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TO:	CHAIR AND MEMBERS AUDIT COMMITTEE MEETING ON DECEMBER 7, 2011
FROM:	PwC INTERNAL AUDITORS
SUBJECT:	<p style="text-align: center;">Quarterly Report on Internal Audit Results</p> <ul style="list-style-type: none"> a) Procurement Bid Process internal audit project b) Brownsfield Site Development internal audit project c) TSD IT Governance internal audit project d) JD Edwards IT General Controls internal audit project e) Proposed Internal Audit Schedule - 2012

RECOMMENDATION

That on the recommendation of PwC, this report **BE RECEIVED** for information and the action plans identified in Appendices A to D **BE RECOMMENDED** for approval. That on the recommendation of PwC, the 2012 internal audit schedule as set out in Appendix E **BE RECOMMENDED** for approval.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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Risk Assessment and 3-Year Risk-Based Audit Plan from PricewaterhouseCoopers – Audit Committee March 31, 2011.

BACKGROUND

This report has been prepared in line with the reporting process defined within the Risk Assessment and 3-Year Risk-Based Audit Plan provided to the Audit Committee on March 31, 2011.

The purpose of this report is to communicate the results of internal audit projects completed to date, which include the following projects:

- Procurement Bid Process internal audit project
- Brownsfield Site Development internal audit project
- TSD IT Governance internal audit project
- JD Edwards IT General Controls internal audit project

PwC requests Audit Committee approval of the action plans developed in collaboration between PwC and City management. Please also refer to the formal presentation document attached in Appendix F.

Finally, attached in Appendices G through H are detailed Summaries of Findings for the internal audit projects included herein. These documents outline the details of the audit programs utilized as well as the action plans identified.

RECOMMENDED BY:	
	PwC INTERNAL AUDITORS

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APPENDIX A – Finance - Procurement Bid Process, December 7, 2011

Summary of Risks & Scope
Finance - Procurement Bid Process

Scope

- Conflict of interest
- Request for quotation, proposal, tender
- Irregular result bids
- Emergency purchases
- No acceptable bids
- Sole and single sourced purchases
- Performance evaluations of suppliers
- Custody and retention of documents

Risks

- Conflict of interest exists when determining suppliers
- Non-compliance with purchasing policies resulting in inappropriate awards or prices
- Inadequate documentation to support bid and purchase processes
- Legislative requirements for procurement are currently changing for certain publicly accountable entities which will lead to increased focus in this area

Controls Operating Effectively

- There were no instances of non-compliance with purchasing policies noted during the course of the audit, only opportunities for improvement
- Procurement and bids handled centrally by Purchasing and Supply are in compliance with purchasing policies and well documented
- Bid evaluators are required to disclose a conflict of interest and excuse themselves from the evaluation process
- Policies governing the 'irregular bids' evaluation process are followed and documented
- Policies governing the 'no acceptable bids' evaluation process are followed and documented
- Documents relating to the bid process are properly maintained in accordance with City retention policies

Value-for-Money Considerations

- There is an opportunity for cost savings by bringing the competitive bidding process in-house rather than allowing third party consultants to take control of the process and billing the City for time incurred.
- The other recommendations will reduce the risk of inappropriate supplier awards that could lead to the City paying too much.

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Observations & Action Plans

#1: Decentralized Request for Quotations, Proposals and Tenders

Observation:

Decentralization of the purchasing process has resulted in inconsistent documentation to support compliance with the City procurement processes when Purchasing and Supply does not manage the process.

Business Impact:

Purchasing and Supply does not exercise immediate oversight over the decentralized purchases, which creates an opportunity for non-compliance with the City Procurement of Goods and Services Policy (the "Policy") and exposure to inequitable purchasing costs and supplier selection.

Action Plan:

It is recommended that the City investigate centralization of the process within the Request for Quotation, Tender and Proposal processes to ensure that: (i) a consistent process is followed in all cases; (ii) the appropriate third party is awarded the contract; and (iii) appropriate documentation is retained.

