

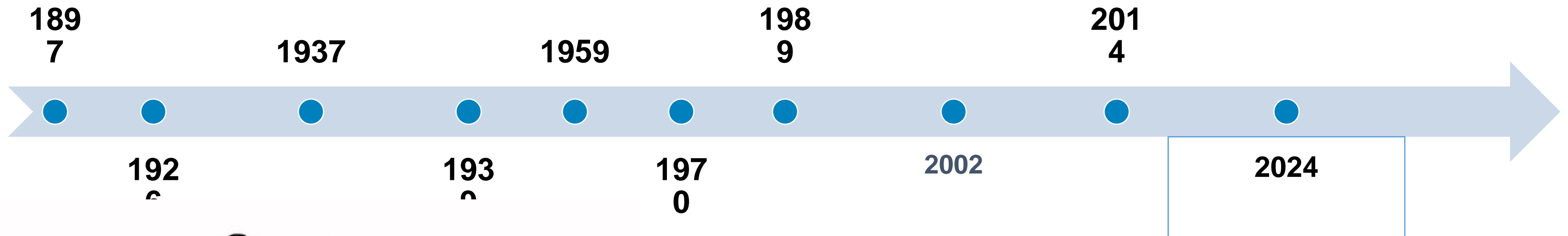
Population Census 2030 Round



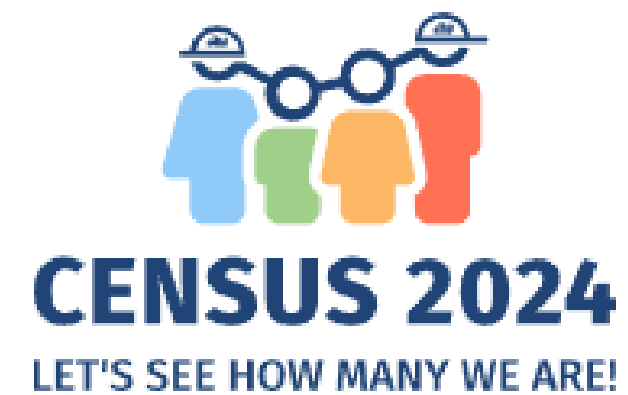
GOGITA TODRADZE

Executive Director
National Statistics Office of Georgia (GEOSTAT)

Population Censuses in GEORGIA



Census



Georgia's 2024 Census: A Landmark Achievement



3.914M

Total Population Enumerated

100%

Electronic Data Collection

5.4%

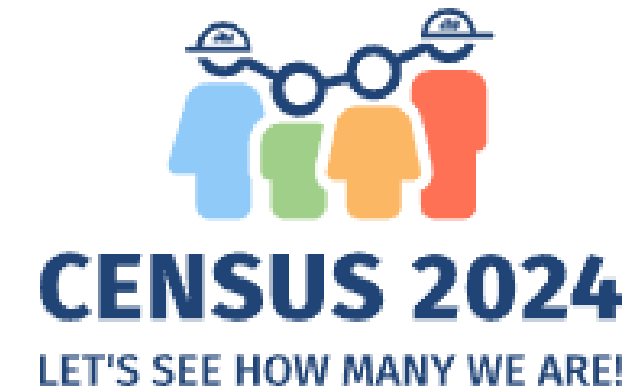
Population Growth Since 2014

First

Fully Digital Census in Georgia

Key Innovation: Dual Electronic Methodology

CAWI (Computer Assisted Web Interviewing) + CAPI (Computer Assisted Personal Interviewing) combined with comprehensive administrative data integration



Technological Breakthrough: Electronic Implementation



CAWI (Web-Based Self-Registration)

- ▶ 24/7 availability during enumeration
- ▶ Direct linkage to civil registry
- ▶ Real-time validation checks
- ▶ Enhanced privacy and confidentiality
- ▶ No time limitations for completion

CAPI (Field Enumeration)

- ▶ Tablet-based door-to-door interviews
- ▶ GPS mapping integration
- ▶ Instant data quality checks
- ▶ Real-time supervisor monitoring
- ▶ Reduced processing time



