E-vote 2011

Relevant Reference Projects

Project: E-vote 2011

Change log

Version	Date	Author	Description/changes
1.0			

CONTENT

1. Reference project 1 – Large development project in Norwegian public sector

CUSTOMER NAME: The Norwegian Food Safety Authorities

PROJECT NAME: MATS

PROJECT DESCRIPTION: Mattilsynet (The Norwegian Food Safety Authorities) was established the 1st of January 2004 replacing a number of public inspection authorities such as:

- Statens Næringsmiddeltilsyn
- Local Næringsmiddeltilsyn
- Statens dyrehelsetilsyn
- Statens Landbrukstilsyn
- The Seafood department in Fiskeridirektoratet

Before the process of procuring a new IT system was initiated, Mattilsynet used 40 different systems originating from the 5 inspection authorities before the merge. It was necessary with a reconstruction of the IT system portfolio to make an efficient tool for the new inspection authority.
Computas was selected to deliver the new system solution to Mattilsynet.

Project objectives
The objectives of Mattilsynet were amongst others:

- Develop a new system to support business critical processes for inspection
- Replace legacy systems and develop required functionality in the new system.
- Develop a self service web application for external users
- Better control of import and export of food
- More efficient and consistent case handling
- Better data quality
- Integration with internal and external systems

Project result and conclusion
The new system is built on the framework for workflow and process support from Computas in a SOA architecture where a standard integration tool from WebMethods is used for integration with internal and external systems. A self

service web application has also been developed as part of the project for external users. This application provides electronic forms for companies exporting and importing food to make the application process more efficient.

The self service application uses a solution of authentication where AltInn is the Identity provider. The AltInn integration is implemented using SAML. When an external user will use the web client he is routed to the AltInn log in page, logging in with a certain level of security, and then routed to the MATS webclient. AltInn also handles if the user is logged in as a person or as a representative of a company.

In addition to the authentication and authorisation of users, the MATS solution uses AltInn for publishing web forms. HTis means that external users can, if they wish, submit a form from the AltInn forms service. The Mats solution also prefills AltInn forms on demand from other external systems. This is implemented using webservices.

The system is delivered using an agile, user centric development methodology based on scrum using 3 parallel teams in the development. Both Computas and Mattilsynet mean that this has been crucial for the projects success.

The MATS solution contributes to a complete and consistent administration in Mattilsynet in a modern and effective way.

PROJECT TASKS:

Computas fulfilled the following tasks associated with the project:

- Project management
- Quality management/test management
- Functional design/process design/workflow design
- Technical architecture and integration
- Specification
- Usability design
- Programming
- Testing
- Maintenance

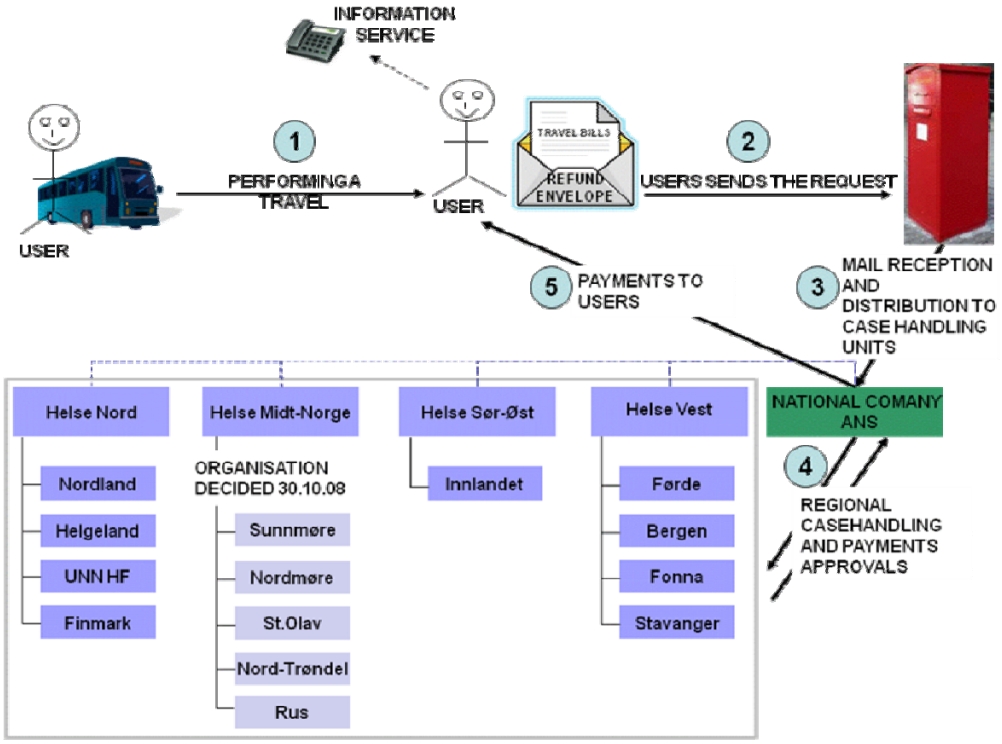
Technology:

- Servers/OS: RedHat ES Linux, Citrix Metaframe, Oracle 10g RAC database, JBoss Application Server
- Development and build tools: IntelliJ, Maven, Hudson, CruiseControl
- Java framework: Java EE, EJB, FS.java™, Skjemaløsning Xultation™ Suite Integrasjonsteknologi: WebServices (.NET, Java), WebMethods®, FTP, Integrasjon med bla ePhorte, Agresso, MS Exchange
- Other software: Oracle Enterprise Manager, Oracle sql*plus, Oracle

	scheduler, Oracle xdb, Oracle java stored procedures • Programming: Java EE, PL/SQL, XML, SAML, SSO
RESOURCES:	The MATS project organisation is large with 3 Scrum teams running in parallel. Selected key resources from the project are listed below: • Eivind Lund, project manager • Filip Van Laenen, Technical project manager • Maria Rekdal, Integration manager • Helle Frisak Sem, Functional coordinator • Elin Kindingstad, Functional architect • Anne Birgit Ro, Test manager • Sissel Wiull, Scrum master • Tor Jørgen Johannesen, Scrum master • Elin Rexed, Scrum Master In addition to the resources listed above around 15 programmers participated in the project
PERIOD:	2006 - 2010
CONTRACT VALUE:	90 MNOK
CONTACT PERSON AT CUSTOMER:	Project Director, Torunn Hagebø, Tel 23216803

2. Reference project 2 – Open source development project in Norwegian public sector

CUSTOMER NAME:	The South-Eastern Norway Regional Health Authority (Helse SørØst RHF)
PROJECT NAME:	National case handling solution - Enkeltoppgjør
PROJECT DESCRIPTION:	The South-Eastern Norway Regional Health Authority (Helse SørØst RHF) on the behalf of all the Regional Health Authorities in Norway selected in oct. 2008 Acando as supplier for the case handling solution for refund of expenses related to transport to/from health treatment locations. The solution was by friporg stated the largest open source contract in the Nordic countries. The solution is now successful put into operation. http://www.digi.no/791818/her-er-norges-storste-friprog-prosjekt The solution gives the Norwegian public health care a future proof, user friendly and efficient case handling solution for refund of travel expenses. The solution was put into operation at schedule 1. Sept. 2009 and will be in full production in des 2009. The Regional Health Authorities take over the responsibility for the case handling from The Norwegian Labor and Welfare Administration (NAV) and the transition ends January 1st 2010. The Solution is used by local case handle units throughout the country and in a national center. The solution is based on open source with software supported from Sun Microsystems and Alfresco, and extends the existing national SOA solution with new products and services.



The solution handles more than 1 000 000 cases with more than 4 000 000 travels per year. The solutions support a national wide organization with about 20 offices with centralized scanning and printing of cases and letters. The case handling is distributed electronically to the correct case handler for handling and approval.

Project objectives

The objectives were amongst others:

- More efficient and consistent case handling
- Better data quality
- Reuse of established infrastructure
- satisfies the requirements of usability, including fast and easy payment
- provide the opportunity for advice and guidance during the case management process
- provide efficient utilization of resources and a uniform practice / problem-solving
- simplify and to a greater extent digitize the proceedings

- provide good management / control and good financial management data

Project result and conclusion

The new system is built on the framework for workflow and process support in a SOA architecture where a standard integration tool is used for integration with internal and external systems. Web applications have also been developed as part of the project for users.

The user involvement in all phases of the projects has been

The system is delivered using an agile, user centric development methodology based on scrum in the development with user involvement in all phases. This has been crucial for the project success.

The solution contributes to a complete and consistent administration in a modern and effective way.

