

Department	Function	Audit Report	Audit Report Date	Details of Audit Issue							Number		Owner
				Audit Finding Number	Risk Rating	Summary	Summary of Management Response	Expected Resolution Date	Revised Resolution Date	Status	Days Past Due	Times End Date Revised	
ITS	Information Technology Services	Corporate Cloud Computing Management	7-Feb-20	1	Medium	Recommendations: Communication strategy should be developed and implemented that will serve to improve initial awareness and that will reinforce simple and clear requirements supported with the purpose they serve.	Comments: Agree Action Plan: The existing cloud policy and framework will be updated and will be followed by the development of a communication strategy with the goal of informing and educating on the cloud policy and framework including details on: • Purpose of the policy and framework • Roles and responsibility • How it will be monitored, managed, and enforced	Q1 2021	Q2 2022	June 8, 2022: IN PROGRESS • Cloud policy updates are complete. Internal web pages have been updated and the cloud framework is in review. Communication to the organization is in planning stage Feb 9, 2022: IN PROGRESS • Cloud policy updates are almost complete with internal reviews to be scheduled. Internal web pages have been updated. Once cloud policy is finalized, communication strategy will be rolled out to the organization. Dec 8, 2021: IN PROGRESS • Cloud policy updates are underway with internal reviews to be scheduled. Once cloud policy is finalized, communication strategy will be rolled out to the organization.	434	1	Manager, IT Strategic Service Delivery
ITS	Information Technology Services	Corporate Cloud Computing Management	7-Feb-20	2	Medium	Recommendations: - Enforce the requirement to have cloud services registered with ITS. - Based on registered services, maintain an inventory of cloud services used. At a minimum the inventory of registered services should indicate its use, the type of data stored and the business owner. - Review the cloud services offered periodically to identify opportunities to consolidate services, identify where services provided internally do not meet users' needs or where training in existing services are required.	Comments: Agree Action Plan: The following actions will be taken in response to the recommendation: • A process for registering cloud applications will be implemented and will form the basis for updating the existing application inventory. • The application inventory will include but not be limited to a description of the system, any confidential/private data stored, security assessments or PIA's performed, key contacts in IT Services and the business. • The inventory will be shared with the business on an annual basis to confirm the solution is still in use and the information on file is accurate • Opportunities to consolidate cloud services may be considered within the scope of larger software implementations and/or within regular planning discussions between ITS and the business • The inventory will form the basis for defining acceptable cloud applications and will be published as such	Q1 2021	Q1 2022	June 8, 2022: COMPLETED Process to register cloud applications completed. Feb 9, 2022: IN PROGRESS • Process for registering cloud applications is documented. Inventory has been captured. Planning is complete to share inventory of pre-approved applications with the business. Design for the BI dashboard has been provided to the development team. Dec 8, 2021: IN PROGRESS • Process for registering cloud applications is documented. Inventory has been captured. Planning is underway to share inventory of pre-approved applications with the business.	-	1	Manager, Business Applications; Manager, IT Strategic Service Delivery
ITS	Information Technology Services	Corporate Cloud Computing Management	7-Feb-20	3	Medium	Recommendations: - A standardized risk assessment methodology should be created that includes a list of typical risk factors and used to help identify the level of risk that needs to be managed and help classify cloud services accordingly. Risk factors could be based on factors such as: the level of dependence on the services for business critical processes, whether the service will be customer facing, the number of users using the service, data classification or level of reliance on the data. - As part of the defined risk methodology, prescribed minimum controls and standards should be linked to risks. For example, if personally identifiable data is present, a Privacy Impact Assessment must be conducted.	Comments: Agree Action Plan: A risk assessment methodology will be developed and will be used to classify cloud services. It will include relevant risk factors and will prescribe new controls to mitigate the risks. Additional follow-up work including conducting Security and Privacy Impact Assessments will require additional time and resources from IT Services and the City Clerks Office.	Q2 2021	Q2 2022	June 8, 2022: IN PROGRESS Risk identification of applications has been incorporated into the technology onboarding processes. Key factors that quantify risk have been identified and those factors are assessed and inventoried during the onboarding process. Risk management efforts that result in residual risk is captured and shared with business owners or managed by IT through the IT risk register. Feb 9, 2022: IN PROGRESS Management provided an update consistent with the progress update below. Dec 8, 2021: IN PROGRESS • Creation of a system to enhance and centrally manage current risk analysis practices is underway resulting in an automated decision process based on information security and business risk. • Cloud services will be classified based on the risk analysis practices resulting in an inventory that documents risk decisions as well as implemented mitigation techniques.	434	1	Manager, Information Security

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ITS	Information Technology Services	Corporate Cloud Computing Management	7-Feb-20	4	Medium	Recommendations: - Define prescribed cloud control activities and who needs to perform them for each cloud service. Develop an application support model that includes specific process areas such as user access management, vendor management, terms and conditions, requests and incidents handling, and who is responsible for controls review over the duration. The level of detail can be determined using the classification system above, e.g. predefined activities. - Monitoring controls are needed to determine whether the processes that are in place are working and are effective. - Enforcement of policies and procedures, mechanisms to follow-up and enforce. Requirements should be clear, and it should also be clear that compliance is enforced. - Monitor and review existing applications that may evolve over time (e.g. where the uses of the app are expanded, or where new information/data is introduced or linked within the app) as changes may necessitate introduction of new or modification of existing controls/practices.	Comments: Agree Action Plan: IT Services will develop and update existing application support models identifying cloud control activities that need to be performed. The support models will initially focus on cloud services that are classified as high risk followed by medium risk services. The application support model will identify the specific responsibilities that reside within the business and those that reside within IT Services for cloud control activities that need to be performed. Given the number of cloud services in place and the current operational workload in IT Services this work will take several months and may require additional staff resources to maintain and enforce the operating model and/or require assistance from 3rd party resources. Addressing the recommendations in this finding will require new or updated operational processes that will impact the responsibilities of both IT Services and business staff.	Q4 2021	Q4 2022	June 8, 2022: IN PROGRESS Continuing work on the application support models. Feb 9, 2022: IN PROGRESS Management provided an update consistent with the progress update below. Dec 8, 2021: IN PROGRESS • Work is underway on formalizing an application support model. • Yearly review of existing cloud apps based on classification of cloud services (based on high risk/low risk)	159	1	Manager, Business Applications; Manager, Information Security