



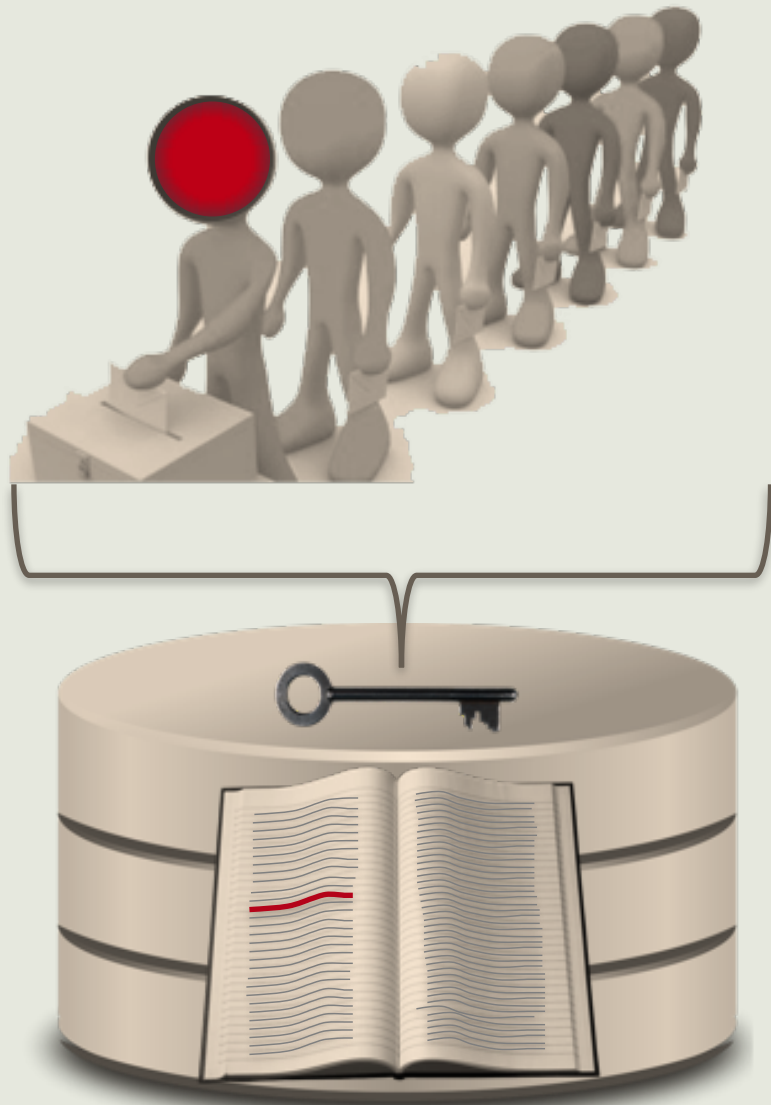
IMT

Voter Registry

An overview of the IMT Voter Registry Solution for Electoral Agencies



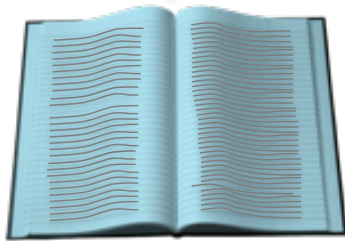
Voter Registration



"The accuracy and integrity of a voter registry in any jurisdiction is a critical element in ensuring that all qualified constituents have the opportunity and right to vote."

A voter registry is the official and authoritative list of all persons eligible to vote and in most cases it is consolidated from several data sources."

The past....



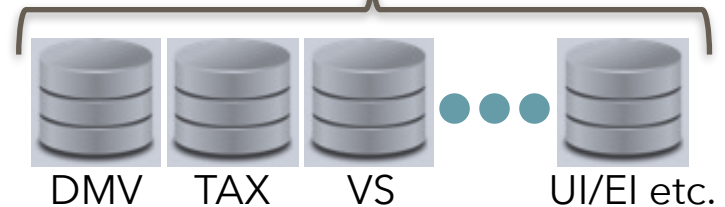
Full Enumeration - door-to door (or no registration until you vote)

- Costly (Every Election)
- Time Consuming / Army of Workers

but

- Raises Election Awareness

The future....



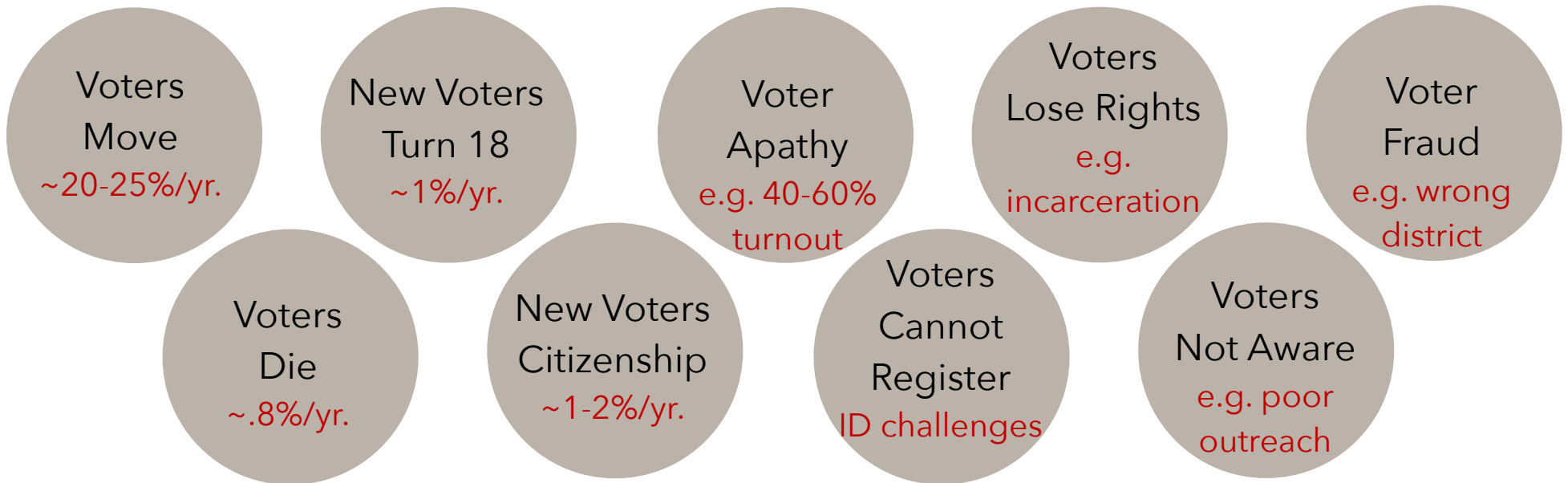
Electronic Voter Registry - Online Registration - Internet Voting

- Costly (Initial Creation)
- Not Accessible to *all* Citizens

but

- Agile, Better Service

Voter Registration – The Challenge



"Approximately 24 million or 1 in 8 voter registrations in the United States are no longer valid or are significantly inaccurate." PEW CENTER **12% Error Rate**



