



Romanian Cadaster and Land Registration System Developing a secure Land Rights System for Romania



FIG Working Week 2012

**Knowing to manage the territory,
protect the environment,
evaluate the cultural heritage**

Rome, Italy, 6-10 May 2012

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Introduction



- Romania – towards a modern Land Administration - Transition from Sporadic to Systematic registration
- The integrated Electronic Cadastre and Land Registry in Romania
- CESAR project financed by WB
- Conclusions

Major achievements



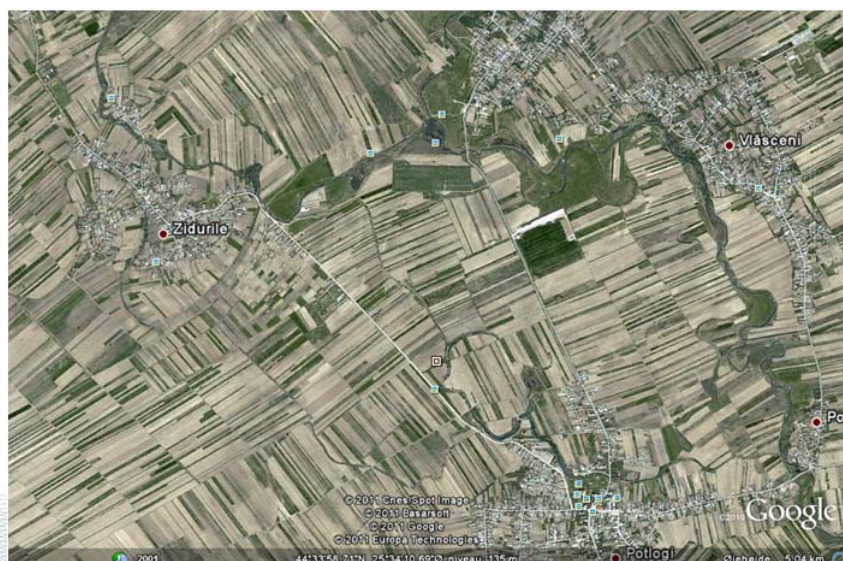
- Running unified institution for cadastre and land administration
- Full operational centralized IT system managing sporadic registration
- Start of systematic registration projects from both local and central level with (WB)
- Political and social awareness of limitations of current system

Major problems



- Land fragmentation (land reform / land management projects before the reform)
- Inconsistent land information as a result of land reform (lack of modern standards when land reform was started)
- Large areas with no cadastral information
- ...Limitation of the current sporadic registration procedure... risks on secure system

Land Fragmentation



Inconsistencies



Sporadic cadastre map



Romania Land Administration on Global map

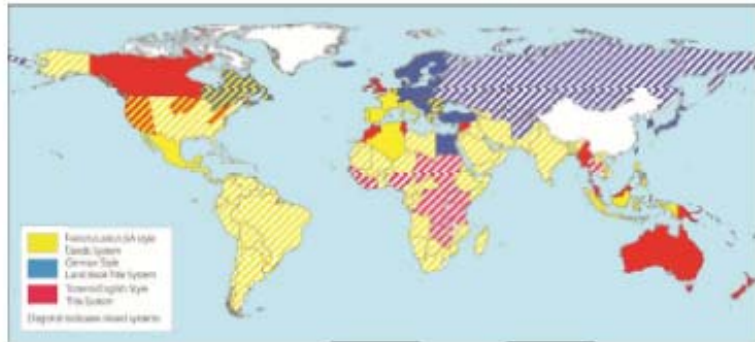


Figure 3. World map of land registration systems (after Enemark 2004)

Two Land Registration Systems before communist period



- Land Tile system established in 1870
- Deed system in the rest of the country

Merger of cadastre with the land registration activity



In 2004,

- The Government of Romania decided to merge the cadastre activity with the land registration activity,
- by reorganizing the cadastre activity managed by the former National Office for Cadastre, Geodesy and Cartography, and by taking over the land registration activity from the Ministry of Justice.
- The new agency:

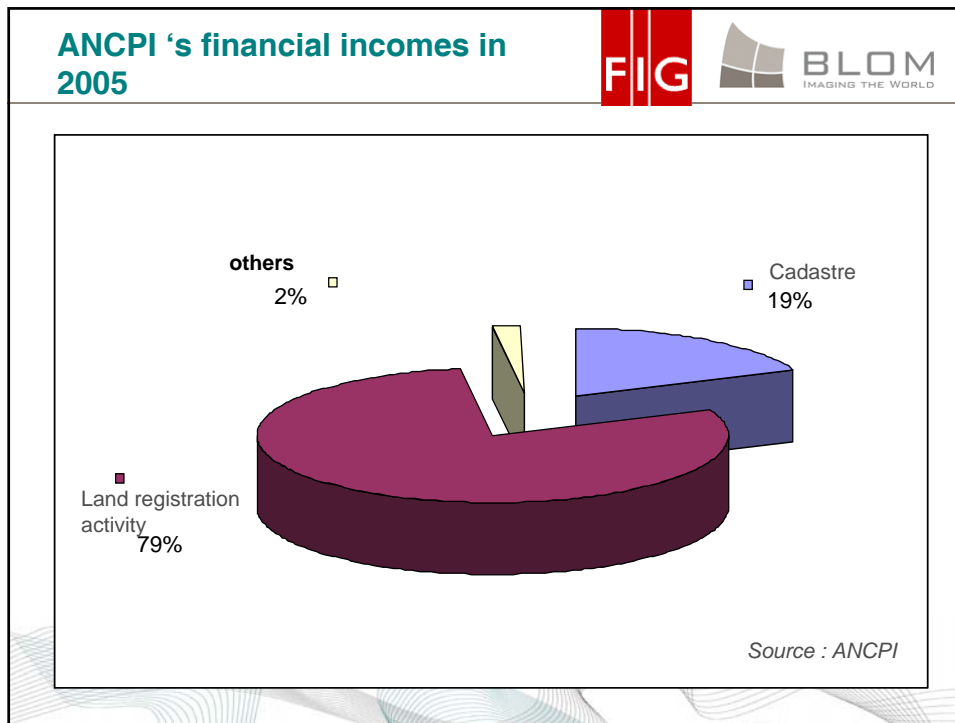
**NATIONAL AGENCY FOR CADASTRE AND LAND REGISTRATION
- ANCPPI -**

ANCPPI

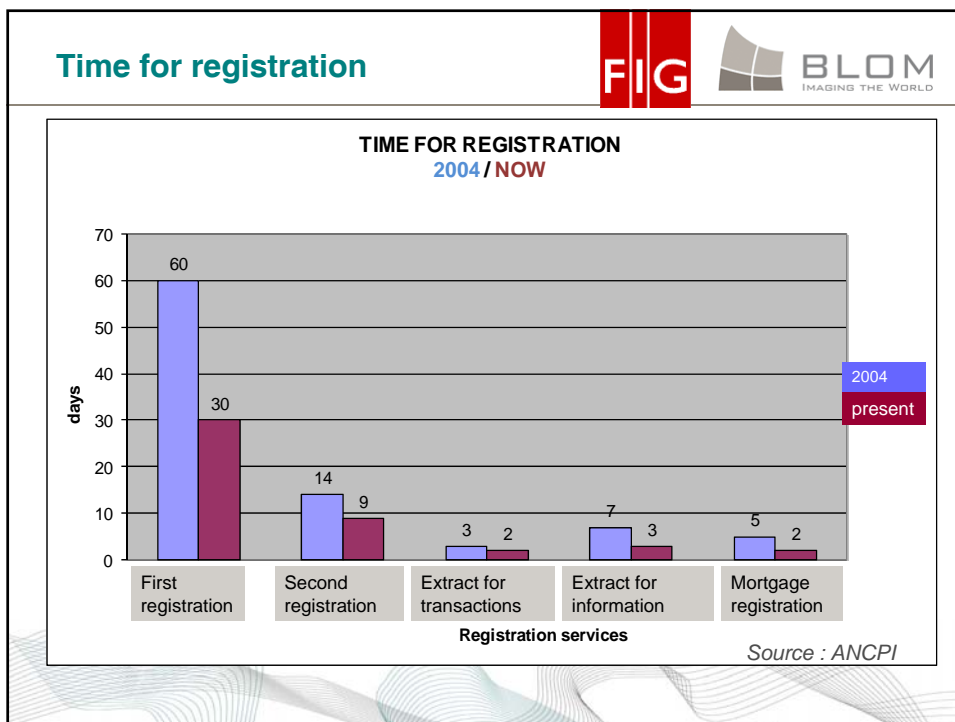
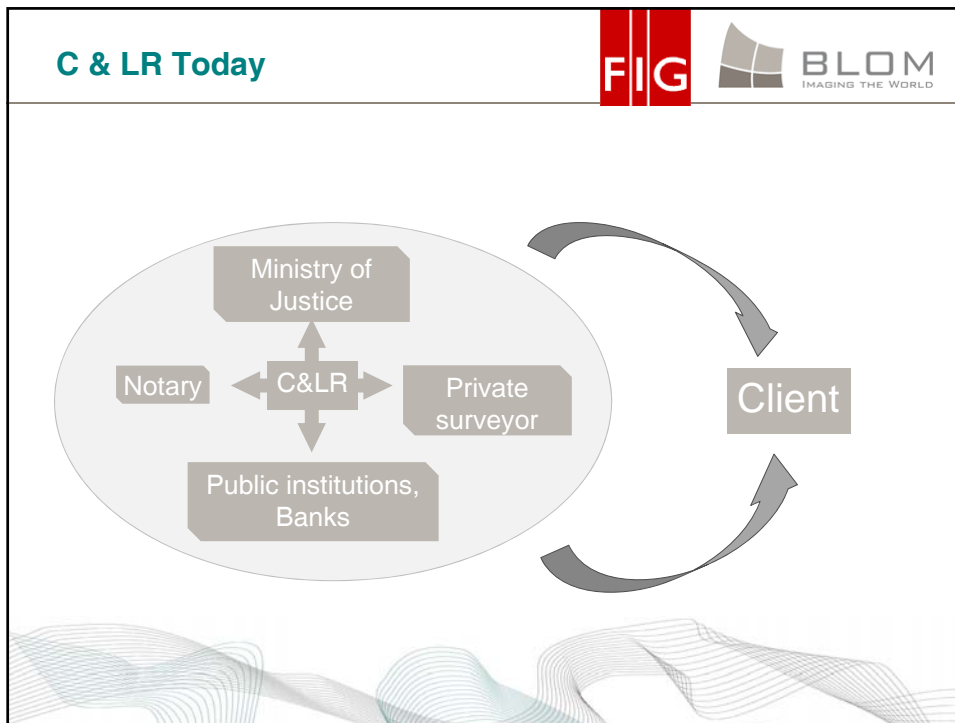


ANCPPI

- **Mapping, cadastre and land registration activities**
- Self – financed: 2004 - 2009
- State budget financed: 2009 - present



- ### C & LR before ANCPI
- Long registration time
 - Two applications for registration needed
 - Inconsistencies between cadastre and land books records
 - Double archives
 - Lack of financing resources



The integrated Electronic Cadastral and Land Registry



- Digitization of current daily documentation
- Data Conversion
- Local network and IT setup
- 42 cadastral offices and 145 land book offices throughout Romania



CADASTRE AND LAND REGISTRATION IT SYSTEM “e-Terra”



- Pilot - 2006
- Improvements - 2007-2008
- Rollout - 2009
- Rollout completed - 2010