In-Depth Interviews

- ▶ No time limitations for completion

- ▶ Enhanced privacy and confidentiality

- ▶ Reduced processing time

Administrative Data Integration: The Game Changer



Pension Registries

Complete coverage of retirees



Education Records

All enrolled students tracked



Employment Data

Public & private sector workers



Property Registry

Housing and dwelling data



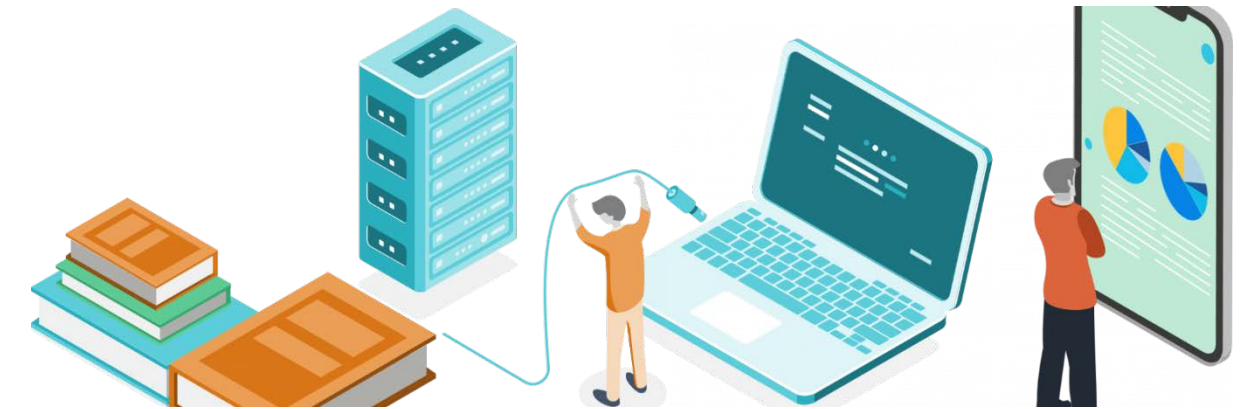
Civil Registry

Birth, death, migration records



Revenue Service

Tax and income information



Key Demographic Findings from 2024



Urbanization Acceleration

Urban population increased from 57% to 62% (2014-2024)



TBILISI, GEORGIA



Growth Leaders

- ▶ Tbilisi: +20% (1.33M inhabitants)
- ▶ Adjara: +20.1% regional growth
- ▶ Batumi: +53.5% municipal growth
- ▶ Capital concentration: 34% of total population

Regional Challenges

- ▶ Guria: -11.1% population decline
- ▶ Samegrelo-Zemo Svaneti: -6.6%
- ▶ Rural-urban migration intensifying
- ▶ Peripheral region depopulation

Data Quality Achievement



5.4%

Discrepancy vs. Estimates
(Significantly Reduced)

Multiple

Administrative Sources
Integrated

100%

Methodological Compatibility
with Previous Censuses



Success despite challenges: Political resistance during enumeration was overcome through strategic use of administrative data and pre-enumeration validation

Overcoming 2024 Challenges



Political Context

Population boycotts managed through administrative data backup



Geographic Barriers

Remote areas enumerated in September to avoid weather issues

Strategic Solutions Applied

- ▶ Comprehensive administrative data as backup for voluntary participation gaps
- ▶ Flexible timing for geographically challenging areas
- ▶ 24/7 technical support throughout enumeration period
- ▶ Extended self-registration period due to high public engagement



Vision for 2030 Census Round



Paradigm Shift: Register-Based Census

Moving from traditional enumeration to continuous population monitoring through integrated administrative systems

Core Objectives

- ▶ Real-time population monitoring
- ▶ Cost-effective data collection
- ▶ Enhanced data quality and timeliness
- ▶ Reduced respondent burden

Key Enablers

- ▶ Comprehensive population registers
- ▶ Advanced data linkage systems
- ▶ Big data analytics integration
- ▶ International standardization