"The cost of Voter Registration accounts for up to one-third of election related expenses"

CalTech/MIT

Up to 33% of Cost



Manitoba 2011 Election:

Total Election Cost:** \$9M

Enumeration Cost:** \$2.8M

31%

People



- Lack of Knowledge of Elections & Process
 - General Apathy
 - Barriers to Access (distance, disabilities)
 - Frustration/Weariness
- "About 1 in 4 Americans believe that if they move, election officials or the U.S. Postal Service automatically update their registration"*

NCSL

Process



- Data Governance
 - Data Stewardship
 - Government/Agency Data Sharing
 - Legislation
 - Budgets
- "About 50% of elections agencies provide the ability for a citizen to check their voting status from a DMV agency"*

NCSL

Technology



- Systems Compatibility
 - Registration Standards
 - Data Standards
 - Security Standards
 - Lack of Expertise
 - Cost
- "Certification of voting systems is a tricky business. Federal voluntary guidelines exist, but the last time they were adopted was in 2005."*
- NCSL.org

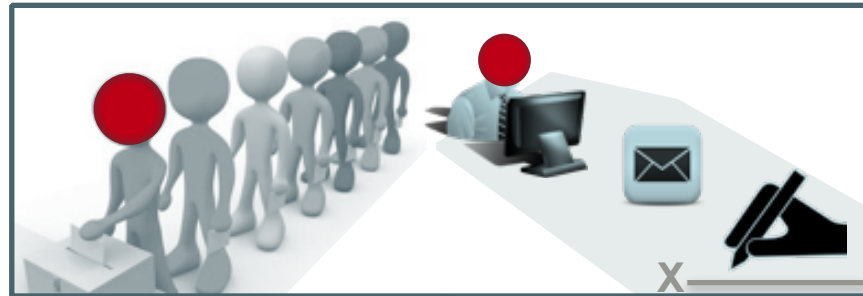
- **MORE AGILITY & FLEXIBILITY IN OPERATIONS TO RESPOND TO:**
 - Increasing rates of change in legislation and policy
 - Increasing frequency of elections
 - Changing expectations of voters and government
- **STRONGER GOVERNANCE & RISK MANAGEMENT TO ENSURE:**
 - Fair and open elections in compliance to legislation, agreements, regulations
 - Provide information to stakeholders in a timely and equitable manner
 - Effectively manage objections, investigations (e.g. fraud) & requests (e.g. FIA)
- **BETTER OUTREACH AND EDUCATION TO:**
 - Increase voter participation (especially to youth and disenfranchised)
 - Increase voter education and awareness (especially to offset no enumeration)
- **ENHANCE SERVICES TO VOTERS AND STAKEHOLDERS:**
 - New voter processes (e.g. Voter Registration via Internet)
 - Improvements in processes via new technologies (e.g. mobile applications to check in voters while in line to vote)





IMT Voter Registry

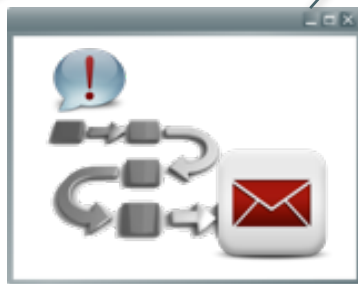
A new & innovative approach to voter registration



Used by many of the largest & most secure ID Registries



Create a single 360° view of each Voter from agency / government data sources (DMV, EI, Tax, Vital Stats) – using gold standard probabilistic link & match algorithms.

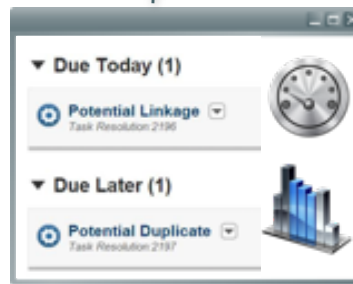


Quickly deploy new business processes to enhance services to voters and poll workers:

Consent to share at DMV registration

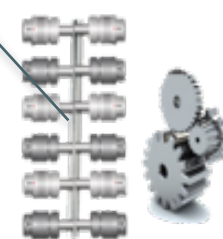
File an Objection

Verify in line Voters



Enforce governance, privacy, and service level agreements

Greatly enhance data quality & integrity with strong Data Stewardship tools & reports



Integrate easily with electronic voter systems & external stakeholders:

EVMs

ERIC

ESRI - GIS



Discover unknown relationships to uncover potential Voter fraud and abuse cases.

Not Eligible

Multiple Votes

Identity Assertions

- Quickly collect voter information from source systems (e.g. DMV, Vital Stats) to create a 360⁰ view of a voter using world-class linking and matching algorithms.
- Maintain all source system data with full history and audit including re-construction of what source data and linkages looked like at a particular point in time.
- Dynamically build relationships from the source system data at the point in time these relationships are required with full audit and logging.
- Strengthen and enforce governance and manage risk with rich data stewardship tools.
- Deploy new business processes using a robust business process manager:
 - Provide voter consent and registration during DMV registration
 - Pre-register students in high-school and with matriculation at higher learning institutes
 - Tax Filing - provide declaration to share with national or provincial voter registries
- Enhance client processes - e.g. poll workers verify voters in line using iPads
- Access Voter Registry by poll workers during election day for eligibility
- Reduce data quality issues - often by 50% - 60% or more based upon our experience
- Receive notifications and alerts from external systems (e.g. DMV for a new voter)
- Uncover potential voter fraud cases with an easy to use investigative tool
- Quick Deployment - typically 90-120 days - fully managed and supported

Political Entities

Registered
Political Parties

Nominated
Contestants

Candidates

District/Constituency
Associations

Public Entities

Eligible Voters

Individuals / Groups

Educators

The Media

Lobby / Campaign Entities

Corporations

Trade
Associations

Organizations

3RD Party Calling
Agencies



State / Provincial Entities

Secretary of State /
Legislative Assembly

Commissions & Committees
(e.g. Boundaries & Acts)

Auditors / Ombudsman /
Privacy Officer / Advocates

Conflict of Interest
Commissioner

Federal Entities

FEC / Elections CA
(National Register of Electors)

CRTC
(Registration Notices)

