

**For discussion  
on 15 May 2023**

**Legislative Council Panel on Constitutional Affairs**

**Proposed creation of two permanent directorate posts  
in the Registration and Electoral Office**

**PURPOSE**

This paper briefs Members on the plan of the Registration and Electoral Office (“REO”) to enhance service delivery by improving the electoral arrangements, strengthening planning capabilities and supervision of departmental operational workflow, and advancing the application of information technology (“IT”). It also seeks Members’ support on the proposed creation of two directorate posts.

**BACKGROUND**

2. Following the commencement of the Improving Electoral System (Consolidated Amendments) Ordinance 2021 in May 2021, the Electoral Affairs Commission (“EAC”), with the assistance of REO, has successfully conducted the Election Committee Subsector Ordinary Elections, the Legislative Council (“LegCo”) General Election, the Chief Executive Election and the Legislative Council Election Committee Constituency By-election respectively in September 2021, December 2021, May 2022 and December 2022. All these elections were conducted smoothly in a fair, open, and honest manner. Nevertheless, the Government notes that there is room for improvement in relevant practical arrangements. To this end, the Chief Executive stated in the Policy Measures of the 2022 Policy Address that the Government would adhere to the improved electoral system in the long run, continue to enhance and further apply IT in electoral arrangements, and ensure that elections are

fair, open, and honest while at the same time more efficient and user-friendly.

3. With the conclusion of the four public elections mentioned above, REO will establish a mechanism to tie in with the requirements of the Government and EAC to continuously improve electoral arrangements in light of the experience gained in each election, and to formulate measures, assign priorities and devise work plans having regard to the measures' importance, urgency, feasibility, resources required, and views of stakeholders, etc. At the same time, REO also needs to continuously upgrade its IT infrastructure so as to enhance its capacity in support of the work above. Details are presented in the ensuing paragraphs.

4. At present, REO has only two directorate staff, namely a Senior Principal Executive Officer ("SPEO") (at D2 rank), the Chief Electoral Officer ("CEO") who is the head of department, and a Principal Executive Officer ("PEO") (at D1 rank) designated as Principal Electoral Officer (see next paragraph for their respective duties). This is clearly inadequate in coping with the substantial workload arising from the additional work mentioned above. In fact, in its Report on the 2021 LegCo General Election submitted in March 2022, EAC recommended that the Government should review the organisational structure of REO, especially its directorate ranks, so as to ensure adequate directorate manpower to steer the department in delivering new and increasingly complex functions. It also highlighted that the Government should consider creating a post at a higher rank to strengthen the ability of REO in applying IT in elections.

5. As the head of department, CEO has a heavy portfolio. He has to oversee the daily administration and operation of REO, ensuring that it can support EAC to effectively discharge its statutory functions and implement EAC's decisions regarding delineation of constituencies, voter registration ("VR") and other electoral matters such as regulations, guidelines and practical arrangements. Besides, he is required to advise EAC on macro policy matters as well as operational aspects, and assist EAC in the supervision and review of elections. The primary duty of the Principal Electoral Officer is to organise and conduct elections, through supervising and coordinating the work of all sub-divisions under the

Elections Division. This comprises the arrangement of election venues; recruitment and training of electoral staff; drafting manuals for electoral staff; review and update of election forms; handling of nomination of candidates; procurement and arrangement of delivery of election materials; issuance of poll cards; the coordination, support, voting and counting arrangements on polling day; fall-back plans and follow-up actions, etc. The Principal Electoral Officer also needs to make careful planning and preparations, and coordinate with the relevant bureaux and departments, with a view to ensuring the smooth conduct of elections in accordance with the law.

## **PROPOSAL**

6. REO proposes to create -
  - (I) a permanent post of PEO (at D1 rank), designated as Principal Electoral Officer (Planning and Research), who will be responsible for continuously examining ways to improve electoral arrangements and implementing relevant practical measures, planning and optimising the department's operational workflow to enhance efficiency, as well as overseeing the VR Division; and
  - (II) a permanent post of Chief Systems Manager ("CSM") (at D1 rank), designated as Head (IT Management), who will head the retitled IT Management Division (currently as IT Management Unit) and be responsible for planning, coordinating, managing and implementing REO's IT projects, upgrading the information system infrastructure to support the various initiatives for improving electoral arrangements and departmental information security safeguard (including that for personal data privacy) as well as exploring the feasibility of introducing new technologies based on latest development.

