Inquiry into the Electoral Commission of Queensland's online publication of the preliminary and formal counts of the votes cast in the 2020 quadrennial local government election and the Bundamba and Currumbin state by-elections held on 28 March 2020.

Submission No 003

SUBMISSION

INQUIRY INTO THE ELECTORAL COMMISSION OF QUEENSLAND'S ONLINE PUBLICATION OF PRELIMINARY AND FORMAL COUNTS OF THE VOTES CAST IN THE LOCAL GOVERNMENT ELECTIONS AND STATE BY-ELECTIONS HELD ON 28 MARCH 2020.

I have over 30 years of experience as an IT executive, Chief Information Officer and Project Director in the Queensland Government and have successfully led and delivered 15 major school systems, customer service systems, finance and HR/Payroll systems. I submit the undernoted comments to the Inquiry for consideration.

In 2018 the Electoral Commission of Queensland (ECQ) commenced a project to implement a new intuitive, easy to use workflow and user interface election management system. While not counting the votes, the system would manage all aspects of an election, including candidate and party, elector, staffing, event, vote, e Pollbook, results and website, to export the election results data to the ECQ web interface (as this would offer higher protection of ECQ data which was stored in the new system). This project would replace the old purpose-built Strategic Election System (SEMS) that was implemented in 2006 and had been modified to the extent that it was not considered upgradeable to meet the Queensland Government's future election needs. The project objective was to implement the new system in time for the March 2020 local election and the October 2020 state election. This timeline was considered appropriate to develop and test the new system.

In February 2019 in excess of 80 new changes to legislation (CTL) reforms were first flagged by the government. However, these amendments took some time for development, review and confirmation of requirements. ECQ was monitoring the CTL process, but it was not until November 2020 that the final reforms to the Local Government Elections Act 2011 were approved. This left approximately four months to implement these finalised changes which ranged from very complex to simple. These new requirements dramatically increased the risk profile of the project. The key issue with introducing new capability into an already largely developed system is the time required to make these changes, the impact that they have across other areas of the developed system, and the need for substantial retesting, much of it in parallel with bug fixes being implemented thus requiring further retesting.

ECQ prioritised the development of these changes based on the progressive stages of the election:
- Candidate and party – which was ready for candidate/party registration and despite a small initial hiccup, performed as required
- Elector and associated capability – which was ready for pre-poll voting and also used on election day – performed as required

The results and website export capability were the last functionality developed and tested in early March. This capability and performance did not meet ECQ's requirements. Hence, ECQ considered its options to be able to publish preliminary and formal vote counts successfully on election night. The options identified were to:

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- proceed with more changes to the new election management system at the eleventh hour as this could jeopardise the success of the successfully tested election capability;
- consider if the old SEM system offered any options to address the results publication issues;
- develop an alternate system which encompassed its own separate and more secure results website, the look and feel of which had already been agreed through prior work.

The last option, develop an alternate system, was considered the only viable and least risk solution. This was despite requiring booth supervisors at the 1100 polling booths to manually record the vote count via a proforma sheet and submit that to an ECQ team for verification. Process validation and performance testing of the solution was conducted and included extensive load and penetration testing. As a result, prior to the election, there was a confidence level that results would be published successfully.

Risk analysis, reporting and monitoring were key items on the project steering committee's fortnightly meetings

On the night of the election an issue was encountered with the uploading of the proforma results sheet to the website. Despite analysis of the problem (which identified that the problem was inconsistent format presentation of the data e.g. punctuation and differences in naming conventions between the source data and the results website), it was 11 pm before the problem was fixed and results were available.

There are a number of learnings from this experience:
- Risks are dramatically increased when additional new capability needs to be configured/developed and tested in a system in a tight timeframe;
- Testing timeframes need to be sufficient to do thorough end-to-end testing e.g. results entry to results publication on the web;
- The new ECQ election management system performed as required for pre-election, pre-voting and election voting.
- System data was accurate; hence enrolment and voting ran smoothly, and results were accurate.

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