Chief
Electoral Officers

Stats Agencies / Post

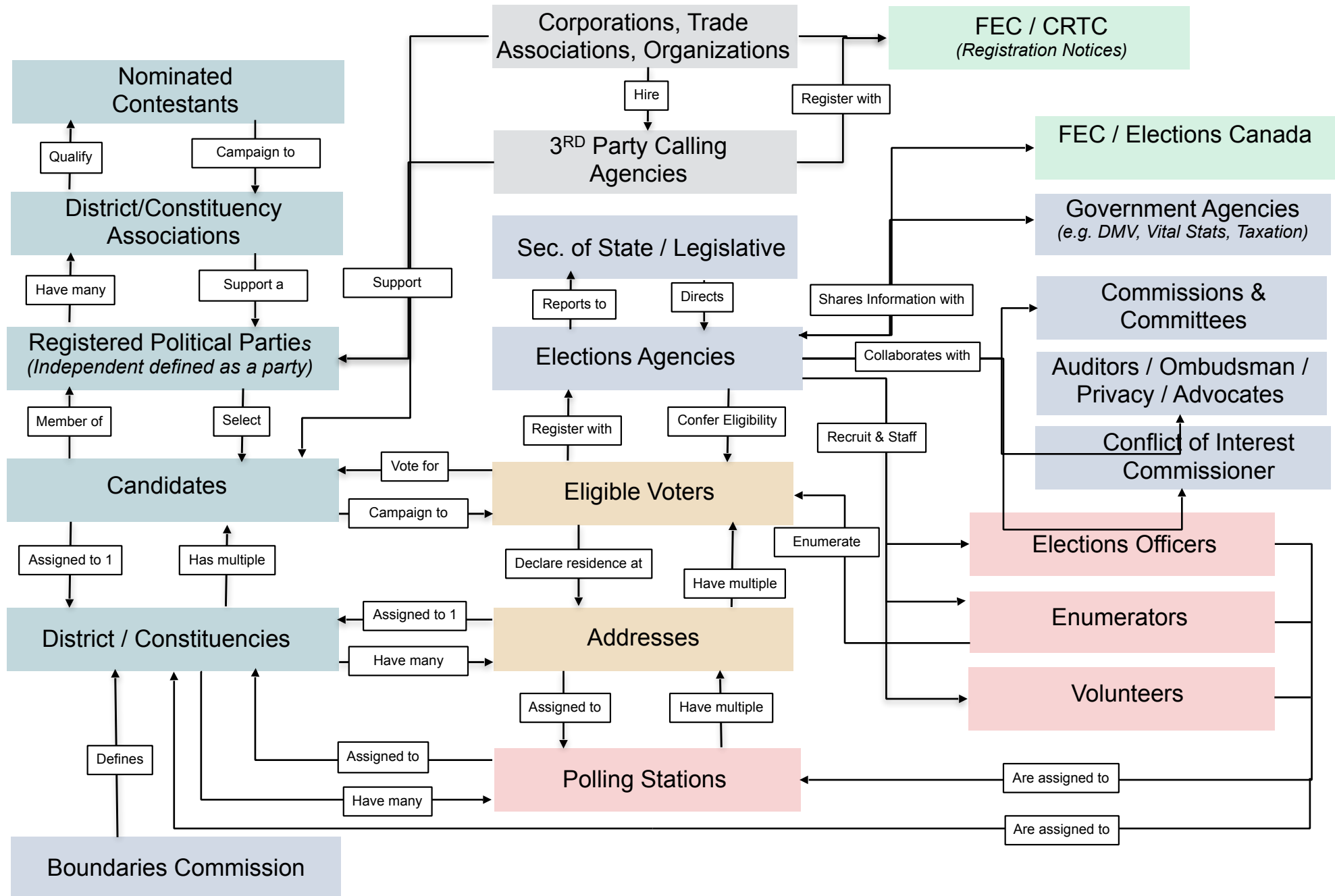
Election Entities

Elections Officers

Enumerators

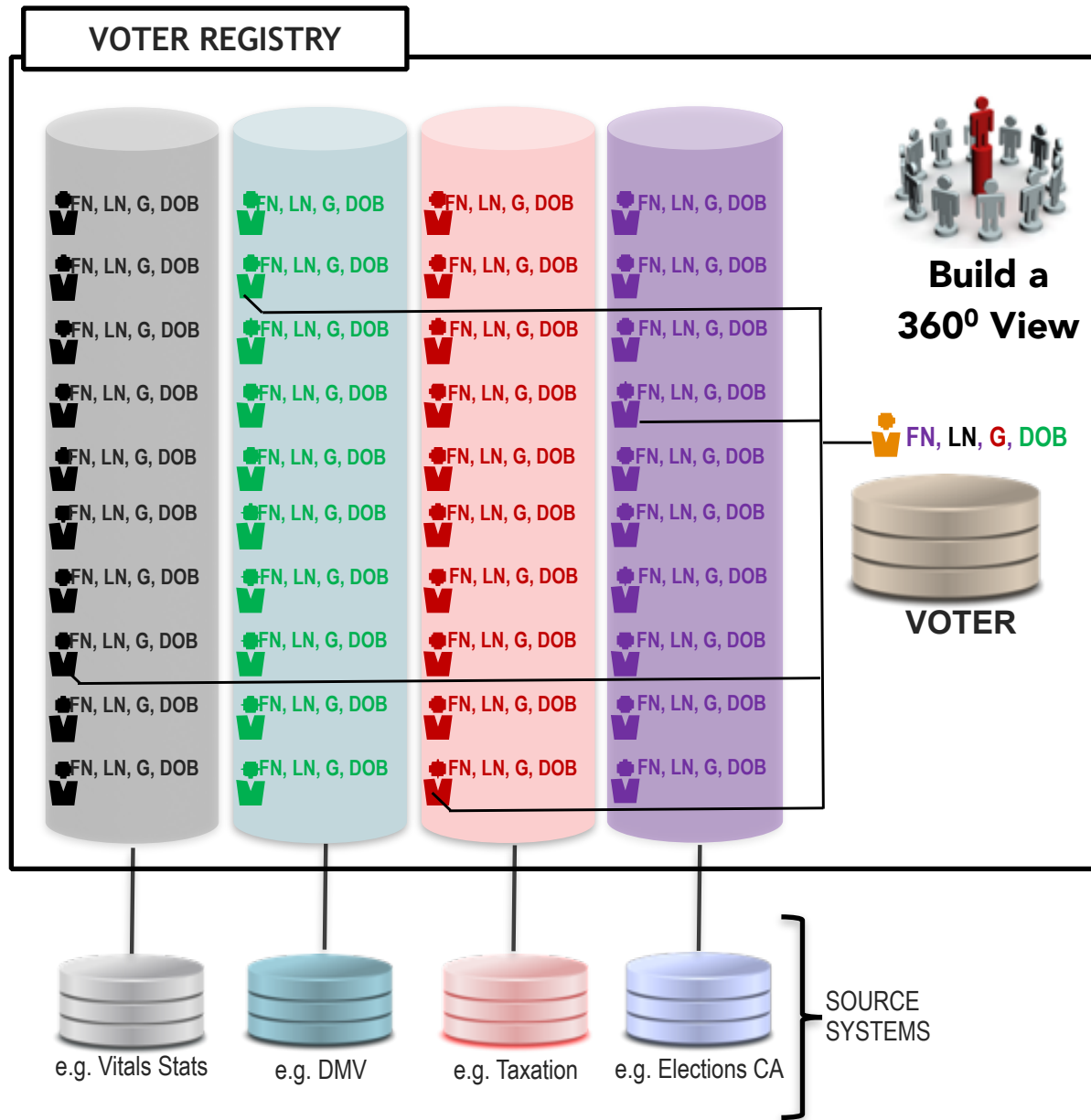
Polling Stations

Volunteers





Voter Registry – Create a “Golden Record”



The Voter Registry builds a “Golden Record” from Source System records using world-leading matching & linking algorithms.