**(I) Creation of a permanent post of PEO to improve electoral arrangements and internal operations**

7. REO proposes to create a permanent post of PEO. The post will, having regard to the views and demands of EAC and the Government, continuously review the arrangements for various public elections based on experience consolidated after each election, study and put forward improvement proposals, prepare legislative amendments required for implementing the proposals, and formulate implementation plans. The post will also devise plans on optimising and rationalising departmental operations, workflow, and internal coordination across divisions in a bid to be more efficient and facilitate the smooth conduct of elections.

8. Based on the recommendations made in various EAC reports in recent years<sup>1</sup>, directions to be considered for improving electoral arrangements include: applying electronic means to the fullest extent in nomination, polling and counting; improving real-time notification of waiting time at polling stations to make it easier for electors to plan their journeys; streamlining and digitalising electoral statistics and reporting as far as possible to simplify the processes and reduce the risk of errors; simplifying counting procedures to expedite announcement of election results; simplifying declaration/return requirements and procedures for election advertisements and election expenses to encourage more candidates to run, etc. The Government will also consider carefully the feasibility of various recommendations put forward by different stakeholders and other improvement areas that would be identified in future election reviews, and follow-up as appropriate.

9. In addition, under the improved electoral system, the methods for returning members for LegCo have become more diversified and the Election Committee has been reconstituted, demonstrating broad representation and balanced participation. These institutional changes gave rise to a significant increase in the complexity of VR arrangements. At the time of improving the electoral system in 2021, REO completed the

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<sup>1</sup> Including the Report on the 2021 Legislative Council General Election, Report on the 2022 Chief Executive Election and Report on the 2022 Legislative Council Election Committee Constituency By-election.

relevant VR exercise expeditiously in view of the time constraints on the basis of existing workflow and resources. When improving electoral arrangements, REO will comprehensively review, restructure and rationalise the VR workflow with a view to enhancing user-friendliness and efficiency of the registration process. There are also prevalent views that, while the fundamental principle of the voluntary nature of VR should continue to be upheld, the Government should simplify the procedure for registration as geographical constituency electors. On the premises that the prescribed consent of the electors concerned is obtained, REO will study means of applying IT and further matching information from relevant departments to make the registration procedure for geographical constituency electors more user-friendly. The PEO post proposed to be created will supervise the VR Division in discharging the above duties.

10. REO's current practice is to maintain only a baseline establishment during non-election years, while for election years it creates time-limited civil service posts, engages non-civil service contract ("NCSC") staff and employs, on polling days, a large number of civil servants to work on a part-time basis to cope with the electoral work. This makes accumulating experience and passing it down a particularly challenging task for REO. Indeed, the working group formed to review the two personal data breach incidents of REO that occurred in March and April 2022 has put forward recommendations and action items on information security (i.e. the 2022 Information Security Review, to be detailed in paragraph 13), many of which require operational workflow improvement to achieve the expected results. To this end, the PEO post proposed to be created will also reorganise the internal operations of REO, rationalising processes and instituting a management system. REO will also seek to automate process through an information system to reduce the need for manual execution, ensuring orderly discharge of tasks while minimising the risk of errors. The post will also revamp the logistics management and statistics reporting leading to and following polling day to smoothen the conduct of elections. More importantly, this post will strengthen the management of departmental know-how so as to ensure that election experience and areas for optimisation can be sustainably and effectively preserved within the departmental system in spite of periodic personnel transfer.

11. The PEO post proposed to be created will lead the Committee and Research Division (“CR Division”) which, as the secretariat for EAC, will compile an election report after each election has concluded according to the statutory requirements. The report gives a detailed account of the electoral preparatory work and implementation of the arrangements. It also regularly contains recommendations on how to improve subsequent electoral arrangements in light of the experience gained from the election. The proposed staffing arrangement will enable the optimal use of existing resources to support the work on improving electoral arrangements, revamping operational workflow as well as the development of comprehensive implementation plans. The proposed job description of the PEO is at **Annex 1**.