Register-Based Census Framework



Aspect	Traditional Census	Register-Based
Frequency	Every 10 years	Continuous updates
Data Sources	Field enumeration	Administrative registers
Cost	High (periodic spikes)	Lower (continuous)
Timeliness	1-2 years delay	Real-time availability
Burden	High public burden	Minimal respondent load

Big Data and Alternative Sources



Georgia's Leadership Position

Member of UN Global Working Group on Big Data for Official Statistics

Member of UN Expert Group on Migration Statistics



BIG DATA



Mobile Phone Data (MPD) Applications

- ▶ Population estimates by municipality
- ▶ Real-time migration tracking
- ▶ Internal mobility patterns
- ▶ Tourism flow analysis

Implementation Challenges

- ▶ Data access negotiations
- ▶ Privacy protection frameworks
- ▶ Technical infrastructure requirements
- ▶ Resource allocation needs

▶ Tourism flow analysis

▶ Resource allocation needs

2030 Technology Architecture



AI & Machine Learning

Automated data validation and pattern recognition



Cloud Infrastructure

Scalable, secure data processing and storage



API Ecosystems

Real-time data exchange between agencies



Mobile-First Design

Responsive interfaces for all devices



Blockchain Security

Immutable audit trails and data integrity



Real-Time Analytics

Instant insights and dashboard reporting



Comprehensive Data Integration Framework

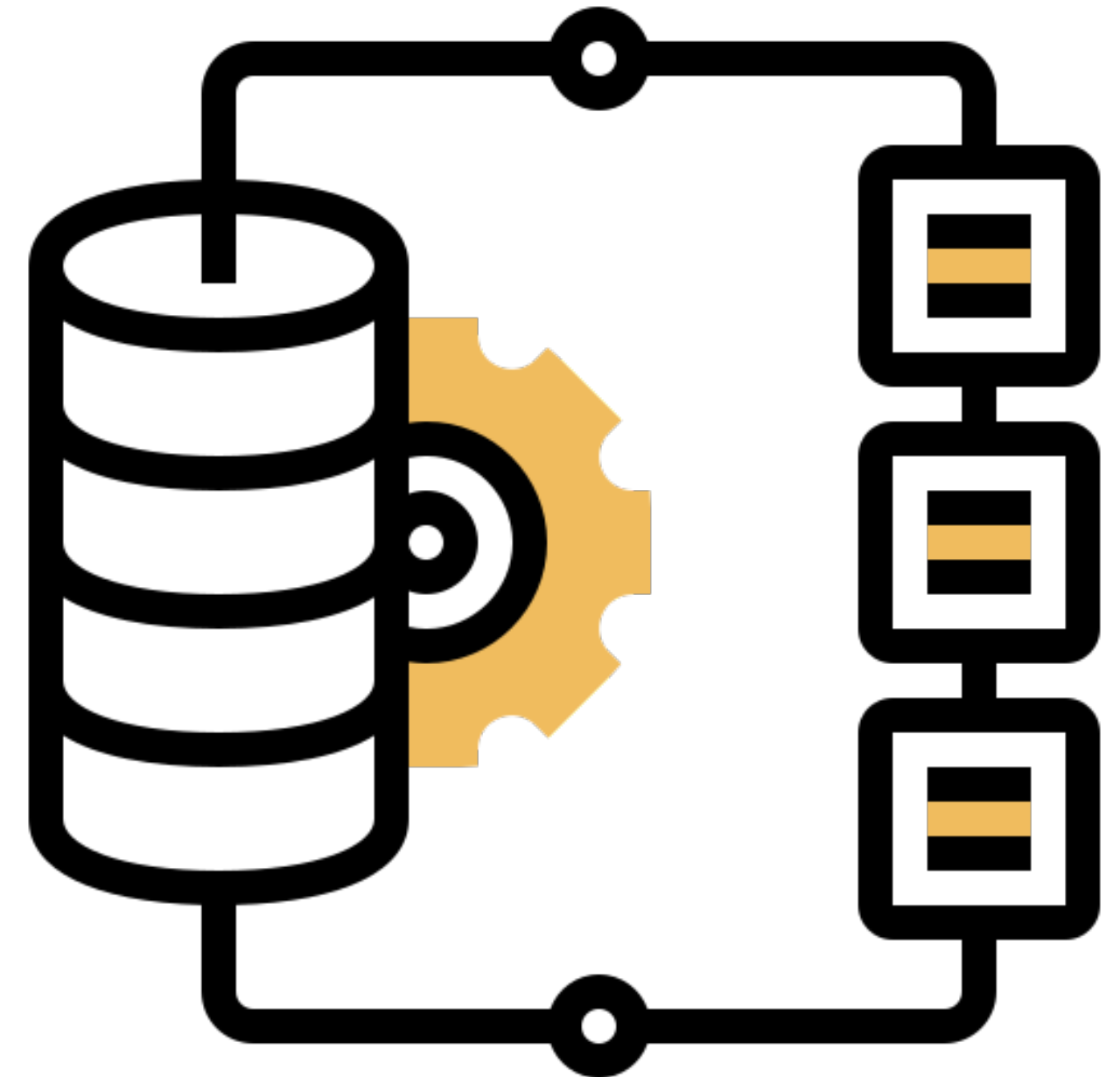


Personal Identification Number (PIN) as Universal Key

Enabling seamless linkage across all administrative systems