Source System data is kept and never written over – a full history of ALL updates is kept.

Linking and matching can be configured to exclude Source Systems if required.

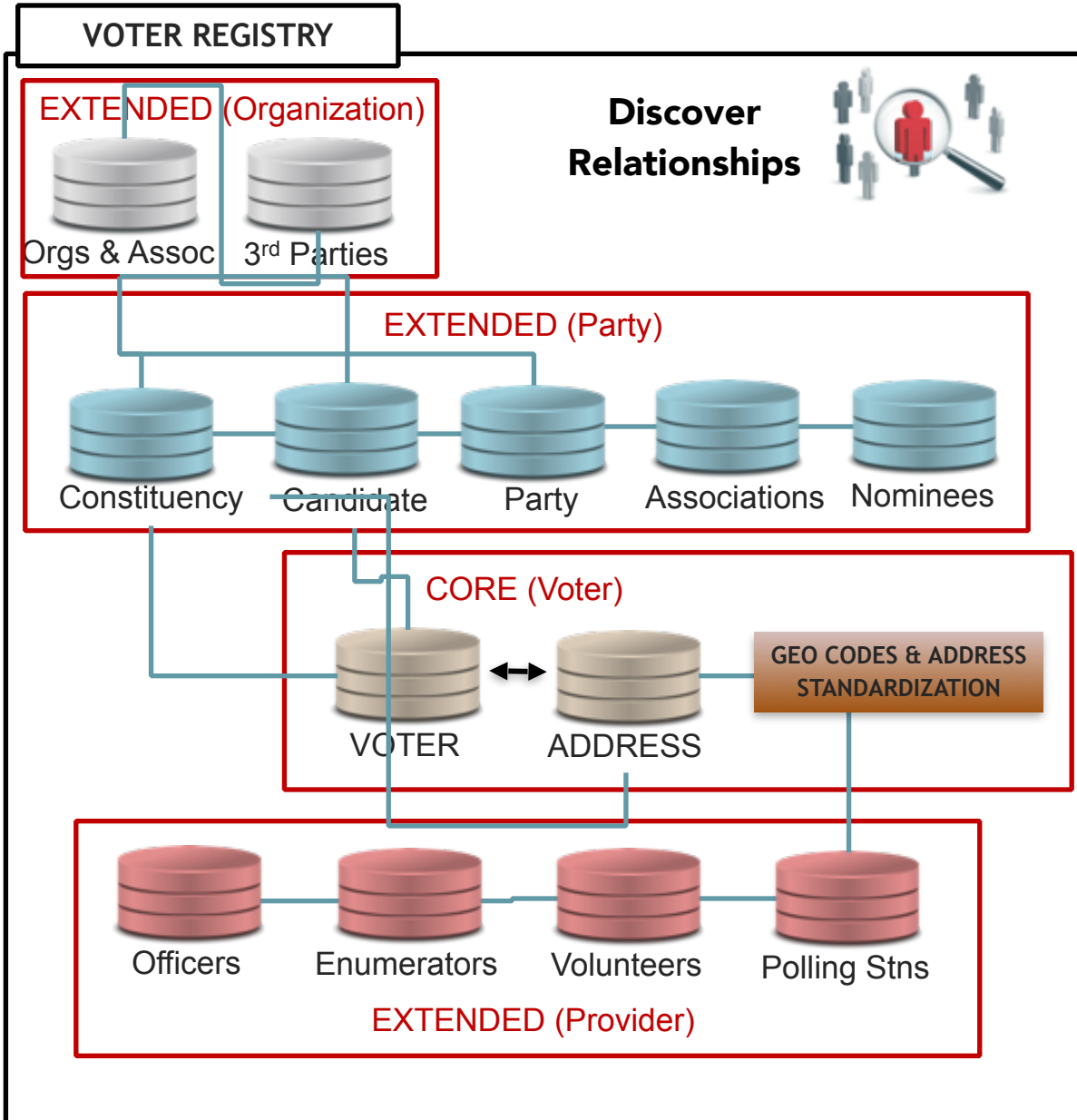
The “Golden Record” is built from the most current information across all sources.

Source Systems can be configured to be excluded from this “Golden Record”

Comprehensive Audit & Logging is provided on all records submitted to the Registry.

Audits can include “point-in-time” investigation – for example “show me the linkage set and which source contributed what data to the “Golden Record” on August 26, 2005”.

This can be demonstrated within one week with the IMT Quickstart Engagement.



The Voter Registry dynamically builds relationships between the “Entities” you establish in your Registry from incoming records.

An Entity can be a person, place, location, organization or thing.