Action Plan Lead:

Manager of Purchasing and Supply

Timing:

June 30, 2012

#2: Decentralized Informal Quotations

Observation:

The current process surrounding decentralized informal quotations do not require these purchases to be numbered. Subsequent review procedures are not performed by Purchasing and Supply to ensure compliance with the Policy.

Business Impact:

Without sequential numbering, appropriate monitoring of the informal quotation process cannot occur. The lack of subsequent review of these purchases exposes the City to non-compliance with the Policy and exposure to inequitable purchasing costs and supplier selection.

Action Plan:

It is recommended that the City number all informal decentralized quotations to ensure appropriate tracking and follow-up analysis can be performed. Furthermore, due to the decentralization of the informal quotation process, the City should investigate performing a periodic review or audit of a sample of informal quotations to ensure that: (i) the appropriate process is followed; (ii) appropriate approvals are obtained; and (iii) appropriate documentation is retained.

Action Plan Lead:

Manager of Purchasing and Supply

Timing:

February 29, 2012



#3: Third Party Consultants

Observation:

The list of approved consultants is continuously updated by identified individuals who are not members of the Purchasing and Supply team. The City does not maintain consistently documented processes by which this list is monitored and maintained.

Business Impact:

Without formal processes to maintain this list, quality and cost effectiveness of consultants listed may be compromised as it may not be clear how a consultant is permitted to be added to the list, or how the list is monitored to ensure the approved consultants are monitored.

Action Plan:

It is recommended that the City create processes regarding the use and maintenance of the third party consultant list, including assigning a "List Owner" to manage the list by division and share this information real-time with Purchasing and Supply. The processes should describe the following: (i) how a third party consultant becomes a member of the list; (ii) the time limit the third party consultant is permitted to remain on the list without supplying the City or being awarded a project; and (iii) the creation of a consultant rating system for all City departments to measure the consultants' performance for determination of whether the third party consultant should remain on the list or be permitted to be awarded projects.

Action Plan Lead:

Manager of Purchasing and Supply

Timing:

June 30, 2012

#4: Grouped Consultant Project Awarding

Observation:

An explanation or description of the grouped consultant project awarding process is not explicitly described in the Policy as this process is used solely by Engineering and Environmental Services. The grouped consultant project awarding processes utilized by Environmental and Engineering Services leads to efficiencies in awarding projects.

Business Impact:

The lack of explicit documentation within the Policy exposes the City to the potential of inequitable purchasing costs and supplier selection.

Action Plan:

It is recommended that the City investigate the appropriateness of the grouped consultant award process to determine if it is in-line with City procurement policies. Furthermore, the City should determine whether specific guidance is needed within the Policy to describe the following regarding the grouped consultant project awarding process: (i) the tasks involved in completing the grouped awarding process; (ii) the City officials to be included in the awarding process; and (iii) the approval required to award the projects. This should include a description of the procedures to be used to determine the winner of each project.

Action Plan Lead:

Manager of Purchasing and Supply
City Engineer

Timing:

June 30, 2012

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#5: Requests for Tenders Managed by Third Party Consultants

Observation:

The management of certain tenders by third party consultants at the request of decentralized purchasing processes has resulted in inconsistencies in documentation to support compliance with the Policy.

Business Impact:

Purchasing and Supply does not exercise immediate oversight over third party consultants managing certain tenders, which creates exposure to the risk of non-compliance with the Policy and exposure to inaccurate information, inequitable purchasing costs and supplier selection.

Action Plan:

It is recommended that the City continue to leverage the expertise of third party consultants in the Requests for Tenders for complex projects; however, the City should determine 'milestones' at which Purchasing and Supply is required to be involved in the process to ensure appropriate procedures are being followed. The City should investigate the business case for bringing the competitive bidding process for non-complex projects in-house as there may be an opportunity for cost savings.

Action Plan Lead:

Manager of Purchasing and Supply

Timing:

July 31, 2012

#6: Supplier Performance Evaluations

Observation:

Supplier performance evaluations are not performed formally with consistent documentation.

Business Impact:

The lack of formal performance evaluations could cause the City to miss identifying poor performing suppliers and could permit suppliers who have performed poorly on City contracts to continue to be awarded contracts.