- ▶ **Core Administrative Sources:** Civil registry, tax records, social security, health systems
- ▶ **Educational Systems:** Student enrollment, graduation records, skill certifications
- ▶ **Employment Data:** Public and private sector employment, gig economy tracking
- ▶ **Housing Information:** Property ownership, rental markets, building permits
- ▶ **Health Records:** Birth/death registration, disability status, healthcare access
- ▶ **Migration Tracking:** Border crossings, visa status, temporary residence

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Enhanced Quality Assurance for 2030



Automated Validation

- ▶ AI-powered consistency checks
- ▶ Real-time error detection
- ▶ Automated data imputation
- ▶ Cross-source verification

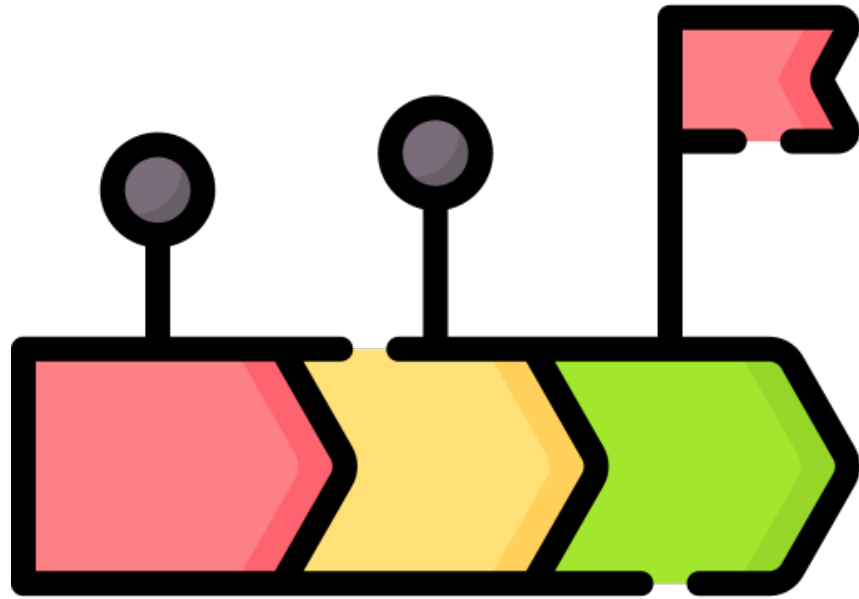
Continuous Monitoring

- ▶ Monthly quality indicators
- ▶ Coverage assessment dashboards
- ▶ Stakeholder feedback systems
- ▶ International benchmarking

Lesson from 2024: Pre-enumeration validation through dwelling-by-dwelling visits provided independent confirmation of final census accuracy



Strategic Implementation Roadmap



- ▶ **Phase 1:** Establish comprehensive population register linking all administrative sources
- ▶ **Phase 2:** Develop automated data quality and coverage assessment systems
- ▶ **Phase 3:** Implement continuous population monitoring with annual updates
- ▶ **Phase 4:** Launch 2030 register-based census with supplementary surveys for detailed characteristics