**(II) Creation of a permanent post of CSM to enhance the application of IT**

12. The New Electoral and Registration System (“NEARS”), being the mission-critical information system for REO, has been in use for nearly 20 years. Despite updates, revisions and implementation of new functions from time to time, the technology platform has become outdated. The software and hardware applications added at different stages could not be fully integrated with the core modules, thus greatly reducing the efficiency of information exchange across modules, sometimes requiring manual intervention. As a matter of fact, the system developer will cease to provide support. Although the system may still subsist on internal support to meet immediate basic needs, it lacks the capability to support REO in adopting “best practices” for optimal efficiency or taking forward various proposals for enhancing the application of IT. As such, REO is conducting a study on creating a brand new electoral and VR information management system to cater for future needs in improving electoral arrangements. The relevant system also needs to be regularly enhanced to keep up with technological advancement.

13. The 2022 Information Security Review report has made eight recommendations comprising 31 information security measures in four areas, namely information security management governance, information security awareness and training, security protection for the operation of

NEARS, and enhanced protection for the departmental IT infrastructure (see **Annex 2** for details). The proposed CSM will be responsible for the coordinated and phased implementation of the measures. REO will also examine incorporating robust controls in the system to support the workflow re-organisation mentioned above, preventing the recurrence of information security incidents.

14. The above recommendations and action items on strengthening the information security safeguard of REO and developing a positive information security culture involve much work. There is a need for comprehensive and continual guidance, formulation, coordination and supervision for the proper implementation of IT security measures, raising staff awareness in information security and enhancing related training programmes. Furthermore, as REO routinely retains and handles a large amount of personal data of the public, it must respond to ever-changing information security threats by conducting assessment and taking prudent protective measures. Staying vigilant and enhancing IT security posture and cyber resilience is of paramount importance.

15. Moreover, REO will strive to introduce more IT measures such that the electoral processes can be more efficient and smooth. In addition to a number of projects that have been<sup>2</sup> or will be<sup>3</sup> implemented, the Government will continue to work with EAC to actively study the wider application of IT at different stages of elections including from VR, polling to counting. This includes turning VR into a fully paperless process; strengthening communication with electors by electronic means; enhancing automation of electoral statistics and reporting; increasing the use of electronic issuance of ballot papers and electronic vote counting; and studying the feasibility of introducing electronic ballot papers to replace physical ballot papers, etc. With an infrastructure that ensures system security, privacy protection as well as provides sufficient capacity

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<sup>2</sup> Including wider use of the Electronic Poll Register (“EPR”) System to issue ballot papers and the Optical Mark Recognition System to facilitate vote counting.

<sup>3</sup> For example, developing new Polling Station Management System and Integrated System for Recruitment and Management of Electoral Staff; enhancing the Central Platform for Election Advertisements and the Mobile Input System for Electoral Statistics; using “iAM Smart” for new VR of geographical constituencies; and conducting feasibility and technical studies for the comprehensive revamp of NEARS.

and flexibility, REO can work in full swing to make use of IT to enhance efficiency of elections. REO will also keep abreast of the latest technological development and explore the feasibility of bringing technology into practical processes to enhance productivity.

16. The further application of IT in electoral arrangements and operational workflow, and the enhancement of information security management of REO are long-term commitments. REO therefore requires dedicated support through the creation of a permanent directorate post to develop the departmental IT plan and improve the IT infrastructure in order to manage changes in work requirements, technology environment and workload. The duties of the proposed CSM includes strategic planning and application of IT, information security management, supervision of projects which are ongoing or undergoing studies including the drafting of contracts and technical specifications. The post will also oversee the performance of various systems, coordinate different system operations, steer internal system development work, and manage the performance of external contractors, etc. To tie in with the internal workflow re-engineering, the post will also have to devise corresponding IT solutions, promote IT awareness and provide relevant training as well as to keep abreast of the latest technological development. As REO handles the personal data of over four million electors, the above professional tasks require the leadership of a directorate officer at the CSM level with sufficient experience and competence. The proposed job description of the CSM is at **Annex 3**.

17. The proposed organisation chart incorporating the above two posts proposed to be created is at **Annex 4**.

## **NON-DIRECTORATE SUPPORT**

18. The proposed Principal Electoral Officer (Planning and Research) will lead a total of 146 non-directorate civil service posts from the CR Division and VR Division, including one post of the Personal Secretary grade to be created.



19. The proposed Head (IT Management) will lead the retitled IT Management Division. In that Division, two new civil service posts of the Analyst/Programmer grade will be added to the existing staffing level<sup>4</sup>.