Action Plan:

It is recommended that Purchasing and Supply develop a performance evaluation system for their suppliers to ensure the services/products being provided are meeting the cost, quality, delivery and service needs of the City. Furthermore, the City should provide guidelines within the Policy for determining those suppliers that are prohibited from supplying the City for a specified period of time. (Note: Purchasing and Supply is currently working with TSD to create a performance evaluation system for all suppliers that will rate each supplier, each time they supply the City, to ensure they meet the cost, quality, value and service needs of the City).

Action Plan Lead:

Manager of Purchasing and Supply

Timing:

November 30, 2012

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#7: Emergency Purchases

Observation:

The Policy does not currently contain detailed examples of what instances constitute an 'emergency', allowing a non-emergency purchase to proceed through the 'emergency' purchasing section of the Policy.

Business Impact:

This lack of clarity exposes the City to inequitable purchasing costs where a purchase has been incorrectly deemed an 'emergency.'

Action Plan:

It is recommended that the City provide additional guidance and examples within the Policy to explain the criteria for determining what constitutes an 'emergency.'

The City should investigate formalizing the process for approval of 'emergency' purchases by department Executive Directors and Purchasing and Supply.

Action Plan Lead:

Manager of Purchasing and Supply

Timing:

April 30, 2012

#8: Single and Sole Sourced Purchases >\$10,000

Observation:

The current processes surrounding single and sole sourced purchases >\$10,000 do not require these purchases to be numbered. Subsequent analysis is not performed to determine compliance with the Policy.

Business Impact:

The lack of numbered purchases does not allow for appropriate monitoring of the single and sole sourced purchases >\$10,000. The lack of subsequent review of these purchases exposes the City to the risk that an unusual amount of purchases are being awarded as single or sole sourced purchases.

Action Plan:

It is recommended that the City number all single sourced and sole sourced purchases > \$10,000 to ensure appropriate tracking and analysis can be performed. The individual submitting the request for single or sole sourced purchases should complete a template form to ensure appropriate documentation is obtained to support compliance with the Policy. The City should investigate performing an annual analysis of the amount of single and sole sourced purchases completed and the results should be reported to City Council.

Action Plan Lead:

Manager of Purchasing and Supply

Timing:

March 31, 2012

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APPENDIX B – Special Project - Brownfield Site Development, December 7, 2011

Summary of Risks & Scope

Special Project - Brownfield Site Development

Scope

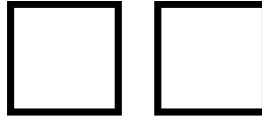
- Review the BMO Soccer Dome project as an example for brownfield site developments that the City may enter into
- Provide recommendations based on the results of that project and identify best practices to follow in similar projects

Risks

- The City may incur unforeseen costs in developing brownfield sites
- The City may not obtain information in a timely manner on additional costs to be incurred to make effective decisions
- Development of brownfield sites is inherently risky

Summary

- It is unlikely that the City could have avoided the additional costs associated with the BMO Soccer Dome project
- However, the City could have been informed earlier of the unforeseen costs, which would have allowed for better decision making abilities
- In some instances, recommendations were partially in place for the BMO Soccer Dome project, but have been reiterated for future brownfield site developments
- In hindsight, there should have been a more formalized agreement in place in relation to the BMO Soccer Dome regarding roles and responsibilities and any limits to the City's liability
- The City Treasurer, in conjunction with the City Engineer, should create formally documented processes for brownfield site developments which incorporates the recommendations presented



Observations & Action Plans

#1: Project Liaison Role Assignment

Observation:

A Project Liaison should be in place for the entire length of the project to monitor the project's process on behalf of the City of London (the City) and act as the City's point of contact for all parties involved. This was attempted for the BMO Soccer Dome project; however, due to retirements and other movements, the role became unclear.

Business Impact:

A potential risk exists that information is not being communicated to the City from the General Contractor and Consultants when a Project Liaison is not in place. Projects may not be completed efficiently and in line with planned timelines and budget without a designated main point of contact for the City.