European Integration & Standardization



EU Twinning Project Collaboration

Partnership with Finland, Germany, and Italy for methodological harmonization

Key Objectives

- ▶ GSBPM methodology alignment
- ▶ EU NUTS classification implementation
- ▶ Statistical process modernization
- ▶ Capacity building initiatives

Expected Outcomes

- ▶ Full European standard compliance
- ▶ Enhanced international comparability
- ▶ Best practice sharing
- ▶ Technical expertise transfer



TWINNING



FINLAND



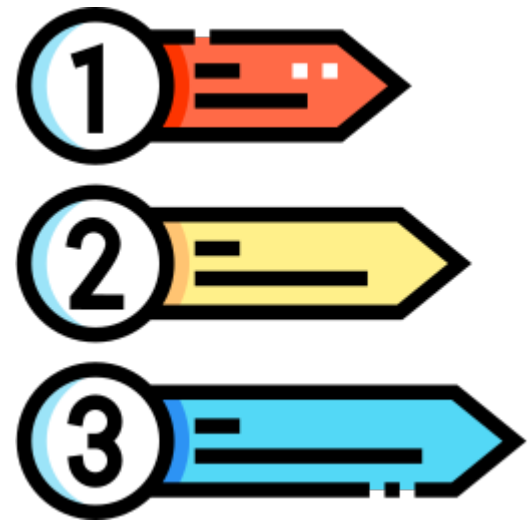
GERMANY



ITALY



Innovation Priorities for 2030



Digital-by-Default

Complete digital transformation with offline backup only



Real-Time Processing

Instant data availability and analysis



Continuous Updates

Dynamic population register maintenance



Targeted Surveys

Focused data collection for specific characteristics



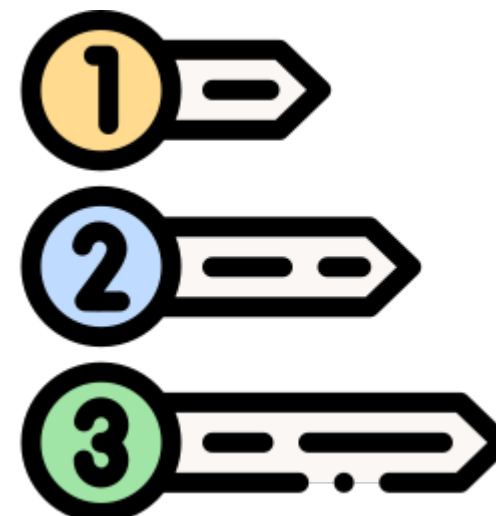
Global Standards

Full compliance with UN and EU frameworks



Privacy-First

Advanced data protection and anonymization



Enhanced Stakeholder Cooperation



Critical Success Factor

Strong partnerships between statisticians, policymakers, and data source owners

- ▶ **Regular Communication:** Establish ongoing dialogue at all organizational levels
- ▶ **Clear Governance:** Define concrete rules and obligations for all stakeholders
- ▶ **Transparent Systems:** Ensure open and reliable data sharing protocols
- ▶ **Mutual Benefits:** Demonstrate value creation for all participating agencies
- ▶ **Legal Framework:** Update legislation to support seamless data integration
- ▶ **Technical Standards:** Implement unified data formats and exchange protocols

Learning from International Leaders



Nordic Model Success

- ▶ Finland: Fully register-based since 1990
- ▶ Denmark: Continuous population updates
- ▶ Norway: Integrated statistical system
- ▶ Sweden: Real-time demographic data

Adaptation Strategies

- ▶ Gradual transition approach
- ▶ Maintaining comparability
- ▶ Building public trust
- ▶ Ensuring data privacy

Georgia's Advantage: Strong foundation from 2024 electronic census success positions the country for rapid register-based transition



