

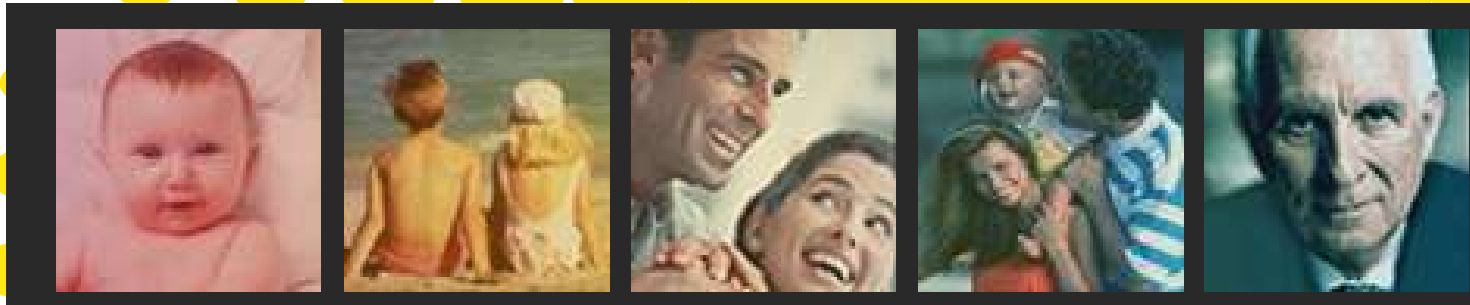


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# e-Voting Standards for UK Elections



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# E-Voting in the UK

- Aim: An e-enabled General Election some time after 2006
- Kiosk voting and remote unsupervised voting
- Multi-channel: Internet, Telephone, SMS, Digital TV, Polling stations, Post
- Pilots testing systems for security and reliability, and building voter confidence

# E-Voting in the UK

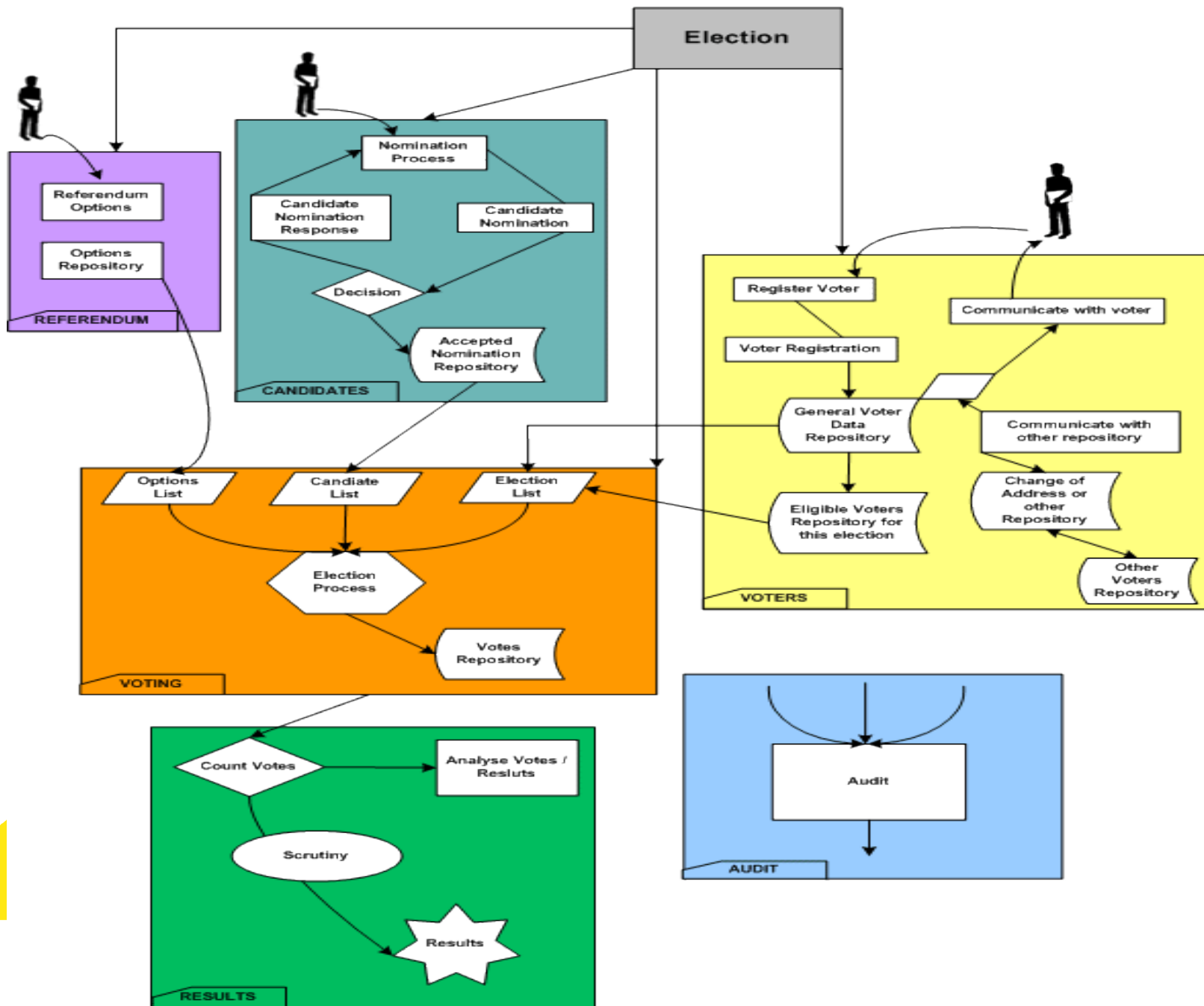
- Critical Success Factors:
  - Making voting more straightforward for the public and more aligned to everyday life
  - Making elections more accessible, more convenient and more attractive
  - Maintaining public confidence in the security of the systems
  - Improving the efficiency and effectiveness of electoral administration
  - Contain costs