Action Plan:

It is recommended that the City assign an individual to the Project Liaison role for projects going forward and consider future succession planning for this role. In addition, a documented process for brownfield site developments should be created which incorporates this and other recommendations.

Appropriate clauses within the project contracts should be included to ensure the Project Liaison is permitted to communicate with the General Contractor and Consultants at any time throughout the project.

Action Plan Lead:

City Treasurer
Chief Financial Officer

Timing:

June 30, 2012

#2: Collaboration with Environmental Consultants

Observation:

After assignment of the Environmental Consultants, the City was not sufficiently involved to ensure that risk assessment activities were in agreement with the City's expectations for the due diligence process.

Business Impact:

A potential risk exists that a conflict may arise between the expectations and objectives of the City and those of third party Environmental Consultants. The project due diligence may not be completed in line with environmental or City requirements.

Action Plan:

It is recommended that the City's Project Liaison works in collaboration with third party Environmental Consultants during the risk assessment phase to ensure City objectives are met.

The City's Project Liaison should get regular updates from the Environmental Consultants. This recommendation should be included in the formal processes for any future brownfield site projects.

Action Plan Lead:

City Engineer

Timing:

June 30, 2012

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#3: Formal Sign-off of Due Diligence Procedures

Observation:

A formal policy is not in place requiring the City to sign-off on the results of the Environmental Consultant's risk assessment process and results to evidence that the due diligence procedures have met City expectations and objectives.

Business Impact:

A potential risk exists that detailed budgeting and project planning activities may commence prior to ensuring that sufficient due diligence procedures have been performed by Environmental Consultants.

Action Plan:

It is recommended that the City provide final sign-off of the Environmental Consultant's risk assessment process to ensure the City's objectives have been met prior to commencing any detailed budgeting or project planning activities for future brownfield site developments. This recommendation should be incorporated within formal process documentation.

Action Plan Lead:

City Engineer

Timing:

June 30, 2012

#4: Determination of Remediation Costs

Observation:

Estimates of remediation costs are not developed by utilizing probabilities of assessed risk factors for the site.

For example, the probability of a remediation cost arising would be impacted by the amount of time the site has been in use, the documented history of the site (if available), the previous issues noted at the site, the uncertainty involved with the site conditions, etc.

Business Impact:

A potential financial risk exists that remediation cost estimates are not accurately developed, resulting in unplanned future expenses.

Action Plan:

It is recommended that the City requests the Environmental Consultant to assign probabilities to each type of remediation cost in their detailed risk assessment report.

The City should consider these probabilities in determining the expected remediation costs of the site and the project budget for future brownfield projects and should incorporate this recommendation within formal process documentation.

Action Plan Lead:

City Treasurer
Chief Financial Officer
City Engineer

Timing:

June 30, 2012

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#5: Defined Reporting Structure

Observation:

A clear reporting structure has not been defined to ensure that periodic status and financial updates are provided from the General Contractor to the Project Liaison where the contractor is hired by a third party.

Business Impact:

A potential risk exists that projects may not be executed efficiently or effectively without a defined communication structure.

Action Plan:

It is recommended that the City implement a reporting structure within project contracts for future brownfield site developments whereby the General Contractor reports to the Project Liaison on a periodic basis.

For example, time delays, budget overages and project issues should be communicated to the Project Liaison in a timely manner to facilitate timely reporting of issues to City management and Council and to ensure efficient completion of the entire project.

Prior to reporting to the Project Liaison, the General Contractor should be responsible for obtaining updates from all Sub-Contractors and Consultants in order to provide a robust and complete report to the Project Liaison.

The City should include appropriate clauses within project contracts to provide the City with the right to refuse inappropriate expenditures.

Action Plan Lead:

City Treasurer
Chief Financial Officer

Timing:

June 30, 2012

#6: Periodic Reporting to City Council

Observation:

There is no formal requirement for project updates to be regularly communicated to City Council.

For example, time delays, budget overages and project issues are not required to be formally communicated to City Council on a periodic basis.

Business Impact:

A potential risk exists that City Council may not be fully informed regarding project status in a timely manner.