Revolutionary Data Dissemination



Real-Time

Data Availability

Interactive

Visualization Tools

API

Direct Data Access

Mobile

Apps & Dashboards

- ▶ **Open Data Platform:** Public access to aggregated statistics through modern web interfaces
- ▶ **Researcher Portal:** Secure access for academic and policy research with advanced analytics tools
- ▶ **Government Dashboard:** Real-time population insights for evidence-based policymaking
- ▶ **International Reporting:** Automated compliance with UN SDG and EU statistical requirements



Privacy and Ethical Considerations



Data Protection Measures

- ▶ End-to-end encryption for all transfers
- ▶ Differential privacy for public releases
- ▶ Anonymization before analysis
- ▶ Strict access controls and audit trails

Ethical Framework

- ▶ Transparent data use policies
- ▶ Public consent mechanisms
- ▶ Regular privacy impact assessments
- ▶ Independent oversight committees

Building Trust: Public acceptance of register-based systems depends on demonstrating clear benefits while maintaining absolute data security



Economic Impact of Modernization



60%

Projected Cost Reduction

90%

Time Savings in Processing

365

Days/Year Data Availability

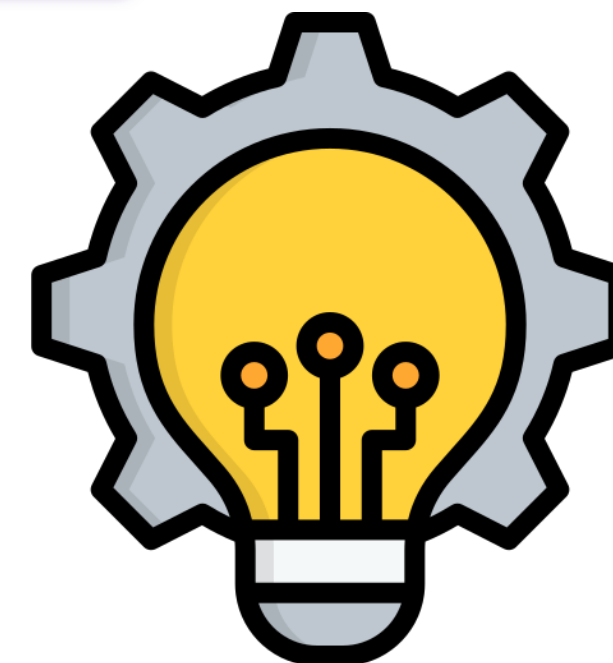
Zero

Public Enumeration Burden



Return on Investment

- ▶ Reduced field operations and logistics costs
- ▶ Improved data quality leading to better policy outcomes
- ▶ Enhanced international reputation and cooperation opportunities
- ▶ Foundation for advanced statistical products and services



Anticipated Challenges & Solutions



Technical Challenges

- ▶ **Data Integration Complexity**
Solution: Phased implementation with pilot testing
- ▶ **System Interoperability**
Solution: Standardized APIs and data formats
- ▶ **Real-time Processing**
Solution: Cloud-native architecture

Organizational Challenges

- ▶ **Stakeholder Coordination**
Solution: Formal governance structures
- ▶ **Change Management**
Solution: Comprehensive training programs
- ▶ **Public Acceptance**
Solution: Transparency and communication



Measuring Success in 2030



Data Quality Index

Comprehensive accuracy
and completeness metrics



Timeliness Score

Speed from reference date
to data availability



Cost Efficiency

Cost per person
enumerated vs. 2024
baseline



Coverage Rate

Population capture
completeness assessment



User Satisfaction

Stakeholder and public
feedback scores



International Recognition

Peer assessment and
methodology adoption

Call to Action: Building the Future



The Time is Now

Georgia's successful 2024 electronic census provides the foundation for revolutionary advances in population statistics

- ▶ **Invest in Infrastructure:** Build the technological foundation for register-based systems
- ▶ **Foster Partnerships:** Strengthen cooperation with administrative data owners
- ▶ **Embrace Innovation:** Lead the transition to next-generation statistical methods
- ▶ **Share Knowledge:** Contribute to global statistical development
- ▶ **Prepare for 2030:** Start implementation planning today



"From Electronic Pioneer to Register-Based Leader"



THANK YOU FOR YOUR ATTENTION!

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Reliable Data for Right Decisions!

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