# E-Voting Pilots in the UK

- 2002 pilots
  - **9 English local council wards**
  - **multi channels**
- 2003 pilots
  - **19 English local councils**
  - **multi channels**
- 2004 and beyond
  - **Further types of elections, eg County Councils, GLA, European, Scottish Parliament, Welsh Assembly**

# Voting Processes

- **Pre election**
  - *Declaration of Elections*
  - *Nominating Candidates*
  - *Formulating Referendum Options*
  - *Registration of Voters*
- **Election**
  - *Casting of Votes*
- **Post election**
  - *Declaring Results*
  - *Audit*
  - *Analysis*



# Related Activity

- **OASIS e-Voting Technical Committee**
- **Council of Europe**
- **CORE project**

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**OASIS**

**Election & Voter  
Services Technical  
Committee**



# OASIS Mission

To drive the  
development,  
convergence &  
adoption  
of e-business standards.

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# TC History

- Formed March 2001
  - **election.com, Accenture, Microsoft**
- Inaugural Meeting May 2001
- Chair: UK Office of E-Envoy
- Regular meetings and workshops to date
  - **Teleconference and face-to-face**

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# Committee Charter

The purpose of the Election and Voter Services Technical Committee is to develop a standard for the structured interchange of data among hardware, software, and service providers who engage in any aspect of providing election or voter services to public or private organizations.

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# Committee Membership

- Governments
  - **UK, USA, Australia, NZ**
  - **indirectly Council of Europe**
- Corporations
- Election service providers
- Media
- Election reform and watchdog groups

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# Deliverables

- Election Markup Language (EML)
  - **Data interchange standards to support voting processes**
  - **Defined as XML schemas**
- Facilitate all aspects of election and voter services, public and private
- Sanctioned through OASIS

# Benefits of using EML

- More choice of products and suppliers
- Less dependency on a single supplier
- Avoid proprietary lock-in
- Stability or reduction in costs
- Accommodate future changes more easily
- Common core but allows local customisation / extension

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# Why Interchange Standards?

- Need for information to be exchanged at several points in the election process
- Several parties involved
- Need to service dissimilar systems and equipment
- Open process

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# Why XML?

- Widely accepted open standard
- Ability to support disparate systems
- Text based
- Easy to understand and implement
- Extensible
- International

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# Documentation

- Process and Data Requirements
  - **Outlines voting processes**
  - **Identifies data requirements**
  - **Contains glossary of terms**
  - **Addresses security issues**
- XML Schemas
  - **Overview of approach taken in preparing the schemas**
  - **Individual schemas**

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<http://www.oasis-open.org/committees/election>

# EML Localisation

- Need to localise EML to reflect national circumstances
- Restrict certain parts, and/or add local elements
- ‘Schematron’ used to handle and apply localisations
- EML(UK) prepared for use in pilots
- Documents on [www.govtalk.gov.uk](http://www.govtalk.gov.uk)

# Security

Key security requirements are:

- Identity authentication
- Right to vote authentication
- Vote sealing and non-repudiation of vote accuracy
- Vote confidentiality
- Voting Audit

# Compliance and Accreditation

- Assurance that approved ICT solutions are used to support e-voting is an essential aspect of building trust and confidence of everyone involved in elections
- Plan is to introduce accreditation processes that allow for any ICT component or service to be tested and certified as being conformant with the standards
- Election officials will only purchase accredited systems or services

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# Council of Europe

# CoE Work

- 43 countries, larger membership than EU
- Working groups to agree standards for e-voting at legal, operational and technical levels
- Members have input requirements for their election systems into EML v4
- Ministerial directive later this year
  - **Recommend EML as core technical standard**



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# CORE Project

# Project Scope

- Project led by ODPM, launched 15 Jan '04
- Two phases
  - **standardise local electronic electoral registers**
  - **allow authorised users to access local registration data centrally and will support multi-channelled, e-enabled elections**
- Make registers EML compliant by end 2004

[http://www.odpm.gov.uk/stellent/groups/odpm\\_localgov](http://www.odpm.gov.uk/stellent/groups/odpm_localgov)

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# Future work

- Future versions EML to reflect experiences learnt from UK and other pilots
- Accommodate other types of election systems
- Develop compliance accreditation processes
- Ongoing enhancements and review to accommodate any changes in voting policies/legislation
- Move EML to an ISO Standard



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**Thank you**

**Any Questions?**

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[www.govtalk.gov.uk](http://www.govtalk.gov.uk)

<http://www.oasis-open.org/committees/election>