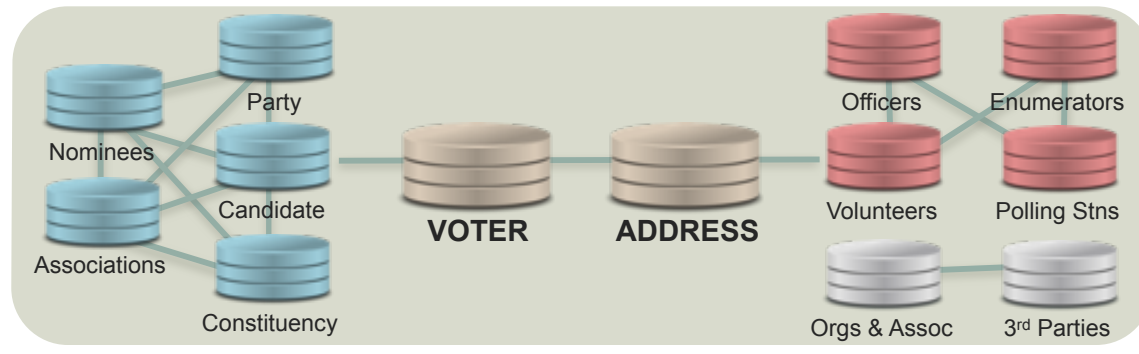
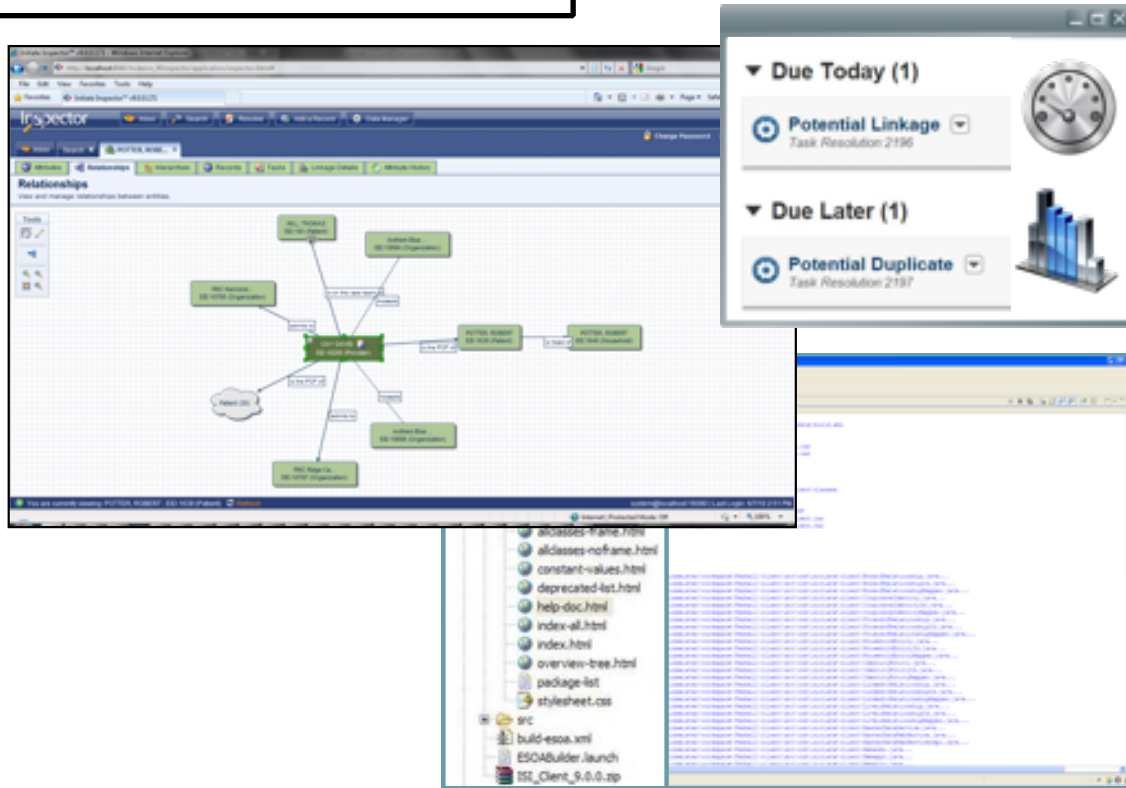
Relationships can be examined in the Data Stewardship tool and are made available to external users and systems via API and Web Services.

ADDRESS STANDARDIZATION TO POST PROVIDED & STORAGE OF GIS CODES

Source Systems can be configured to be excluded from Relationships.

Audits can include “point-in-time” investigation – for example “show me the address of a voter and whether they were a volunteer on August 26, 2004”

VOTER REGISTRY



The Voter Registry provides both Data Stewardship & Data Governance Tools:

Stewardship

Resolve Duplicates

Resolve Linkages

View Relationships

View Source Record

Generate Reports

CUSTOM TASKS

Governance

Create Roles

Assign Users to Roles

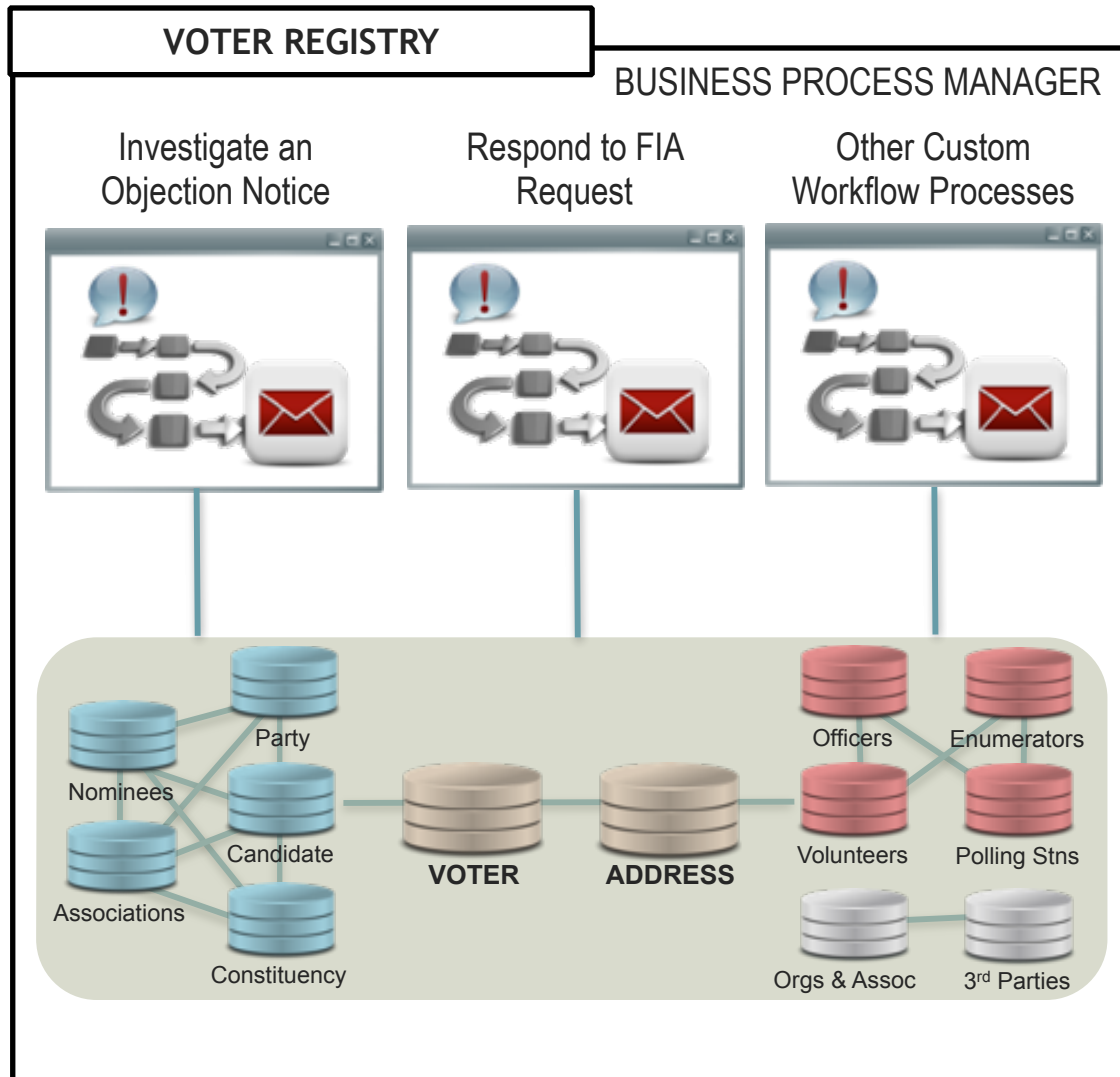
Exclude a Source

Override a Linkage

View Pt in Time Audit

Respond to FIPPA

For example, a ROLE could be created of "Polling Officer" and a person given access as a "Polling Officer". This ROLE could be constrained to QUERY the Registry only and to have the Registry only show this ROLE the "Golden Record" and not specific information from a Source System (e.g. DMV).