PROJECT TASKS:

Acando fulfilled the following tasks associated with the project:

- Project management
- Quality management/test management
- Functional design/process design/workflow design
- Technical architecture and integration
- Specification
- Usability design
- Programming
- Testing
- Training
- Maintenance

Technology:

- Servers/OS:opensolaris, RedHat ES Linux, MySQL, JBoss Application Server, Glassfish
- GWT
- OpenSSO, Glassfish webspace server/Liferay,

RESOURCES:

The project organisation includes handling of several sub supplier sand handover to Norsk Helsenett which is the operator of the live system
Selected key resources from the project are listed below:

- Bjørn Dahl, project manager
- Anders Eid, Technical project manager
- Kjell Atle Lund QA manager
- Hans Petter Hoås Bauhr OpenSSO and
- Stian Karlsen User Interface

	In addition to the resources listed above around totally 10 programmers participated in the project
PERIOD:	2008 -
CONTRACT VALUE:	50 MNOK +
CONTACT PERSON AT CUSTOMER:	Project Leader, Jan Furseth, Technical leader Allan Lochert

3. Reference project 3 – E-voting development and maintenance project

CUSTOMER NAME:	Estonian National Electoral Committee, Estonia
PROJECT NAME:	e-voting
PROJECT DESCRIPTION:	Implementation and maintenance of Estonian e-Voting System. The purpose of the project was to: • develop an Internet voting system that would utilize Estonian ID-card infrastructure and conform to the results of e-voting security analysis report; • interface the developed system with existing election information system; • provide support for the pilot voting; • provide support for Estonian Local Government and Parliament Elections at years 2005, 2007 and Europian Parliament Elections and Estonian Local Government Elections at year 2009
PROJECT TASKS:	To methodologically (Rational Unified Process) develop Internet voting system. To keep the software up-to date with new developments on the client and server-side platforms. To provide active support during election days. To actively analyze and improve the system security and performance during the usage period.
RESOURCES:	Arne Ansper - system analyst, architect; Kristo Heero - architect, project manager; Sven Heiberg - architect; Roman Loemaa - programmer; Ivar Smolin - programmer; Vahur Vaiksaar -programmer; Märt Laur - technical writer, QA engineer
PERIOD:	15.03.2004-18.09.2009
CONTRACT VALUE:	1,61 MNOK
CONTACT PERSON AT CUSTOMER:	Project manager, Tarvi Martens, phone +372 627 0143, email

4. Reference project 4 – Electoral modernisation pilot project 2007

CUSTOMER NAME: Ministry of Justice, United Kingdom

PROJECT NAME: Electoral Modernisation Pilots 2007

PROJECT DESCRIPTION: In 2007, the United Kingdom Ministry of Justice (formerly the Department for Constitutional Affairs) embarked on a programme of Election Modernisation with the aim of introducing improvements in efficiency, security and delivering innovation to support and enhance the electoral process.

As part of this process the Ministry of Justice (MoJ) invited tenderers to bid to become an approved provider of Electoral Services under the Electoral Modernisation Framework. After a rigorous tender process, OPT2VOTE were awarded one of the five prestigious positions on this Framework.

In late 2006 the MoJ published an electoral pilot scheme prospectus inviting UK Local Authorities to procure electronic electoral services from Framework suppliers. OPT2VOTE were selected to deliver three electoral modernisation pilots as follows:

Authority	Electorate	Pilot Detail
Sheffield City Council	375,000	• Remote e-voting (internet & telephone voting • Advance voting at kiosk terminals • Ballot Printing on demand
Dover District Council	40,000	• Electronic counting of ballot papers
Shrewsbury & Atcham District Council	68,000	• Advance remote electronic voting (e-voting) using the internet and touch tone • telephone • e-voting kiosks in three advance voting locations

Project Objectives

The **objectives of the 2007 Electoral** Modernisation pilots were as follows:

- To offer additional choice too voters to make voting more convenient and accessible
- To extend choice, security and ease of voting
- To test the effect on turnout of providing an extended voting period

- To pave the way for the expansion electronic election services
- To reduce the time taken to count paper votes using electronic scanning and adjudication methods
- To improve the accuracy of the counting ballots, particularly in relation to multi-member parish council elections
- To enable an accurate and well-documented evaluation of social impact, processes and technologies arising from the pilot scheme.

Sheffield City Council Pilot

Sheffield is a major urban city, situated in South Yorkshire with some rural and semi-rural areas. Sheffield's population was 520,700 with the City Council area covering around 36,800 hectares. Sheffield City Council is represented by 84 councilors', elected from a uniform pattern of 28 three-member wards.