Action Plan:

It is recommended that the Project Liaison be required to provide a project status report to City Council on a periodic basis in accordance with a specified timeline.

City Council should be requested to approve any additional remediation costs incurred or additional estimates through the current purchase approval processes.

Action Plan Lead:

City Treasurer
Chief Financial Officer

Timing:

June 30, 2012

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#7: Project Debrief Meetings

Observation:

As the BMO Soccer Dome project is not yet complete, formal meetings have not yet been held among all parties involved in the project to debrief the overall effectiveness of the project and lessons learned.

Business Impact:

A potential risk exists that successes and lessons learned during the project will not be considered in future projects.

Action Plan:

It is recommended that a formal meeting is held at the completion of each significant project for future brownfield site developments which would allow all City officials and third parties involved to discuss the overall effectiveness of the project (i.e. what went well, what went wrong, what could have been improved, etc.).

These individuals should include the Project Liaison, Finance, Engineering, Environmental Consultant, General Contractor, other Consultants, etc. This recommendation should be incorporated within formal process documentation.

Action Plan Lead:

City Treasurer
Chief Financial Officer

Timing:

June 30, 2012

#8: Standardized Agreements

Observation:

The scope of the relationship between the City and the General Contractors has not been formally documented in standardized agreements.

Business Impact:

A potential risk exists that the limit of the City's liability in development arrangements has not been clearly documented.

Action Plan:

It is recommended that formal agreements are developed to standardize the relationship between the City and the General Contractors, including roles and responsibilities, reporting requirements and any limits to the City's liability.

Action Plan Lead:

City Treasurer
Chief Financial Officer

Timing:

June 30, 2012

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APPENDIX C – IT - TSD IT Governance, December 7, 2011

Summary of Risks & Scope
IT - TSD IT Governance

Scope

- IT strategy and decision making
- Project portfolio/program management
- Systems support capability
- Security management
- Disaster recovery and continuity
- Project management and benefits realization
- Governance structure
- IT policies and standards
- IT compliance
- IT performance management

Risks

- IT strategy may not be aligned to business strategy
- Success of IT projects may not be measurable
- There may be a failure to identify a legal, contractual, policy or regulatory requirement related to information and the IT organization, processes and infrastructure
- Current IT infrastructure may not support new business initiatives
- Continuity plans may not reflect the current personnel, business structures or processes

Controls Operating Effectively

- Management has a clear understanding of the key decisions that drives IT and business strategy and of its legal and other obligations.
- Business representatives and the Technology Services Division (“TSD”) share responsibility for managing projects through the customer relationship
- The IT security infrastructure, applications, policies, principles and standards are aligned with the organization's risk appetite and current legal requirements

Value-for-Money Considerations

- The recommendations in this report will help to make TSD more efficient and effective which will increase value to the City.

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Observations & Action Plans

#1: IT Strategy

Observation:

IT strategy is currently being developed to align with business strategy.

Area for Improvement:

To support the City's business objectives a formal IT strategy must be approved by senior management and the IT steering committee, widely communicated and understood across the organization, and align the IT strategy with stakeholder priorities and business objectives.

Action Plan:

TSD should continue developing a formal IT Strategy. The strategy should be presented to both the senior management team ("SMT") and City Council, as well as to all TSD staff. Alignment with corporate objectives must be a key component of the City's IT strategy.

Action Plan Lead:

TSD Division Manager

Timing:

December 31, 2012

#2: Decision Making

Observation:

Stakeholders that are involved in key decisions are well defined and understood. Management has an understanding of the key decisions that drives IT and business strategy.

Area for Improvement:

Roles and responsibilities of persons involved with critical IT decision making should be clearly communicated to mitigate the risk of process breakdown in a critical situation.

Action Plan:

The City should employ an Enterprise IT Governance model that will address the overall decision making. Specifically, an RACI (Responsible, Accountable, Consulted, Informed) chart for critical decisions should be employed which identifies stakeholders and responsibilities, as well as who should be consulted during a decision making process.