The Voter Registry has a robust Business Process Workflow engine embedded.

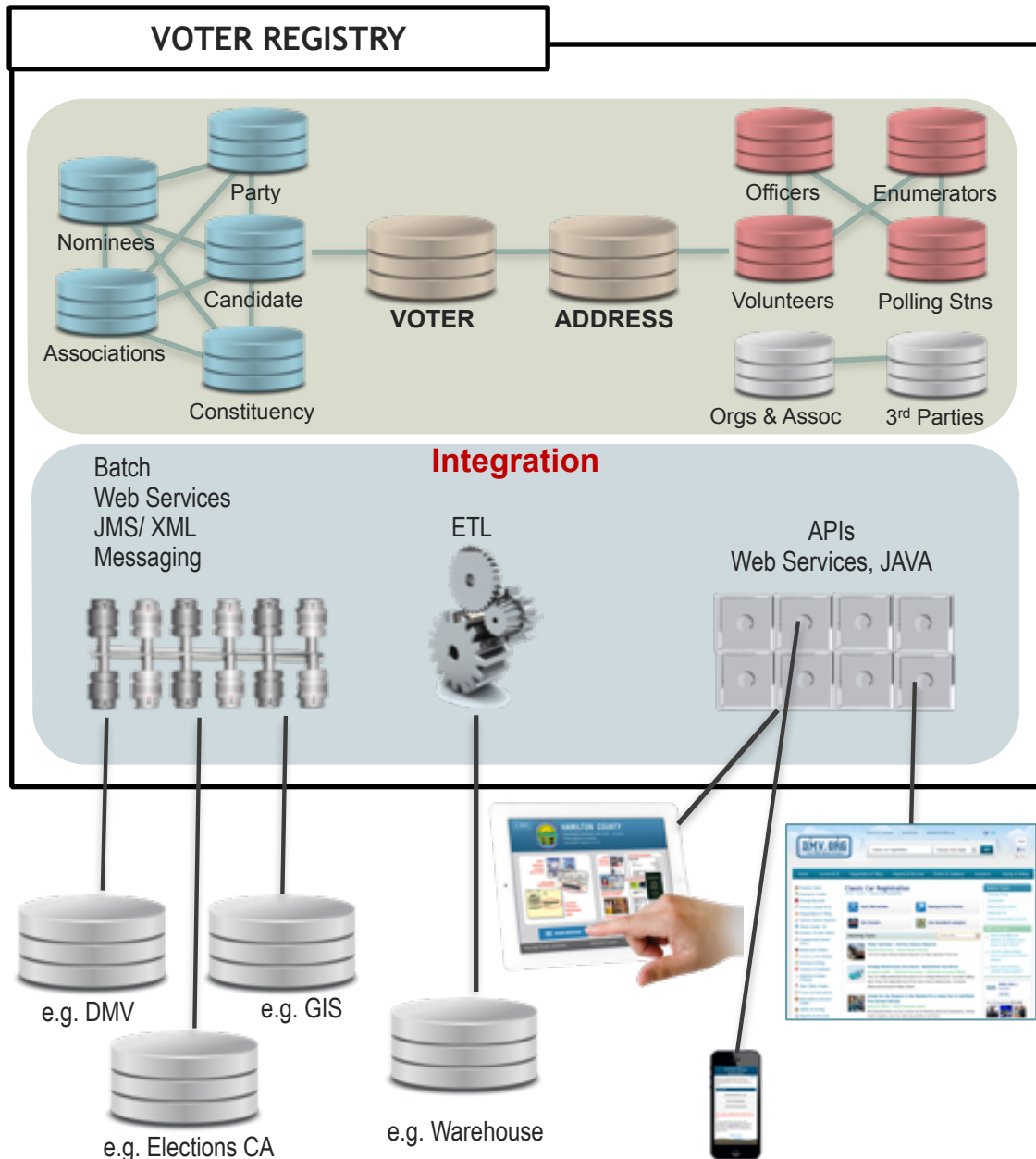
Workflows can be easily created to facilitate multi-stage approvals and to provide alerts and notifications.

For example, a workflow can be configured to manage a potential voter objection:

Enter objection – query and find polling station / constituency – create a task – notify returning officer – provide officer with ROLE based information – record officer analysis – route for examination and approval – record decision in Registry and update Voter data if required.

Many basic workflows can be created and tested within 5 days.

This can be demonstrated in the IMT Quickstart Engagement.



The Voter Registry provides a rich integration environment for ingesting and exporting data to source systems including Web Services, XML, JMS, and Messaging.

ALL functions and processes that you can access in the Voter Registry can also be accessed by a rich set of APIs.

These API services allow you to quickly and easily create new applications such as mobile apps (electronic poll books) and service portals (voter kiosks).

RESOLVE:ID is an IMT software component that allows you to embed workflow and Voter Registry functions directly into a stakeholders system and on their native application screens.

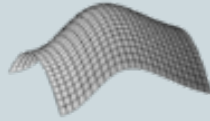
For example, RESOLVE:ID allows you to place a “CONSENT” button on a native Motor Vehicles registration screen and when clicked will send the registration demographic information to the Voter Registry with the appropriate consent information.

VOTER REGISTRY

Analytics



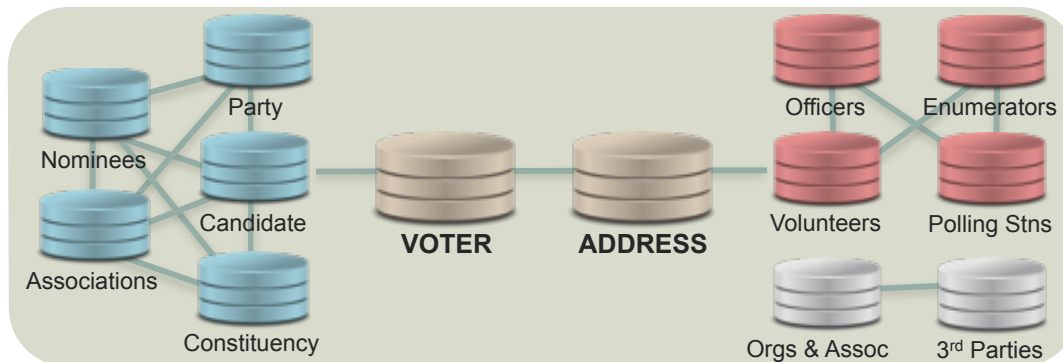
Natural Language Processing



Modelling / Predictive Analytics



Data Visualization & Exploration



The Voter Registry provides reports and statistics as part of the core functionality. In addition, the Voter provides an Extract, Transform and Load (ETL) service to populate data to a data warehouse or analytics environment.