## **ALTERNATIVES CONSIDERED**

20. The Government has carefully examined the possibility for REO to take forward the above new initiatives under the current structure and whether its existing staffing can cope with the additional workload. However, there are only two directorate officers in REO, namely the CEO and the Principal Electoral Officer, whose scopes of work have been set out in paragraph 5. The Principal Electoral Officer leads the Elections Division in its efforts to deal with the practical work of various elections, including the District Council Ordinary Election, the LegCo by-election, the Election Committee Subsector by-election and the next Election Committee Subsector Ordinary Election and LegCo General Election. With election cycles constantly repeating, the officer hardly has any capacity to juggle embarking on a comprehensive and in-depth planning and study on improving practical electoral arrangements. The CEO, as pointed out in paragraph 5, also has a heavy portfolio as the head of department and it is not possible for him to conduct related work without the support of a dedicated directorate officer.

21. If the CSM post could not be created, the dedicated IT development work in REO would have to be undertaken by non-directorate staff, which would render it difficult to meet future operational needs and public expectations. Given the unique nature of public elections and electoral arrangements are strictly regulated by electoral laws, it is unlikely that any “off-the-shelf” information systems could be directly applied. Having civil servants who are acquainted with governmental and electoral operations to drive the development of the core information system, undertake the maintenance work as well as to study the possibility of introducing new technology would be more suitable than outsourcing such

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<sup>4</sup> There are currently 14 non-directorate civil service posts in the IT Management Unit, headed by a Senior Systems Manager. There are also one post-retirement service contract staff, 44 term contract (commonly known as “T-contract”) staff centrally administered by the Office of the Government Chief Information Officer and 17 NCSC staff.

work to contractors.

## **FINANCIAL IMPLICATIONS**

22. The notional annual salary cost at mid-point (“NAMS”) of the proposed creation of two permanent directorate posts is \$3,943,200, with details as follows –

<b>Permanent Posts</b>	<b>NAMS (\$)</b>	<b>No. of posts</b>
PEO	1,971,600	1
CSM	1,971,600	1
<b>Total</b>	<b>3,943,200</b>	<b>2</b>

The full annual average staff cost, including salaries and staff on-cost, is \$5,894,000.

23. The NAMS of the creation of one additional post of the Personal Secretary grade as mentioned in paragraph 18 is \$296,040.

## **ADVICE SOUGHT**

24. Members are invited to support the above proposed creation of two permanent directorate posts. If support is obtained, we will submit the proposal to the Establishment Sub-committee of the Finance Committee for consideration.

**Constitutional and Mainland Affairs Bureau**  
**Registration and Electoral Office**  
**May 2023**

**Proposed Job Description**  
**Principal Electoral Officer (Planning and Research)**

**Rank** : Principal Executive Officer (D1)  
**Responsible to** : Chief Electoral Officer

**Main Duties and Responsibilities –**

1. To lead the Committee and Research Division in continuously researching into ways to improve electoral arrangements with reference to the experience gained in each election, and put forward proposals on the implementation of improvement measures;
2. To draft legislative amendments required for implementation of improved electoral arrangements and formulate implementation plans;
3. To oversee the work of the Voter Registration Division in compiling register of electors, handling claims and appeals, implementing checking measures, and studying and re-engineering the voter registration procedures;
4. To plan and enhance departmental internal operations, consolidate and rationalise operational workflow, put information technology systems into effective use and enhance internal coordination among divisions, with a view to enhancing work efficiency, smoothing the conduct of elections and improving the service delivery of the department;
5. To oversee the Committee and Research Division which provides administrative support as the secretariat for the Electoral Affairs Commission, including the drafting of electoral guidelines, review and delineation of geographical constituencies, compilation of reports on elections for submission to the Chief Executive according to the statutory requirements, handling of election-related complaints and public enquiries on matters relating to the elections and electoral guidelines, etc.; and
6. To represent the Chief Electoral Officer and the Registration and Electoral Office in inter-departmental meetings and coordinate with various bureaux/departments/outside bodies.