Action Plan Lead:

TSD Division Manager

Timing:

December 31, 2012

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#3: Governance Structure

Observation:

The IT governance structure is in its development phase having operated for less than a year. The IT governance structure is being defined with the proper mandate, roles and responsibilities to make decisions. Communication is taking place on a regular basis; however, the scope, function and operating principles of the governance bodies are still being developed.

Area for Improvement:

To maintain its effectiveness, the mandate, roles and responsibilities of the governance structure should be known to everyone. Furthermore, the scope, function, and operating principles of governance bodies should be widely communicated and understood by everyone.

Action Plan:

Once the IT governance structure is fully defined, a communication plan should be developed to ensure that all appropriate staff are informed of the roles, responsibilities, scope, function and principles of the IT governance structure.

Action Plan Lead:

TSD Division Manager

Timing:

December 31, 2012

#4: IT Policies and Standards

Observation:

Most IT policies and standards require updating to reflect current processes. TSD has adopted an informal process of communicating IT policies and standards across the organization.

Area for Improvement:

To ensure effective policies are in place, IT policies and standards should be aligned to corporate strategy and reflect IT best practices. TSD should establish a formal process to maintain and update IT standards.

Action Plan:

TSD should identify IT policies, procedures and standards which require updating and correspond with relevant departments such as Human Resources and Legal to update these polices as necessary.

Action Plan Lead:

TSD Division Manager

Timing:

December 31, 2012

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#5: IT Compliance

Observation:

Although management has a clear understanding of its legal and other obligations regarding IT compliance, processes to support compliance are not addressing all relevant compliance needs.

Area for Improvement:

TSD should have formal and robust compliance management processes with roles and responsibilities clearly defined. All relevant statutory, regulatory and contractual requirements should be explicitly defined and documented for each major information system.

Action Plan:

TSD should implement formal compliance management processes with roles and responsibilities as well as relevant statutory, regulatory and contractual requirements clearly defined. TSD should consider whether external resources should be consulted to support the implementation of these compliance management processes.

Action Plan Lead:

TSD Division Manager

Timing:

December 31, 2012

#6: IT Performance Management

Observation:

IT performance management is not robust and relies on limited service level agreements. No formal capacity planning process is in place.

Area for Improvement:

IT performance should be measured and monitored with roles and responsibilities formally defined and agreed. Formal, periodic performance meetings should occur to discuss the current TSD performance as well as ensure that capacity exists to respond to corporate demands and requirements.

Action Plan:

TSD should continue its implementation of the Information Technology Infrastructure Library ("ITIL") best practices, and should consider other performance management tools such as a balanced scorecard and identification and measurement of key performance indicators to support continuous improvement of the division.

Action Plan Lead:

TSD Division Manager

Timing:

December 31, 2012

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#7: Project Portfolio/Program Management

Observation:

IT projects often run late and require additional resources.

Area for Improvement:

The IT project portfolio should be reviewed and evaluated at key milestones and events. Furthermore, accountability of the success of the portfolio should be clearly defined and measured.

Action Plan:

TSD is in the process of ensuring the established project management office (“PMO”) uses formal processes to manage the portfolio of projects. TSD should investigate adding additional performance benchmarks to its current portfolio review to improve the portfolio performance evaluation process, including cross-organizational feedback processes.

Action Plan Lead:

TSD Division Manager

Timing:

December 31, 2012

#8: Project Management and Benefits Realization

Observation:

Business cases for projects are authorized, but benefits are informally defined. Furthermore, project management is affected by inadequate planning, unclear assumptions, lack of business involvement and additional resource requirements. IT projects are often perceived as unsuccessful by the business and new projects have gone live with issues.

Area for Improvement:

Key performance indicators should be identified for each benefit and measured post implementation to measure the realization of identified benefits. Projects should be managed and resourced based on their criticality, complexity and priority and evaluated through milestone reporting. A process to evaluate lessons learned from problematic projects and to implement the appropriate corrective actions on future projects should be considered.

Action Plan:

TSD should require benefits of a project be clearly defined prior to project approval. A Corporate IT Governance Committee should be created to prioritize projects. Furthermore, every project should have a lessons learned assessment prior to project closure. Business should be engaged throughout the process.