OPT2VOTE was selected by Sheffield City Council and the UK Ministry of Justice as the approved supplier capable of delivering the largest electoral modernisation pilot ever delivered in the UK. OPT2VOTE were selected not only to deliver the e-voting and advance kiosk voting systems but also to project manage the complete pilot.

OPT2VOTE provided Sheffield with remote internet voting facilities, touch tone telephone voting and kiosk voting, made available to its electors over a period of four days from 7am on 26th April until 7am on 30th April.

Electors wishing to vote by internet or telephone had to register for the system, and provide their name and address, date of birth, a six-digit pass code and a signature. Registered e-voters were then sent a unique voter identification number (VIN). As part of the election project, OPT2VOTE also provided remote voting services via information kiosks for internet voting across Sheffield

The system provided Sheffield City Council and its voters with a voting solution which offered multiple voting channels and increased accessibility compared to traditional paper based voting systems.

Dover District Council

The south-east coast local authority of Dover principally covers the towns of Dover, Deal and Sandwich, and many neighbouring villages. Covering 31,500 hectares, it is the seventh largest of the Kent districts. The Council comprises a total of 45 councillors: 22 Conservative, 17 Labour, three Liberal Democrats and three Independents and is elected every four years and the district comprises 21 district wards and 35 parishes (a number of which are warded).

The OPT2VOTE e-counting system consisted of a number of separate software

applications that have been developed to correspond to the processes involved in a manual count. These included:

- *a module for the registration of ballot boxes*
- *a scanning module*
- *a verification module*
- *two adjudication modules*
- *a counting module.*

Shrewsbury & Atcham District Council

The borough of Shrewsbury & Atcham is one of five district councils in the county of Shropshire, in the West Midlands region. The borough covers an area of approximately 60,200 hectares. Shrewsbury & Atcham has an estimated population of 96,000 and most of its inhabitants live in Shrewsbury (around 60,000), with other significant populations to be found living in the nearby towns of Bayston Hill and Pontesbury.

Shrewsbury & Atcham Borough Council has 40 elected councillors, representing 24 single- and two-member wards. There are 43 parishes situated within the borough. As elections are held by thirds, there were elections in 13 wards in 2007.

The authority introduced the following innovations for the pilot:

- *advance remote electronic voting (e-voting) using the internet and touch tone telephone*
- *e-voting kiosks in three advance voting locations (a shopping centre and two village halls)*

The Council made remote internet and touch tone telephone voting available to its electors from 12 midnight on 21 April until 11.59pm on 1 May, two days before polling day Voters were required to pre-register using a paper form, and provide personal identifiers for security purposes. These identifiers were a signature, date of birth and password (consisting of numbers only). On receipt, these forms were to be scanned and the personal identifiers linked to the voter. The final date to register was 18 April 2007.

Project Results & Conclusions

The UK Electoral Commission produced a report to describe the results and conclusions of the 2007 Electoral Modernisation Pilots

- The pilot scheme facilitated and encouraged voting by offering new voting channels, and giving electors more convenient voting options.

- The pilot scheme facilitated the counting of votes cast
- The pilot resulted in an increase in turnout of 1.5% compared to 2006 Local elections
- The pilot scheme provided electronic voting services and advance voting services that were easy to use.
- The pilot scheme did not appear to result in an increase in electoral malpractice or offences.

PROJECT TASKS: OPT2VOTE fulfilled the following tasks associated with the project:

- Project management and risk management services associated with the election
- Development and deployment an electronic counting and adjudication solution
- Provision of electronic electoral register and the ability to print ballot papers on demand for the advance voting station
- Printing of e-voting pre-registration forms, e-voting poll cards and other communications promoting the pilot scheme
- Printing of ballot papers, postal vote packs and poll cards.
- Training and election communications.
- Quality Assurance of overall delivery.

RESOURCES: **OPT2VOTE** resourced the 2007 Electoral Modernisation Pilots as follows:

- Mark Gillen – Operations Director
- Siobhan Donaghy – Project Manager
- Roy Hill – Technical Director
- Clyde Hunt – Software Development Manager
- Marion O'Reilly – Elections Operation Manager
- Emma Ryder – Quality Control
- Fiachra Mac Giolla Bhríde – Security Analyst
- Richard Curry – Testing

PERIOD: January 2007 – May 2007

CONTRACT VALUE: £2.2 million pounds

CONTACT PERSON AT CUSTOMER: **Andrew Winsor**, Ministry of Justice, Electoral Modernisation Department, +44 (0)20 3334 3555, Andrew.winsor@justice.gov.uk
John Tomlinson, Head of Electoral Services, Sheffield City Council, +44 (0) 114 273 4606, John.Tomlinson@sheffield.gov.uk