### **Special Review on the Information Security of the Registration and Electoral Office**

In response to the data breach incidents that occurred in March and April 2022, a working group comprising representatives from the Office of the Government Chief Information Officer, the Constitutional and Mainland Affairs Bureau and the Registration and Electoral Office (“REO”) was formed to conduct a comprehensive review on the information security of REO. The review adopted a risk-based approach and made reference to the industry’s best practices to review REO’s current information security management system, implementation procedures and related information security devices, so as to identify potential improvement opportunities.

With the completion of the information security review in mid-2022, the working group put forward eight recommendations comprising 31 information security measures in four areas, namely information security management governance, information security awareness and training, security protection for the operation of the New Electoral and Registration System (“NEARS”), and enhanced protection of the departmental information technology (“IT”) infrastructure. The measures are summarised in the table below.

<b>Measure</b>	<b>Summary</b>
1	<u>Recommendation 1</u> : Clearly define the roles and responsibilities of the IT security management team (“ISMT”) so as to ensure that information security programmes/activities are properly managed
2	<u>Recommendation 2</u> : Further strengthen the IT security team (“IST”) and its reporting mechanism to the ISMT so as to ensure that information security programmes/activities are well coordinated and implemented effectively
3	<u>Recommendation 3</u> : Establish an information security awareness and training workgroup for formulating an awareness programme plan
4	<u>Recommendation 4</u> : Expand the variety and delivery channels of awareness activities to enhance awareness of information security and help develop a positive information security culture

Measure	Summary
	<u>Recommendation 5</u> : Build a central registry for NEARS to document all system interfaces and related information to facilitate the effective evaluation of protection measures and to ensure a prompt response when a security incident is detected (comprising the following 3 measures)
5	Build a central registry for NEARS to document all important assets, system interfaces and related information
6	Detect any discrepancies or abnormal configurations by examining and comparing the entries in NEARS and the central registry
7	Review the network protection and segmentation
	<u>Recommendation 6</u> : Build a centrally-managed secure storage and processing environment to support the data analysis associated with NEARS and ad-hoc needs of information updates (comprising the following 2 measures)
8	Build a centrally-managed secure processing environment to support the data analysis needs associated with NEARS
9	Manage data requests with a structured workflow system
	<u>Recommendation 7</u> : Strengthen the protection of IT infrastructure against multi-stage attacks and threats (comprising the following 16 measures)
10	Prevent incremental persistent penetration attacks
11	IEEE 802.1X port-based network access control solution
12	Filter malicious website URLs in the departmental Internet service to prevent visits to malicious websites
13	Review departmental firewall rules
14	Set email sandboxing with inline mode
15	Set up an isolated environment for PCs handling email enquiries to improve network security
16	Conduct behaviour-based malware detection
17	Develop hardening standards for departmental computer endpoint devices and create hardened operating system images with reference to different authoritative sources in the industry

<b>Measure</b>	<b>Summary</b>
18	Conduct security reviews for the department’s Active Directory
19	Adopt a risk-based patching policy to review patching arrangements
20	Increase frequency of vulnerability scans
21	Review security controls for remote access services
22	Set a workflow system for user account management
23	Adopt the principle of tiering model in setting the access rights for different system administrator accounts to enhance the security management of the department’s Active Directory
24	Adopt privileged access management (“PAM”) solutions
25	Conduct information security incident response drills
	<u>Recommendation 8</u> : Strengthen the protection of IT infrastructure against multi-stage attacks and threats (comprising the following 6 measures)
26	Review the configuration of audit logging system for Internet-facing services
27	Conduct proof-of-concept trails for Endpoint Detection and Response” (“EDR”) and Network Detection and Response (“NDR”) solutions to determine the scope of future implementation
28	Conduct central management for all security logs and alerts
29	Enhance preparation for information security incidents
30	Equip IT security professionals
31	Engage Managed Detection and Response (“MDR”) services