Action Plan Lead:

TSD Division Manager

Timing:

December 31, 2012

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#9: Systems Support Capability

Observation:

There is very little systems documentation maintained for the majority of systems. There are dedicated teams responsible for the support of key systems. These teams have relevant skills, but are under-resourced.

Area for Improvement:

TSD should identify key systems that each require a separate dedicated support team and ensure each team is well resourced and generally has significant 'hands on' experience in the support of each system. Good up-to-date systems documentation is required for most systems.

Action Plan:

TSD should create a documentation plan to ensure adequate documentation is maintained for all systems. TSD should examine the need for resource alignment for better allocation of resources.

Action Plan Lead:

TSD Division Manager

Timing:

December 31, 2012

#10: Disaster Recovery and Continuity Planning

Observation:

Backups are made for major systems, but they may not be routinely tested. Disaster Recovery ("DR") and Business Continuity Plan ("BCP") documentation are under development.

Area for Improvement:

TSD should create backups and restore policy that describes the requirements for all systems. Backups should be periodically tested to check that they contain the right information and that this can be restored when required. The DR and BCP plans should be updated and tested on a periodic basis.

Action Plan:

TSD should continue development of its DR and BCP plans. The plans should document and clearly define backup and restore procedures. Regular restore tests outside of the normal restore process should occur daily.

Action Plan Lead:

TSD Division Manager

Timing:

December 31, 2012

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#11: Security Management

Observation:

Budgets and plans for information security management are prepared annually and reviewed through the year. An information security policy is being developed. There is no information security strategy and information risk assessments are not conducted. There are no checks of compliance with policy and there is no formal reporting of the status of information security projects/initiatives.

Area for Improvement:

The information security policy should be approved and supported by detailed standards and guidelines. The security strategy should be signed off by TSD senior management and information risk assessments should be formalized and assessed at least on an annual basis. Security audits should be held to ensure compliance.

Action Plan:

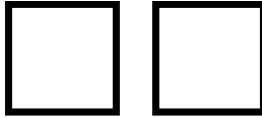
- a) TSD should provide a status update to the Audit Committee on the Deloitte IT Access Review.
- b) After security policies have been finalized, TSD should create the necessary detailed standards and guidelines. A security strategy should be included in the IT Strategy which should be approved by TSD senior management. Procedures and processes which are in place to check compliance should be improved. Monthly reporting should continue to occur to provide updates on security projects and initiatives.

Action Plan Lead:

TSD Division Manager

Timing:

- a) April 30, 2012
- b) December 31, 2012



- APPENDIX D – JD Edwards IT General Controls internal audit project, December 7, 2011

Summary of Risks & Scope

JD Edwards IT General Controls internal audit project

Scope

- User administration
- Logical security
- Operating system security
- Database security
- Back-up restore operations
- Incident management
- Change management (application and database)

Risks

- Access to programs and data may not be appropriately restricted
- Data may be lost or corrupted resulting from improper migration/conversion, backup/recovery or data change management practices
- There may be unauthorized access to data outside the application
- Errors in transaction processing may not be corrected and/or identified

Controls Operating Effectively

- Access requests for new users are authorized before being granted to the network and JD Edwards
- Management reviews JD Edwards access rights periodically to ensure individual access rights are commensurate with job responsibilities and exceptions are appropriately followed up
- Logical security controls are in place for users accessing the network and JD Edwards
- Super-users/privileged access to the network, database and JD Edwards are appropriately restricted
- Changes to application programs and application configurations appropriately approved and are tested by appropriate personnel prior to being moved to production
- JD Edwards data is backed up on an appropriate basis
- The system is configured to detect errors in automated transaction processing



#1: Roles and Responsibilities

Observation:

There is no formal description of roles and responsibilities related to IT functions; however, staff interviewed are aware of their current role and responsibilities within TSD.

Area for Improvement:

TSD should consider defining the roles and responsibilities for each key role and communicate them in a defined manner.

Action Plan:

TSD should update the descriptions of roles and responsibilities for each IT function during its re-organization.

