UNIFIED MIGRATION ANALYTICAL SYSTEM (UMAS)

Public Service Development Agency
Ministry of Justice of Georgia

October 30, 2017
Geneva, Switzerland
Main Topics

- Migration management in Georgia
- UMAS goal, concept, and stakeholders
- UMAS infrastructure
- UMAS data analysis architecture
- UMAS progress as of today and sample report
- Expected deliverables
Migration Management in Georgia

State Commission on Migration Issues (SCMI)

Chaired by the Ministry of Justice

12 member state agencies:

MIA  SSG  MRA  MFA  MoH  MoEd  MoF  MoE  MRDI  OSMEAI  GeoStat

12 Consultative Members (IOs, NGOs)

EU  UNHCR  IOM  ILO  ICMPD  DRC  GIZ  CiDA  GYLA  IRC  MC  UNAG

SCMI Secretariat
Migration Data in Reports

- Migration Profile (Medium) 2015.
- 2017 MP to be published by the end of 2017.
- Brief Migration Profiles 2016 and 2017.
- UMAS reports for public and internal use.
**The Goal**

“Combine (at 1st stage) the immigration-related administrative data stored at different line ministries and state agencies involved in migration management in Georgia and make it available and suitable for migration trend analysis, risk analysis, and forecasting.”

+ Other administrative registries at line ministries, such as data on international protection in Georgia, educational immigrants, irregular immigrants, revenues collected from non-citizens, labour immigrants and social assistance to non-citizens.
The Concept

- Linking datasets using person identification algorithms.
- Apply big data technology for high performance, low cost, and flexibility.
# Project Stakeholders

<table>
<thead>
<tr>
<th>Supervising bodies</th>
<th>System Owner</th>
<th>Data Sources</th>
<th>System Users</th>
<th>Partner Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCMI</td>
<td>PSDA (SCMI Secretariat)</td>
<td>MIA, SSG, PSDA, NAPR, MoF, MFA, MRA, MoESc, MoLHSA</td>
<td>SCMI</td>
<td>IOM, ICMPD</td>
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<td>GoG</td>
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<td>Data source agencies</td>
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<td>PDP</td>
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<td>Other state agencies (incl. GeoStat)</td>
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<td>EU</td>
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System Architecture, Tec. Solution Used

Source Data → HDFS

Data Transformation

Analytical DB

Reports

HDFS

UmasMainDataset

UmasForeignerToDate

UmasIllegalsToDate
**DATA TRANSFORMATION**

- **Data Sources**
- **ETL, Data Unified**
  - Dictionaries
  - Identity of Persons
  - Documents
  - Features
  - Events
- **Data Depersonalized**
  - Anonymous Persons
  - Documents
  - Features
  - Events
- **Data Presentation for Analytics**
- **Analytical reports**
Progress 2014 - Present

- Project concept developed
- Legal framework adjusted
- Project team staffed
- Data sources secured
- System trial version
- Test analytical reports
- New data sources added
- Real reports produced
- System concept revisited
- Team staffing ongoing
Sample Report in Tableau
EXPECTED DELIVERABLES

Informed Policy Making

- Issue specific analytic reports
- Filled in data gaps
- Capacity building
- Regular BI analysis
- Improved data management

SPECIFIC PRODUCTS:

- Feed the Migration Profile(s);
- Source for Migration Risk Analysis WG;
- Issue reports for decision-makers;
- Data source for GeoStat;
- Introduction of common data storage standards;
- Recommendations for state agencies on data security, management, and administration.
ANALYTICAL REPORTS

UNDERLYING PROCESSES:

- Regular dialogue with stakeholders to:
  - understand & shape their needs and expectations;
  - ‘generate demand’;
  - keep them involved in data quality and management issues;
- Revisiting and refining system architecture and algorithms;
- Institutionalizing UMAS at PSDA;
- Building a team of analysts;
- Adding new data sources;

In the long-term, predictive analysis.

<table>
<thead>
<tr>
<th>Stocks</th>
<th>Flows</th>
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<tr>
<td>Sex, age, income, ownership, education, etc.</td>
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<tr>
<th>Refugee and Asylum</th>
<th>Integration</th>
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<td>Sex, age, income, ownership, education, etc.</td>
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<tr>
<td>length of stay, economic activity, mobility, family, etc.</td>
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<th>Risk analysis</th>
<th>Irregular flows</th>
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THANK YOU

SECRETARIAT OF
THE STATE COMMISSION ON MIGRATION ISSUES (SCMI)

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