Other analytics that the Voter Registry can support include:

Natural Language Processing

Statistical Modelling

Predictive Analytics

Data Visualization

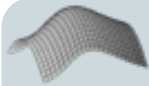
Data Exploration (e.g. Fraud)



Voter Registry Architectural Model



We provide a Voter Registry both in an "Appliance" model and a "Cloud" offering



Analytics

Reports
Statistical Models
(e.g. Fraud)



e.g. File an
Objection



Custom
Workflows

BUSINESS PROCESS MANAGER WORKFLOW, ALERTS, NOTIFICATIONS

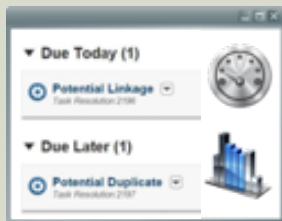


e.g. New Nominee or
Association

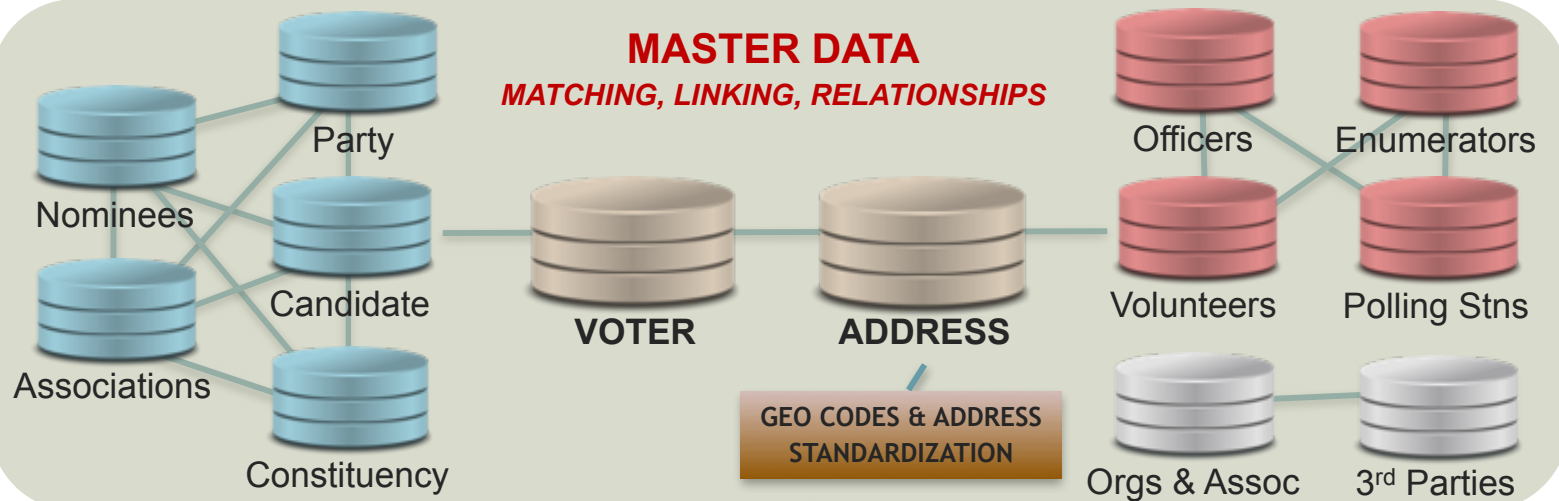


Custom Events
& Notifications

Data Stewardship



Resolve Duplicates
View Voter & Relationships
Resolve Potential Linkages
Custom Tasks



INTEGRATION / ETL



WEB SERVICES &
API'S (JAVA)



Batch



Web Service



API



Messaging



ETL



e.g. Query District,
MLA, Polling Stn.



e.g. Get Relationship
Voter to Candidate



e.g. Add, Modify,
"Delete" Voter



e.g. Get /Add GEO
codes for Address



e.g. Register a
Candidate/Nominee



e.g. Merge Voters



e.g. Vitals Stats



e.g. DMV



e.g. Taxation



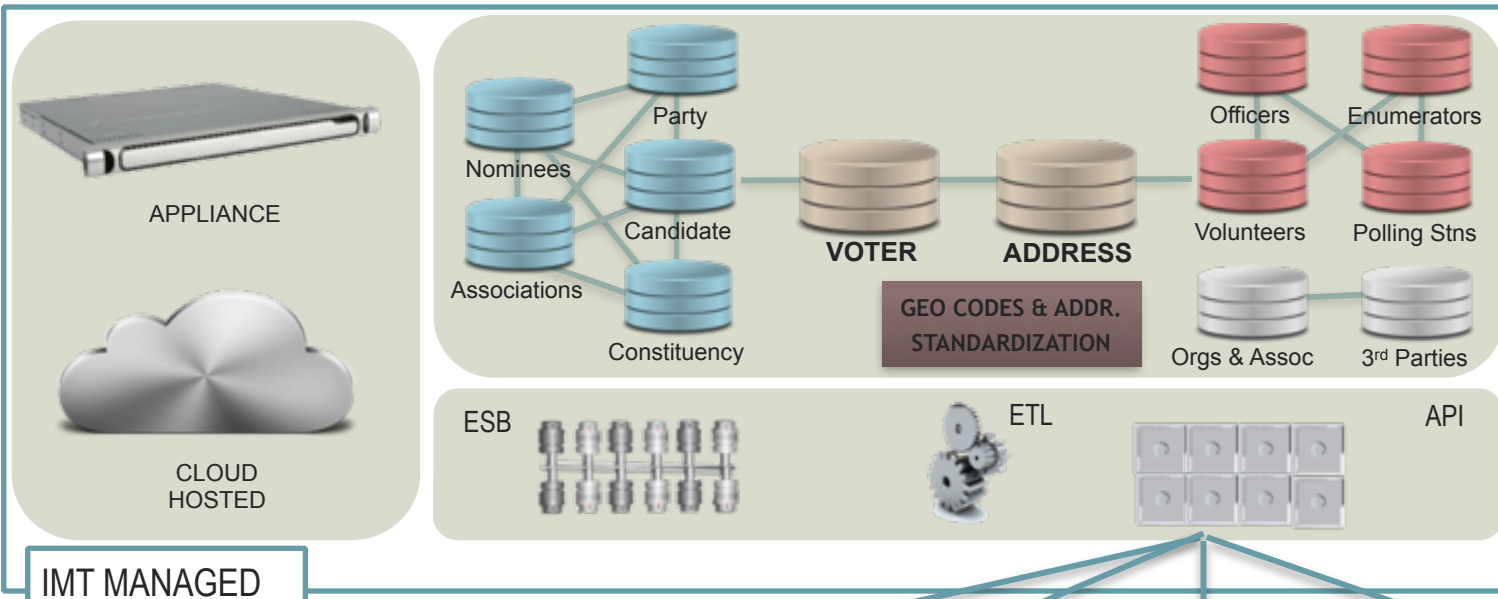
e.g. Elections CA



e.g. Warehouse



Voter Registry Managed Offering Value Proposition



An on-premises "Appliance" model or a hosted cloud model are options where the Voter Registry is managed by IMT.