What is e-Terra

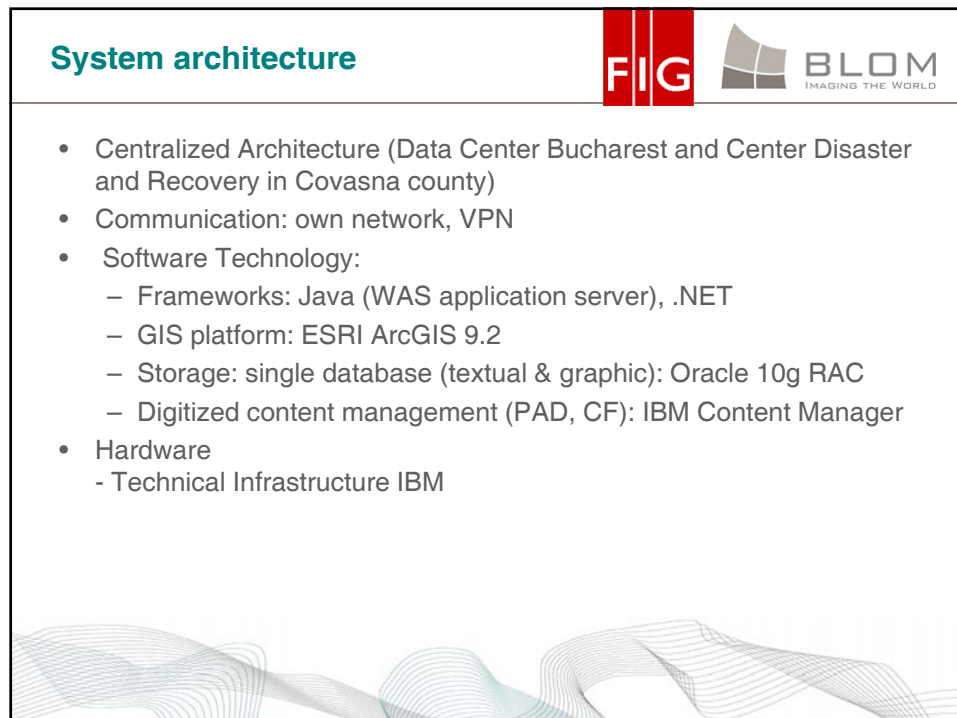
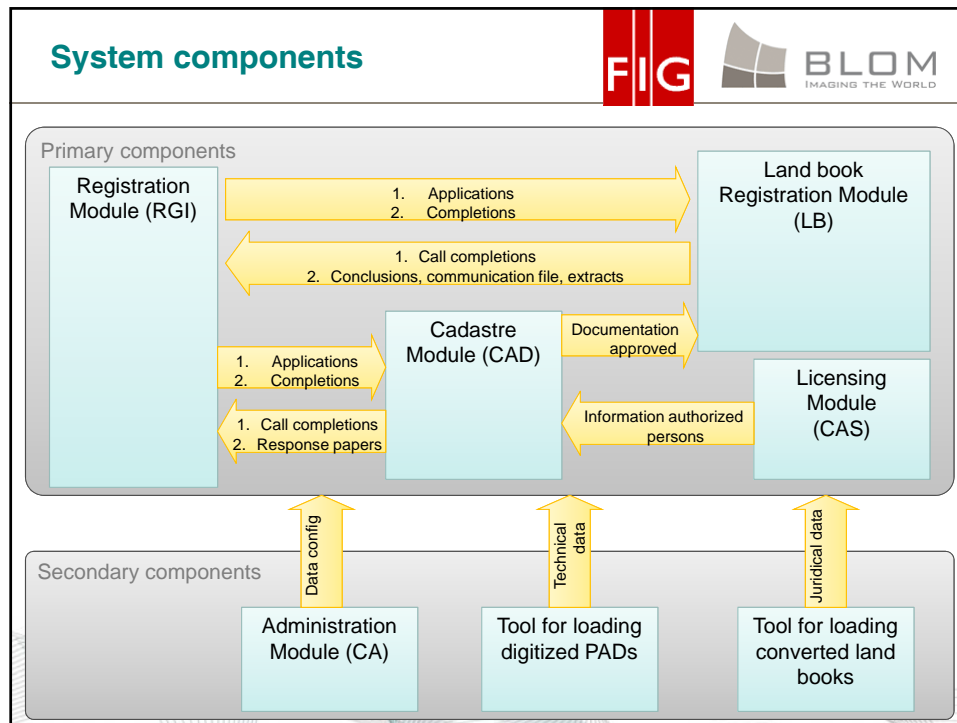