5. Reference project 5 – Electoral modernisation pilot project 2003

CUSTOMER NAME: Office of the Deputy Prime Minister (ODPM), United Kingdom

PROJECT NAME: Electoral Modernisation Pilots 2003

PROJECT DESCRIPTION:

Project Description:

In 2003, the United Kingdom Office of the Deputy Prime Minister (ODPM) invited tenderers to bid to become an approved provider of Electoral Services under the Electoral Modernisation Framework. After a rigorous tender process, OPT2VOTE were awarded one of the five prestigious positions on this Framework.

Following publication an electoral pilot scheme prospectus in late 2002, OPT2VOTE were selected to deliver the following electronic electoral services:

Authority	Electorate	Pilot Detail
Kerrier District Council	72,710	• Remote e-voting (internet & telephone voting) • Digital TV voting • Traditional polling stations
Vale Royal District Council	94,000	• Remote e-voting (telephone voting) • Postal voting • Traditional polling stations
Shrewsbury & Atcham District Council	95,000	• Advance remote electronic voting (e-voting) using the internet and touch tone • telephone • e-voting kiosks in three advance voting locations

Project Objectives

The objectives of the 2003 Electoral Modernisation pilots were as follows:

- To offer additional choice too voters to make voting more convenient and accessible
- To extend choice, security and ease of voting
- To test the effect on turnout of providing an extended voting period
- To pave the way for the expansion electronic election services
- To reduce the time taken to count paper votes using electronic scanning and adjudication methods

Shrewsbury and Atcham Borough Council

Shrewsbury and Atcham Borough Council (SABC) applied to run an electoral pilot in the May 2003 local elections, the first such pilot for which the Council had applied. With a population of over 95,000, and elections across 13 wards and 1 parish, the Council was delighted to be working with ***OPT2****VOTE in the delivery and management of the e-enabled election.*

SABC proposed a dramatic change from traditional elections – an extended voting period and no polling stations. Instead all voters were given the opportunity to vote using the following methods:

- *E-Voting by Internet*
- *E-Voting by Digital Television*
- *E-Voting by Telephone*
- *Voting by Post*

SABCs goal was to achieve voter turnout in excess of 50%, where the traditional turnout was 36% As Robin Hooper, Chief Executive and Returning Officer said, 'We knew this would be a challenge, but we were confident in the expertise and professionalism of ***OPT2****VOTE, and that together we could deliver'.*

A project team was put in place, supported directly by ***OPT2****VOTE Head Office, to plan and co-ordinate the delivery. In addition to the normal intensive election workload, additional activity to ensure success included a Public Awareness campaign, training of the electorate, and work with the local Council staff and members.*

The pilot was exciting in many ways, notably as this was the first Digital TV voting trial in Europe - a great achievement for both SABC and ***OPT2****VOTE.*

A staggering 54.5% of the electorate voted, one of the largest turnouts in the country. As Robin Hooper said 'It's brilliant news. I think everybody involved needs to be congratulated. It's excellent news for the whole of the Borough'.

The success was all about people too. 19 year old Jayne Christopher, spending her gap year in Cunnamulla, Australia voted via the internet on www.smartvoting.com. This and many other stories demonstrate how e-voting is the future of elections. Shrewsbury does not want to go back to traditional polling stations alone. Perhaps it's best left to Robin Hooper again - 'The future of elections will be about providing the electorate with choice, and we look forward to working with ***OPT2****VOTE again'.*

Kerrier District Council

Kerrier District Council (KDC), applied to run an electoral pilot in the May 2003 local elections, following the highly successful all postal by-election pilot in 2001. With an electorate of 72,210, and elections being held in 16 wards and 12 parishes, Kerrier and the ***OPT2****VOTE project team worked extremely closely to deliver the election.*

*Kerrier proposed an approach to the pilot where the traditional could integrate with the modern. The approach was to provide an e-enabled voting period form the 22-27 April, with traditional polling methods available on May 1st. With **OPT2**VOTE's election expertise, this integration was achieved, giving the electorate the opportunity to vote using a range of access methods:*

- *E-Voting by Internet*
- *E-Voting by Digital Television*
- *E-Voting by Telephone*
- *Voting via traditional Polling Station*

*The pilot was exciting in many ways, notably as this was one of the first digital TV voting pilots in Europe - a great achievement for both Kerrier and **OPT2**VOTE. A close working relationship was developed, as highlighted by Nigel Richards, Returning Officer, when he said 'The operational success of the pilot was due to the provision of a fulltime project manager and support staff by **OPT2**VOTE. A strong and pragmatic working relationship between **OPT2**VOTE and the Council enabled the risks to be managed and the pilot scheme to operate properly'.*

Undoubtedly this was an exciting development for the electorate in Kerrier. Many electors contacted the council to express their satisfaction with how the election was conducted. One voter simply stated - 'An excellent scheme - well done. Welcome to the 21st Century!'