Many organizations are adopting this model allowing them to direct their effort and resources to the development of stakeholder focused apps.



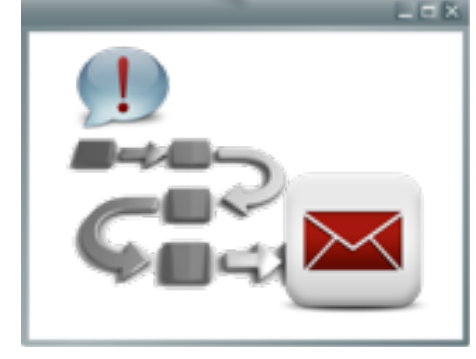
Sante Fe NM is now using ePoll Books to validate voters, print their ballots, and check in voters while in line at precinct polling stations



In Egypt, texting *433 will start a conversation that ultimately tells you where to vote



Over 50% of US DMV offices now offer citizens the ability to register to vote when renewing their license in response to "Motor Voter" legislation



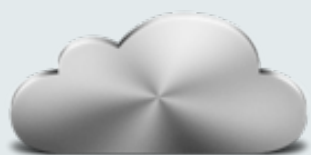
New workflows are providing greater agility. ERIC in the USA allows one state to receive notification from another state that a voter has moved

A bit about Architecture for those who want to know.....

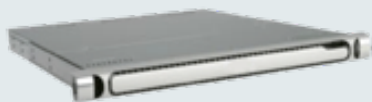
- *IBM Master Data Management (MDM) platform for Entity (ID) linking - data stewardship and governance*
- *IBM Business Process Manager for rapid deployment of new business processes, notifications, and alerts*
- *IBM Identity Insight for advanced relationships investigation and voter fraud detection*



Rapid Deployment

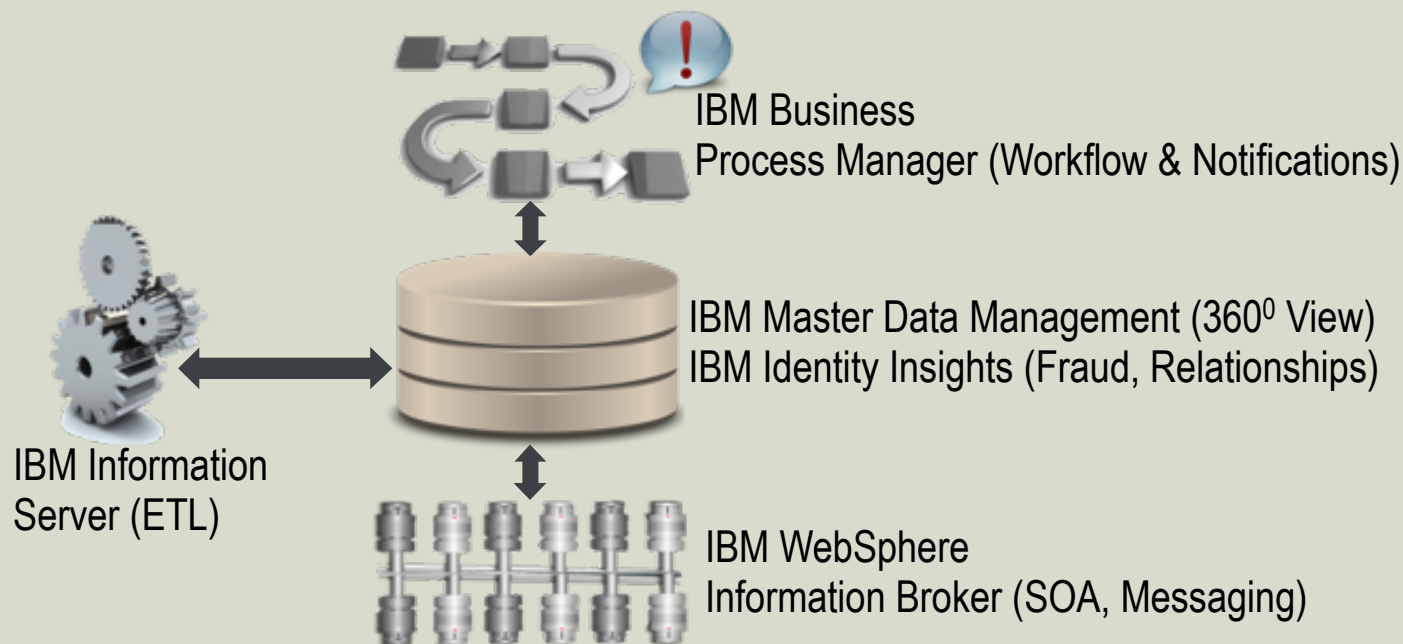


Cloud / SaaS
IBM Soft Layer



Appliance
IMT Built

Master Data Management and Identity Insight





IMT Voter Registry – QUICK START

A RISK-FREE ASSESSMENT

Data quality and integrity issues have a significant impact on your organization. If you don't uniquely resolve the identity of a Voter at registration your problems multiply downstream – we know – we've lived it. Accurate identity resolution and innovative business processes drive operational effectiveness and enhance the voter experience.

During a QuickStart engagement, our certified staff will load your data into a pre-configured Voter Registry instance and analyze the results providing a comprehensive report that identifies and quantifies data quality issues in your enterprise. Using the advanced probabilistic matching logic found in IBM® InfoSphere® we link your data across all sources to provide insights and demonstrate how quickly new business processes can be deployed to leverage these insights.

BENEFITS



Know the potential Voter Registry ROI with your data.



Know your data “hot spots” & source data issues and exposure.



Speed up a Registry implementation with a solid Proof of Concept



Gain insights needed to create a governance framework.

THE IMT QUICKSTART METHODOLOGY

During a QuickStart assessment we leverage IBM® InfoSphere® MDM tools ,which use highly advanced data quality inspection methods to give you deep insight into your data quality. If you find at the end of the engagement that you want to move forward with a Voter Registry, simply transfer what you have learned from QuickStart directly into your Voter Registry using IBM® InfoSphere® MDM– saving you both time and money.

A comprehensive report will be provided at the end of the engagement that will deliver specific metrics around data validity, quality and integrity, inter-source duplication, intra-source overlaps, identity composition and temporal analysis.



Zero Footprint Approach

IMT provides the appliance; you don't need to procure any hardware. You provide data extracts from your contributing source systems and IMT does the rest. The appliance can be run with or without a network connection on your premises to eliminate data security concerns. No data ever leaves your premises and we fully adhere to your security policies.



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