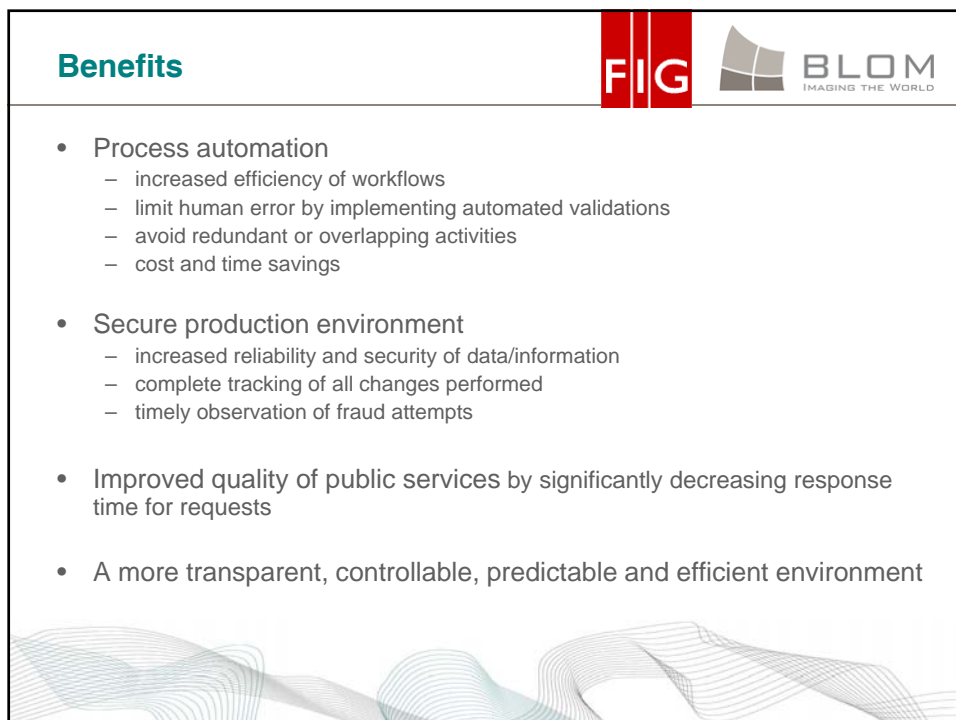
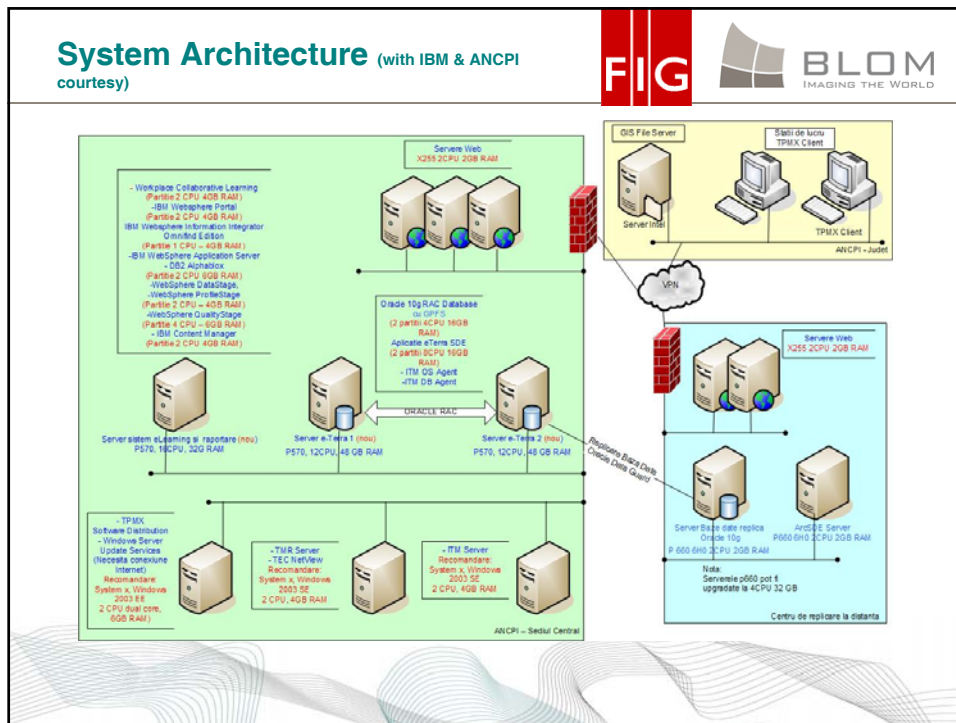
- Integrated computer system Cadastre and Land Registration of NACLR (production system)
- Currently used by approx. 2,000 employees in 157 offices and offices of Cadastre and Land Registration
- Ensures the operation of approx. 10000-15000 calls daily
- Developed by IBM Romania with more local partners(Blom) in between 2005 - 2006 (version 1) and 2007-2008 (version 2) and Rollout till - 2010
- Fully implemented in all country (now in Bucharest City)

Objectives of the system



- Standardization of processes
- Computerization of the main flow of NACLR/ Regional offices
- Automation of certain processes (where technically possible)
- Streamlining operations
- Increased data security and transactions
- Early detection of attempted fraud
- Create premises for greater transparency - on-line
- Improving the capacity for interoperability with third parties