One key benefit of the e-enabled election was how it benefited the wider electorate. A survey indicated that 30% of those who voted online in Kerrier were aged 45-55, 25% aged 55-65 and 14% aged 65 and over. Many disabled people also found the system convenient, highlighting the ease of access compared to a traditional polling station. The Kerrier electorate was justifiably proud of its council for exploring these new voting opportunities.

Vale Royal Borough Council

*Vale Royal Borough Council in Cheshire has embraced the e-government agenda. When the opportunity for an electoral pilot in the May 2003 local elections arose, the council was eager to apply. **OPT2**VOTE was commissioned to run the pilot, for an electorate of 93765 across 27 wards and 11 parishes.*

*While Vale Royal is a progressive council, the proposed approach was to merge traditional with modern. An e-enabled voting period was provided from the 17-27 April, with traditional polling methods available on May 1st. With **OPT2**VOTE's election expertise, this integration was achieved, giving the electorate the opportunity to vote using a range of access methods:*

- *E-Voting by Telephone*
- *Voting via traditional Polling Station*
- *Voting by post*

The importance of a concerted publicity and awareness campaign to educate the electorate was recognised early in the process. The Communication Department,

*Electoral Services Team and **OPT2**VOTE worked closely together to produce an extensive voter engagement campaign comprising:*

- *Billboard Advertising*
- *Flyer Distribution*
- *Newspaper Articles*
- *Council Mailings*
- *Citizen Magazines advertising*
- *Focus groups Meetings*
- *Public Information Evenings*
- *Supermarket Demonstrations*

*The campaign clearly produced results. Over 25% of those who voted did so electronically, with the solution attracting much favourable comment throughout the borough. This positive attitude extended to the Election team in Vale Royal, who expressed the opinion that they see no turning back and would expect the pilot to be expanded over time. Anne Bingham-Holmes, Chief Executive and Returning Officer simply stated ''Thanks to the ability of **OPT2**VOTE to work closely with our team, and the flexibility and professionalism demonstrated, the election was a resounding success'.*

Project Results & Conclusions

The UK Electoral Commission produced a report to describe the results and conclusions of the 2003 Electoral Modernisation Pilots

- The pilot scheme facilitated and encouraged voting by offering new voting channels, and giving electors more convenient voting options.
- The pilot scheme facilitated the counting of votes cast
- The pilot in Shrewsbury resulted in an increase in participation of 18% compared to the previous election.
- The pilot in Vale Royal resulted in an increase in participation of 22% compared to the previous election.

PROJECT TASKS:

OPT2VOTE fulfilled the following tasks associated with the project:

- Project management and risk management services associated with the election
- Development and deployment e-voting channels (internet, telephone and Digital TV platforms)
- Printing of e-voting pre-registration forms, e-voting poll cards and other communications promoting the pilot scheme
- Printing of ballot papers, postal vote packs and poll cards.
- Training and election communications.
- Quality Assurance of overall delivery.

RESOURCES:	**OPT2VOTE** resourced the 2003 Electoral Modernisation Pilots as follows: • Siobhan Donaghy – Project Manager • Roy Hill – Technical Director • Clyde Hunt – Software Development Manager • Marion O'Reilly – Elections Operation Manager • Emma Ryder – Quality Control • Fiachra Mac Giolla Bhríde – Security Analyst • Richard Curry – Testing • Patrick Daly – Software Development • John Malanaphy – Software Development • Matthew Brown – Customer Engagement
PERIOD:	January 2002 – May 2003
CONTRACT VALUE:	£1.6 million pounds
CONTACT PERSON AT CUSTOMER:	**Nigel Richards**, Head of Electoral Services, Kerrier District Council, +44 (0) 300 1234 100, nigel.richards@kerrier.gov.uk **Penny Chamberlin**, Head of Electoral Services, Shrewsbury & Atcham District Council, +44 (0) 345 678 9000, penny.chamberlain@shrewsbury.gov.uk