**Proposed Job Description**  
**Head (Information Technology Management)**

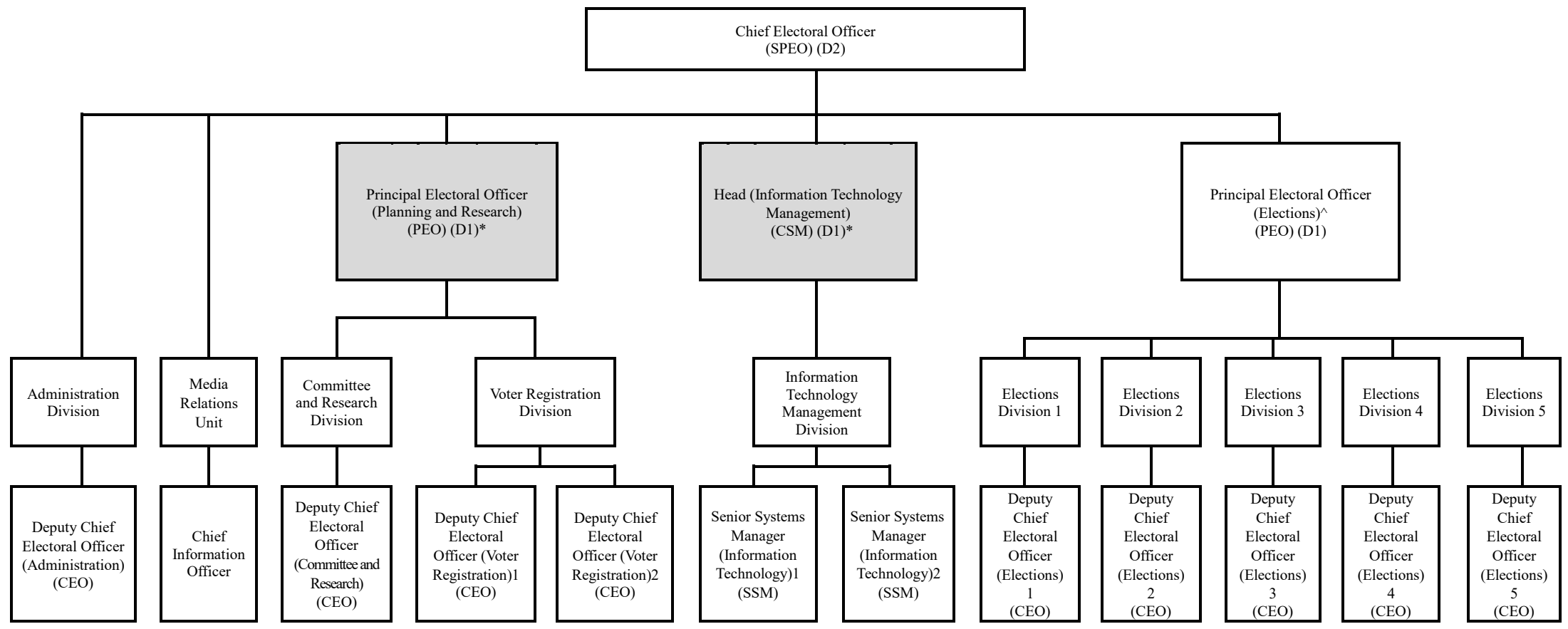
**Rank** : Chief Systems Manager (D1)

**Responsible to** : Chief Electoral Officer

**Main Duties and Responsibilities –**

1. To lead the Information Technology Management Division in the formulation and review of information technology (“IT”) policies and strategies, and allocation of IT resources in accordance with business needs and the overall e-Government targets;
2. To review the various aspects of further application of IT in elections and put in place more IT initiatives in different parts of the electoral process in future;
3. To give steer and oversee the feasibility and technical study for the comprehensive revamp of the New Electoral and Registration System to support the core business of the Registration and Electoral Office (“REO”);
4. To review, devise and enforce the IT security policy and framework in REO and establish an effective monitoring mechanism through regular security risk assessments and audits to ensure compliance with the relevant regulations or requirements;
5. To coordinate and formulate information security awareness and training programme for REO;
6. To participate in the development, coordination and maintenance regarding matters concerning the service-wide IT standards, technology infrastructure, inter-departmental systems, etc., with a view to achieving system interoperability;
7. To act as the IT consultant of REO and liaise with the Office of the Government Chief Information Officer on relevant matters; and
8. To ensure the overall coordination of IT work and timely delivery of various IT projects for efficient management of resources and operations.

### Proposed Organization Chart of Registration and Electoral Office



**Legend:**

- SPEO Senior Principal Executive Officer
- PEO Principal Executive Officer
- CEO Chief Executive Officer
- CSM Chief Systems Manager
- SSM Senior Systems Manager

**Note:**

- \* Permanent directorate posts proposed to be created
- ^ Post retitled from Principal Electoral Officer