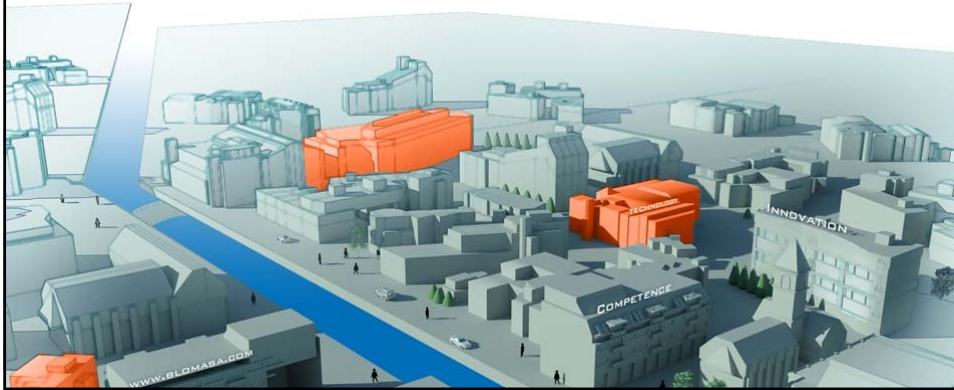






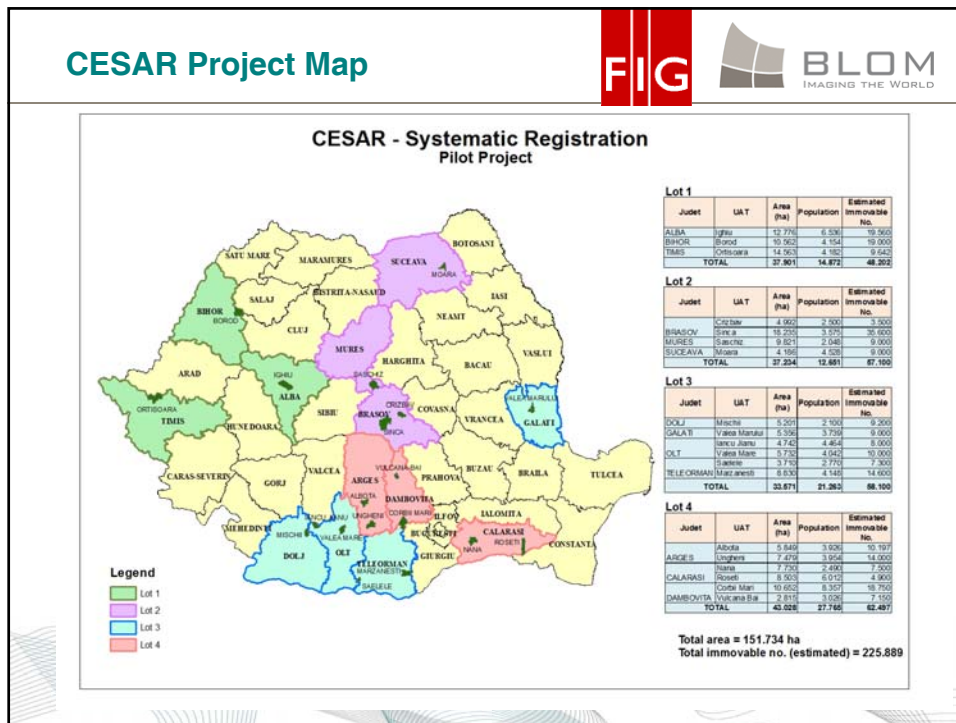
Systematic registration of the properties in 19 UATs (4 Lots 2011-2012)

Complementing European Support for Agricultural Restructuring (CESAR)



Systematic registration of the properties within the Project concerning Complementing European Support for Agricultural Restructuring(CESAR)





CESAR Project Financing




Romania and The **International Bank** for Reconstruction and Development have ratified the Loan Agreement for Project concerning Complementing European Support for Agricultural Restructuring

Project is undertaken by The Romanian State through the Ministry Of Development and Tourism, represented by ANCP.

Publicity campaign



The publicity campaign phases are:

- Social study,
- The implementation,
- The monitoring,
- The analyze of the results.

Evolution:

- Before starting the works in the field,
- During the works, to inform the stakeholders about the status,
- Before the public display

Communication channels:

- meetings with the citizens in every village,
- local mass-media,
- letters,
- information points,
- posters and flyers,
- web page.



Benefits



General Benefits to be acknowledged by society are:

- Registration at no costs for citizens and any legal entity
- Facilitating UE fundraising for agricultural grants
- Completing the process of land reform
- Registration of state and public lands
- Creation of Address Register (ANCPI)
- Registration of lands without legal documents
- Registration of buildings
- Clarify owner identity problems
- Contribution to INSPIRE implementation

Other indirect benefits



The special benefits of the project are:

- Clear cadastral situation at local level
- Land market development and transparency
- Reducing the transactions costs for users
- Enable E-services for taxation, permitting and professional users

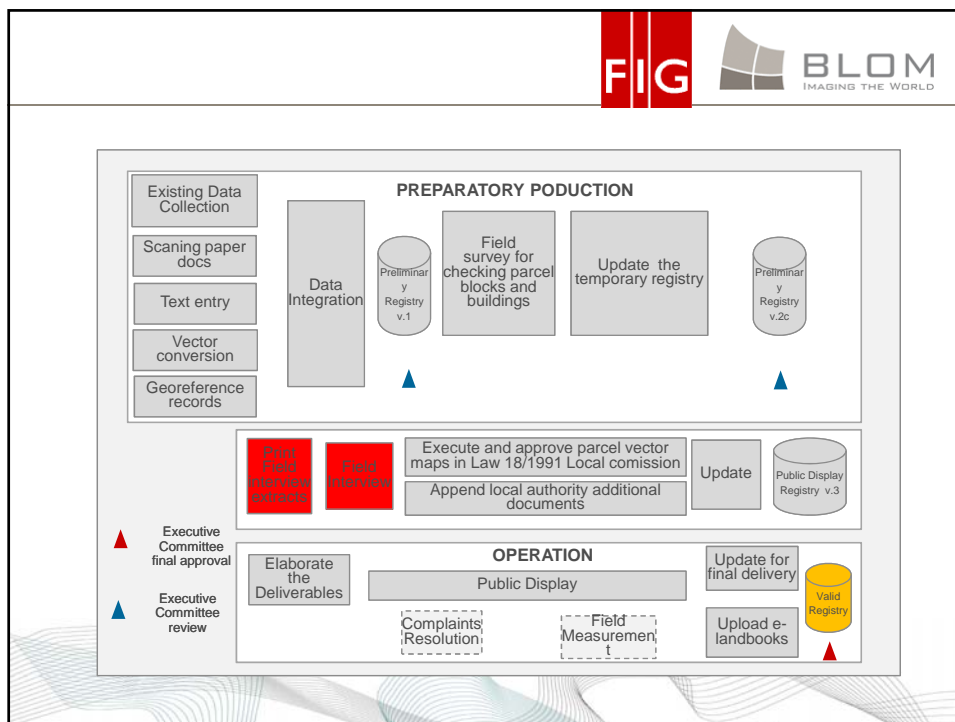


Work Phases



1. Preliminary works
2. Publicity campaign
3. The technical works (interviews, measurements, collecting the legal documents)
4. The acceptance of the technical works
5. The public display
6. Solving the complaints
7. Updating the technical documents
8. Opening the new electronic land books
9. Lessons learned





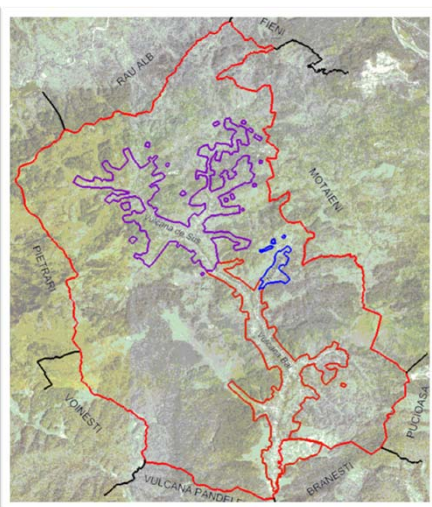
Deliveries **FIG** **BLOM**
IMAGING THE WORLD

