Land administration quality assessment: LGAF, DoingBusiness, WPLA UNECE. What next?

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TS01A
Improving Procedures in Land Management
Land Governance and Land Administration quality assessment today

- Land Governance Assessment Framework (LGAF): LGI16 "Completeness of the Register", LGI17 "Reliability", LGI18 "Cost-Effectiveness and accessibility of land administration services".

Expert methodology, off-line, time consuming

- WPLA UNECE. Overview of 2016, Indexes: coverage, availability of online services, state guarantees, registration and other state fees, registration speed, a type of registration system, types of actions, gender equality.
Digital transformation of society

Land Allotment ➔ Land Administration ➔ Land Governance

Drivers: Innovative Technology, PPP, Open Data

E-government; multilevel RS; crowdsourcing, e-participation; e-decision making; big data; cloud computing; nation geospatial platforms; GNSS; VGI; SDI; BIM; M-telephony; 3D-modeling; ERP-, CRM-systems for facility-management.

Monitoring on-line is possible today!

KPI_{LA} = F (KPI_{LG})
What is Land Governance (LG) Monitoring?

Land Governance (LG) Monitoring is a regular automated reporting system on key indicators KPI that correspond to the functional areas of land governance. It relies on existing administrative data from various sources as a primary source of information.
Model of on-line LA/LG quality assessment monitoring. Process approach:

- Technical infrastructure
- LA/LG BPs specification
- Model for every BP
- Specification KPI for every BP
- BP KPI on-line calculation in the technical system
- Real-time LA/LG quality assessment
- Systematic LA/LG impact assessment
- BP improvement or reengineering
Technical infrastructure

E-Services Portal

E-Government

Geospatial Platform

Multy Level RS

LA Infrastructure

BP1 BP2 ...... BPN

{KPI} {KPI} {KPI} {KPI}

Impact KPI

LG on-line monitoring system LGMS

Inclusive e-participation management!
LG BP specification

<table>
<thead>
<tr>
<th>Land Governance BP groups for quality monitoring</th>
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<tbody>
<tr>
<td>LAND ALLOTMENT</td>
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<tr>
<td>URBANIZATION</td>
</tr>
<tr>
<td>LAND RIGHT TERMINATION</td>
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<tr>
<td>REAL ESTATE REDEVELOPMENT</td>
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<tr>
<td>LAND PROTECTION</td>
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~120!
Tools for BP models

- SADT (IDEF0) or
- IDEF3 - IDEF0 or
- DFD or
- ARIS or
- UML or
- Case-tool BPwin (PLATINUM technology)
- Silverrun (Silverrun technology) or
- Oracle Designer (Oracle) or
- Rational Rose.

E-Government tool!
Specification KPI for every BP

- Duration
- Cost
- Transparency
- Social Accountability
- Number per time unit
- Monitoring Indicators
- Number (and prices where possible) of registered transactions of different types;
- Receipts of land tax revenue;
- Share of communal, private, and state land mapped;
- Cases of expropriation and privatization;
- Number of land-related conflicts in the courts;
- Share of agricultural/residential land registered and mapped in women’s/men’s name or in
- …
Continuously operating automated expert system has to carry out calculation of KPI of separate land governance processes in real time and draw conclusions about its quality.
The reform of cadastral systems for LG BP improvement

1. LA: Registration, accumulation and distribution of territorial planning documents, including land consolidations and land readjustment documents.

2. LA: Property registration on the basis of BIM (buildings information models).

3. LA: Registration of facts, phenomenon, land events according to geo-monitoring based on cadastral data and remote sensing.

   LG: Input signals for LG System

   LG: Development, redevelopment, 3D facility management, in LG System

   LG: Feedback of LG System improvement
4. LA: Registration of the creation, modification and termination of underground engineering structures

5. LA: Registration of events in sphere of urban development activities.

6. LA: Registration of e-public discussion of land governance projects.

LG: Administrative procedures for exavation permissions of LG System

LG: On-line monitoring of LG activity in urban areas

LG: e-decision making with e-participation in inclusive LG
KPI for the land administration quality assessment

• **LA11.** Legal support of spatial data infrastructure.

• **LA12.** Unified geospatial platform is used for territorial governance.

• **LA13.** Cadastral data integrity.

• **LA14.** Cadastral data completeness

• **LA15.** BIM are the grounds for Real Estate registration

• **LA16.** Excavations in the country are operated by cadastral data.
KPI for the land administration quality assessment

• LAI7. Cadastre provides publicity and transparency of territorial land use planning projects.

• LAI8. Cadastre provides publicity and transparency of administrative inspections of land relations objects.

• LAI9. Cadastre support e-decisions making, e-consultancy and e-information participation in land governance purpose

• LAI10. Cadastre provides the urban development monitoring.
Conclusions

1. LG/LA quality on line monitoring, not off-line expert evaluation.
2. LGMS – land governance monitoring system
3. LGMS ← E-government + Cadastre/Registers + Remote Sensing System
4. Process approach
5. Models of BP_{LG} - are E-Government instrument
6. KPI for every BP_{LG}
7. KPI calculation by LGMS
8. LA and LG BP improvement or reengineering
ISO 19152

- Upgrading respectively the LADM standard ISO19152 is recommend
Thanks for attention
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