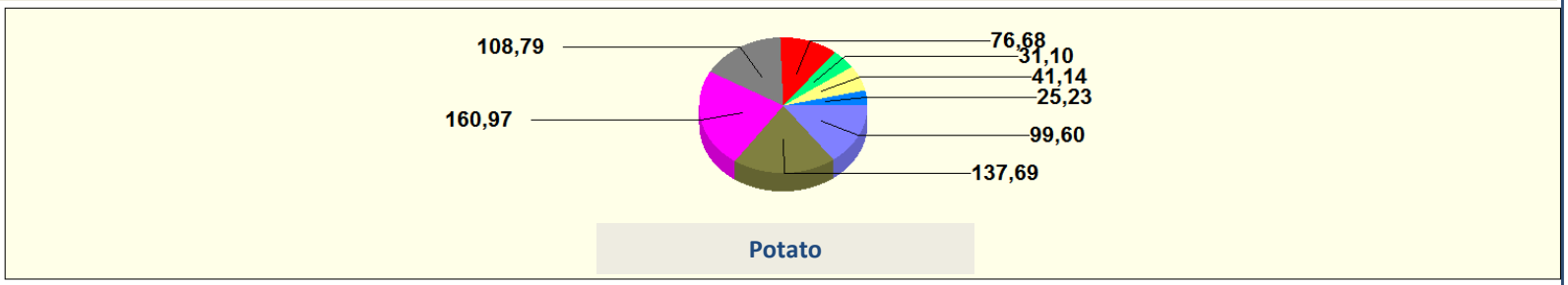


Cultivated area, detailed on counties and crop type

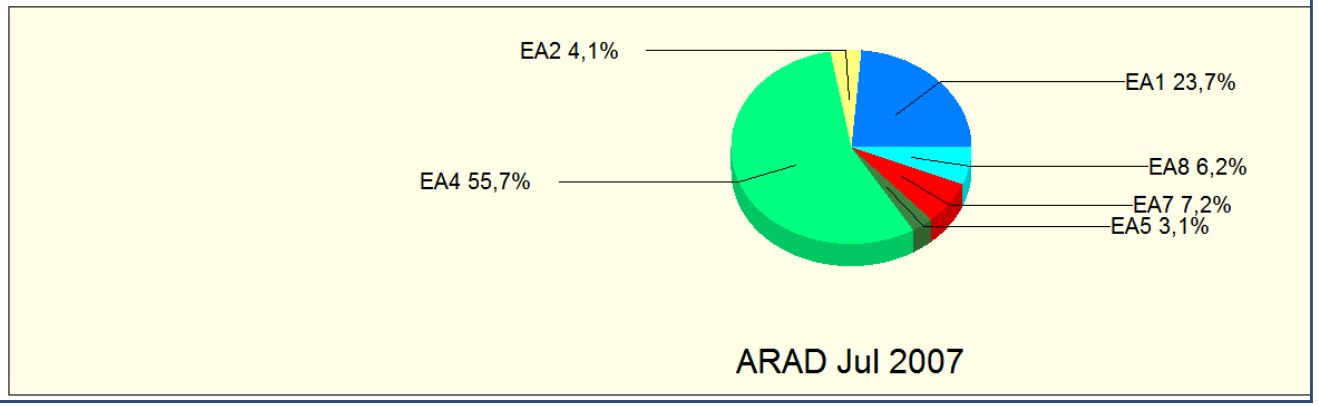
Total Categorii de folosinta / Campanie 2007 / Suprafata culturilor (hectare)	Total Judete	ALBA	ARAD	ARGES	BACAU	BIHOR	BISTRITA-NASAUD	BOTOSANI	BRAILA	BRASOV	BUCURESTI
– Total Tip cultura	9.602.736,71	190.253,04	319.217,12	199.836,35	152.581,14	326.951,02	201.024,89	267.534,65	335.456,18	171.981,52	12.492,93
Alte cereale pentru boabe	222,92	2,74	12,71	1,64	0,21	3,25	6,32	0,97	0,56	20,51	
Alte culturi de cartofi	2.164,87	18,39	16,55	3,75	80,74	59,31	59,09	29,34	0,50	327,75	
Alte culturi in teren arabil	21.237,74	9,14	443,97	192,11	310,83	1.575,98	363,14	2.900,15	8,74	350,96	54,74
Alte leguminoase pentru boabe	396,37	9,64	0,85		1,74	2,27	1,58	2,15		29,45	4,50
Alte oleaginoase	1.134,36	0,18	17,97		0,50	1,00		2,40			
Alte pepiniere	174,27	30,48	6,99	0,54	1,63	11,19	0,75	1,10	1,35	4,55	3,02

Categorii de folosinta (1) | Total Categorii | Campanie (1) | Campanie 2007 | Measure (1) | Suprafata cultur | Judete (8) | Tip cultura (1)

Cultivated area, detailed on counties and crop type - potato



The number of irregularities, detailed on counties and types of inconformities

Jul 2007 / Campanie 2007 / Numar de neregularitati	Total Tipuri de neconformitati la nivel de	EA1	EA2	EA3	EA4	EA5	EA6	EA7	EA8	EA9
– Total Judete	4.258	247	33	19	2.604	451	2	411	490	1
ALBA	67				42	10		4	11	
ARAD	97	23	4		54	3		7	6	
ARGES	152	11	1		114	2		13	11	
BACAU	134	1	3		112	4		2	12	
BIHOR	63	3			36	1		14	9	
BISTRITA-NASAUD	66			1	50	6		7	2	
BOTOSANI	116	10	1		76	14		4	10	1

The number of irregularities, detailed on counties and types of inconformities