Project Phases	The Obtained Document
The preliminary study	Report
The preliminary works	Report
The information campaign	The monitoring report
The identification of the immovables/owners/holders	The validated interview sheets
The creation of the technical documents	The alphabetical index of the holders, The cadastral register of the immovable properties and of the holders The cadastral plan
The acceptance of the technical documents by the OCPI	The minutes acceptance
The Public display	The ANCPI's Director's Order to allow the public display
The solving of the complaints	The land book resolution
The opening of the new electronic land books	The land book resolution, the information extract, the cadastral plan extract
Updating the information held by the city hall	The specific registers of the city hall – in an electronic format



UAT – Commune - Localities



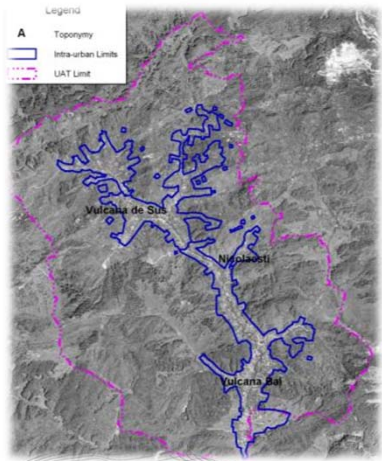
Location – Vulcana Bai





Key figures



- Area: 2815 Ha
 - intravilan – 407 Ha
 - extravilan – 2408 Ha
- No. of localities : 3
- Inhabitants : 3026
- Proprieties (estimated): 7150
- Land reform titles : 407
- Other property documents: 1000
- Land books :
 - la 31.03.2011 – 709
 - la 30.09.2011 – 825






Key facts for UAT Vulcana-Bai

- The parcels always belonged to the landlords, they never belonged to the Romanian State
- Most of the people do not have legal documents to sustain their property rights
- High hills landscape
- 40.85 % is forestland
- Many parcels outside intravilan without clear limits and irregular shapes (fruit trees lands and grass lands)
- Most of the parcels do have a complex configuration with boundaries which can not be easily identified
- Many owners are not living in the comuna

Contractor	 
<ul style="list-style-type: none"> • Joint Venture <ul style="list-style-type: none"> S.C. THEOTOP S.R.L. (leader) S.C. BLOM ROMÂNIA S.R.L. S.C. CORNEL&CORNEL TOPOEXIM S.R.L. S.C. GEOTER PROIECT S.R.L • For Vulcana Băi, all the works are carried out by BLOM ROMÂNIA 	



DATA sources for cadastral map	 	
Holder	Document	Format
OCPI	E-terra vector PADs	Vector
	Digital or paper PADs not incorporated in e-terra	Vector (80%)
	Orthofoto 50(some 20) cm (2005, 2008, 2009 function of availability) or images	Digital (1-2 m acc.)
	Parceling maps from land reform or sketches for each individual parcel block	Paper or scanned or vector
	Land Use Cadastre overview map (land reform index) 1:10.000	Paper or scanned
	Land Use Cadastre map 1:5.000/1:2000 (usable in intravilan and non-cooperativised areas)	Paper or Scanned
	Old generation Land book maps	Paper or scanned
Communa	Other maps with cadastral content if available	Paper or vector
Private owners	Confirmation of boundaries during field survey and property visits	Digital field books or sketches (20/40 cm)
Institutional owners	Other maps with cadastral content if available	Paper

DATA sources for ownership info		
		 
Holder	Document	Format
OCPI	Existing land-books	Paper & records
	Existing land reform titles	Paper & records
Communa	Fiscal register	Records
	Agricultural register	Paper
	New land reform certificates	Paper
	ID records	Records
Private owners	Building certificate	Paper
	ID information	Paper
	Property documents	Paper
	Field forms	paper
Institutional owners	Fiscal Registration	Paper
	Property or other legal documents (certificates)	Paper

Project Team	
	 
Senior management	<ul style="list-style-type: none"> • Project Manger (client) • Deputy Project manager – Cadastral expert
Experts	<ul style="list-style-type: none"> • Land registry expert • WF Expert/Developement analyst/Programer • Comuna coordinator – cadastral expert • Designer • Communication & Social mobilization expert
Production teams	<ul style="list-style-type: none"> • Field teams production coordinator • Office production coordinator • Surveyors • Data collectors • Local support (Foremans = variable function of field teams)

Cadastre data integration in production system



The information contained by the source data

Date CPXML

Date CAD

Date CGXML

CAD

Date DDAPT

Date DDAPT

Proprietati

Proprietati	
Apelarement	
CodPostal	
DenumireArtera	
DenumireCartier	
Descriere	
Etaj	
Intravilan	NU
Județ	BRASOV
Localitate	
NrPostal	
Scara	
TerritoriuAdministrativ	Crizbav
TpArtera	

General

Folosinta	faneata
Intravilan	NU
Mentuni	
Numar	4
Numar_topografic	
Parcela	78/2
SuprafataMasurata	3119
Tarla	7
Titlu	

Folosinta

Categoria de folosinta

Cadastre data integration in production system



Comparing the information and creating the final record

Compara date

Compara teren

Compara parcele

Compara parcele din fișier cu cele din baza de date

Date din baza de date				Date de importat			
Nr parcela	Sup masurata	Intravilan	CatFolosinta	Nr parcela	Sup masurata	Intravilan	CatFolosinta
1	367	1	uslt comunalt	1	290	1	uslt
2	860	1	uslt				

Data privind terenul

Data privind parcelele

Data regarding the immovable

Data regarding the parcels

Cadastre data integration in production system



Comparați date
Comparați persoane din fișier cu cele din baza de date

Date din baza de date				Date din import			
Nume	Prenume	Inițială	CNP	Nume	Prenume	Inițială	CNP
SEB	ECU	SCORNEL	1800000000000	CONSTANTIN	OMESCU		180002715175
SEB	DANIELA		3000000000000	CONSTANTA	ANDREI		2400021400102
BEPECHEC	AGRIPINA		3000000000000	ANITA	MANIASCU		2500021400021

Lista diferenta

- Sebuc persoane SEB ECU SCORNEL din baza de date ("13A4"-B)
- Sebuc persoane SEB DANIELA din baza de date ("13A5"-D)
- Sebuc persoane BEPECHEC AGRIPINA din baza de date ("13A6"-D)
- Adauga persoane CONSTANTA OMESCU din fișier ("12"-1)
- Adauga persoane CONSTANTA ANDREI din fișier ("12"-2)
- Adauga persoane ANITA MANIASCU din fișier ("12"-3)

Data regarding the owners

Comparați date
Comparați acte din fișier cu cele din baza de date

Date din baza de date				Date din import			
Id act	Data	Tip act	Autentitate	Id act	Data	Tip act	Autentitate
4482 DIN 1988				HOTARARE JU	22.01.2009 22.0	Hotarare judecatara	JUDECATORIA

Lista diferenta

- Sebuc act 3418 DIN 2003 din baza de date
- Sebuc act 4482 DIN 1988 din baza de date
- Sebuc act 4482 DIN 1988 din baza de date
- Sebuc act 4482 DIN 1988 din baza de date
- Sebuc act 4482 DIN 1988 din baza de date
- Sebuc act 4482 DIN 1988 din baza de date
- Sebuc act 4482 DIN 1988 din baza de date
- Sebuc act 4482 DIN 1988 din baza de date
- Adauga act HOTARARE JUDECATORIESCA NR.5278 din fișier

Data regarding the deeds

Cadastre data integration in production system



Statistics regarding the usage of the source data

Situatie import

Filtrare Statistici

Criterii filtrare

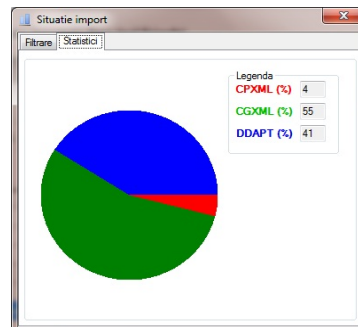
Sursa

CPXML CGXML DDAPT

Total: 3647

Aplica filtru

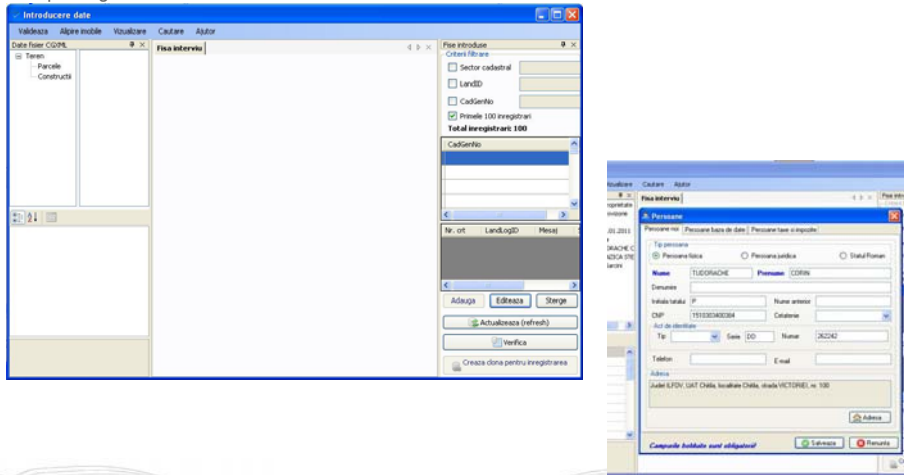
NumeFișier	TipFișier
IE101869.CGXML	CGXML
IE101869.CGXML	CGXML
1_2010_94.cpxml	CPXML
1_2010_93.cpxml	CPXML
1_2010_95.cpxml	CPXML
Cad_105_2008_87932_DS 10 2008_IEM.cpxml	CPXML
1_2010_75.cpxml	CPXML
1_2010_77.cpxml	CPXML



Cadastre data integration in production system



Updating the textual database



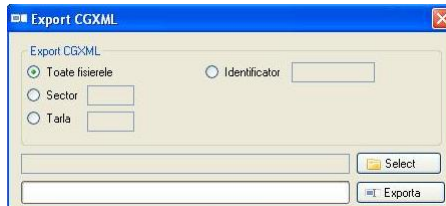
Cadastre data integration in production system



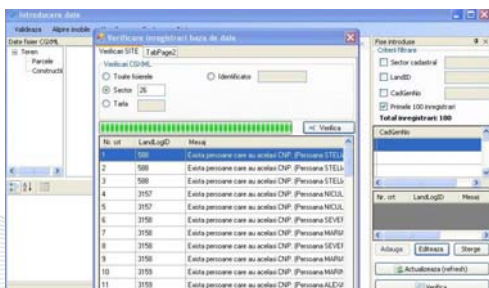
Generating the interview sheets



Generating CGXML files



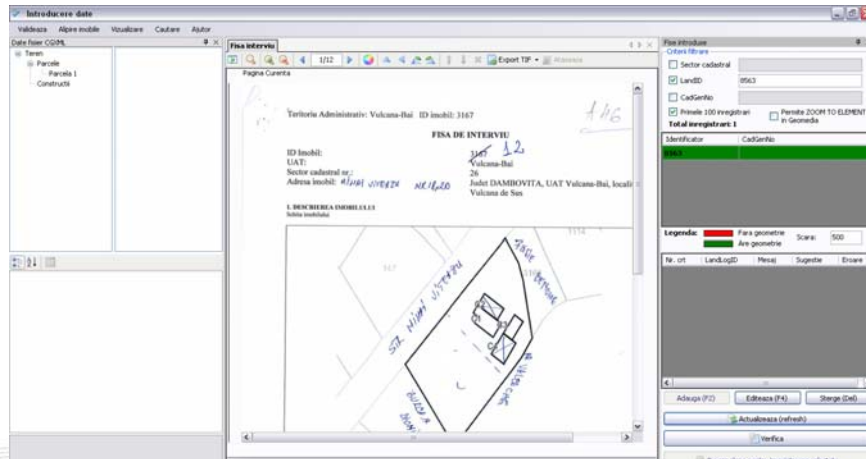
Automatic check of the CGXML files



Cadastré data integration in production system



Visualizing the PDF files



Cadastré data integration in production system



Generating the Cadastral Register and the Alphabetical Index of the Owners



The Cadastral Register



ANEXA 6 - REGISTRUL CADASTRAL AL IMOBILELOR SI AL DETINATORILOR
 UAT Vulcana de Sus
 Sector cadastral nr. 26
 1. DESCRIEREA IMOBILULUI

ID	Adresa imobil	Sic. Cadastral	Sic. CF	DATE TEREN						DATE CONSTRUCIE						
				Sic. sup. teren	Sic. sup. parcela	Sic. sup. parcela	Cat. ter.	IE	Destinatia	Cat. constructie	Sic. CF	Chimic	la cu act			
1	Judet DAMBOVITA, UAT Vulcana de Sus, strada VITRALU, nr. 26, Cluj-Napoca, Romania	10592	10592	478	-	-	-	478	CC	1	2	CA	22	1	DA	DA

1. PROPRIETATEA POFENEA

Titularul dreptului de posesiune	Tipul dreptului de posesiune	Prezenta	Prezenta	Data	Procedura	Critica parte	Critica parte	Stadiu de	Anul	Post	Notari
Nume si prenume	Tipul dreptului de posesiune	Prezenta	Prezenta	anului	de actiune	tereno	construciei	de finalizare	de actiune	de finalizare	de finalizare
BEANSAIE	1	STELIANA	-	2010	911	1:1	1:1	Construcie	actiune	2010	Steliana
BEANSAIE	1	STELIANA	-	2010	911	1:1	-	Construcie	actiune	2010	Steliana

Cadastre data integration in production system






The Alphabetical Index of the Owners

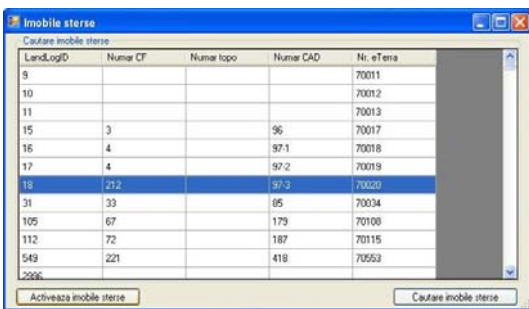
Judetul Dambovitza Indexul alfabetic al detinatorilor
UAT Vulcanca

Nr. crt.	Nume denumire detinator	Data nasteni / CUI	ID	Plansa	Sector cadastral	Adresa imobilului	Suprafata
1	COMUNA VULCANCA BAI	4206918	14		26	Judet DAMBOVITA, UAT Vulcanca-Bai, localitate Vulcanca de Sus, strada VIITORULUI	90
2	COMUNA VULCANCA BAI	4206918	17		26	Judet DAMBOVITA, UAT Vulcanca-Bai, localitate Vulcanca de Sus, strada MIHAI VITEAZU	7
3	BURCAN NICOLAE	1670801151231	8		26	Judet DAMBOVITA, UAT Vulcanca-Bai, localitate Vulcanca de Sus, strada MIHAI VITEAZU, nr. 10, Cod postal 137537	1042
4	BURCAN NICOLAE	1670801151231	16		26	Judet DAMBOVITA, UAT Vulcanca-Bai, localitate Vulcanca de Sus, strada VIITORULUI, nr. 56, Cod postal 137537	315


Cadastre data integration in production system


Reactivating the erased immovables



Updates on the textual part



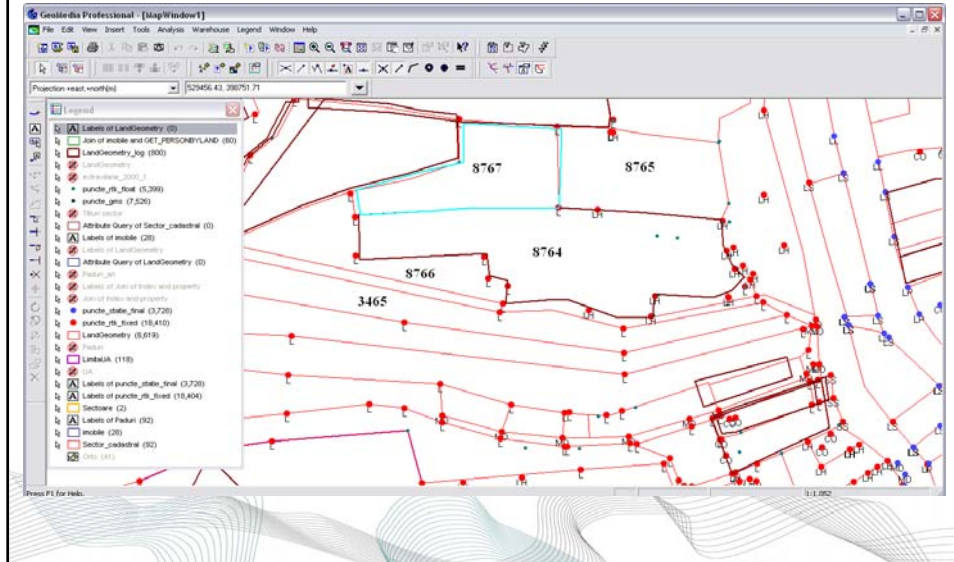
Updates on the graphic part



Cadastre data integration in production system



The graphic part of the database



Conclusions... on transition from sporadic to systematic



Very slow process under current set up

Lack titles and current legal (40% of territory) on non coop. lands

Reconstruction of land reform cadastral data is complex and not clearly regulated

IT system and cadastral regulation has to be adapted to the scope

Financial challenge (local / national budgets, EU support, or PPP?)



Questions?



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