Action Plan Lead:

Project Manager - JD Edwards Upgrade

Timing:

As part of the JD Edwards upgrade project

#2: Logical Security

Observation:

1. 37 active JDE users have more than one user ID giving them access to either more than one role or environment. This increases the complexity of managing segregation of roles and access to different JDE environments.
2. Database administrators ("DBA") have super-user application access to all of JD Edwards.
3. One group has DBA access to the JD Edwards database as they have access to the DBAADM safe.
4. There is currently no process to review super-user access on a periodic basis.

Area for Improvement:

- TSD should review the process of creating multiple user IDs to ensure that they are appropriate.
- TSD should limit the super-user access at the application level to only the CNC Administrators and that at the database level to the DBAs only.
- TSD should limit DBA access to the appropriate personnel only.
- TSD should consider reviewing the database, server and domain administrators access rights on a periodic basis to ensure that access remains appropriate.

Action Plan:

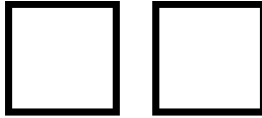
TSD should investigate whether users with more than one ID require this access and remove access for DBAs where appropriate. TSD should review network access with the CNC Administrator, DBAs, and TSD senior management. TSD should complete a review of user access on an annual basis.

Action Plan Lead:

Project Manager - JD Edwards Upgrade

Timing:

As part of the JD Edwards upgrade project



#3: Database Security

Observation:

No processes are in place to review transactions and activities of super-user at the application level on a periodic basis. The database audit logging is not turned on to monitor DBA transactions and activities. DBAs are using generic user IDs to login to the database for database administration.

Area for Improvement:

TSD should review on a periodic basis the transactions or activities performed by super-users and investigate any unexpected items. Consideration should be given to tracking the DBA activities through logging and review of the logs on a periodic basis. TSD should consider assigning unique user IDs to each DBA in order to trace accountability and to review the password parameters to comply with policy.

Action Plan:

TSD should consider auditing super-user transactions and activities on a periodic basis. TSD should review application tools which could assist with tracking DBA activities.

Action Plan Lead:

Project Manager - JD Edwards Upgrade

Timing:

As part of the JD Edwards upgrade project

#4: Change Management Process

Observation:

There is no process in place to provide a complete list of all datafix changes completed during the review period. The "Database Action Request" form which is used to document datafix changes is not sequentially numbered.

Area for Improvement:

TSD could set up a process to review all the objects that were checked in on a periodic basis to ensure that they are appropriate and consider tracking the logging of the DBAs transactions and activities.

Action Plan:

TSD should consider developing a report which includes details of all datafix changes completed.

Action Plan Lead:

Project Manager - JD Edwards Upgrade

Timing:

As part of the JD Edwards upgrade project

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#5 Back-Up and Restore Process

Observation:

There is no formal backup and restore policy and procedure document. There is no document that describes the criticality of the JD Edwards data (both application and database) in order to determine the risk and the appropriate backup and restore policy that would mitigate the risk. Escalation processes with regards to backup failures are not documented.

Area for Improvement:

TSD could formalize the backup and restore policy for each of the critical data components and could set up procedures to log evidence of review of backup logs and the escalation of any backup errors and their resolution.

Action Plan:

TSD should improve the documentation surrounding its data backups before upgrades, data updates, etc. A formal risk assessment should be created to support the development of formal back-up and restore policies. An escalation process should be developed to support the backup and restore policy.

Action Plan Lead:

Project Manager - JD Edwards Upgrade

Timing:

As part of the JD Edwards upgrade project

#6: Incident Management

Observation:

No formal incident management policy currently exists and there is no process in place to monitor open calls/tickets.

Area for Improvement:

TSD should formalize the incident management policy describing the escalation and remediation procedure and should consider monitoring of open calls/tickets procedures on a periodic basis to ensure that tickets/calls are closed on a timely basis.

Action Plan:

TSD should create an incident management program through ITIL, including JD Edwards. Furthermore, CNC staff call should document all calls and tickets to allow for effective monitoring.

Action Plan Lead:

Project Manager - JD Edwards Upgrade

Timing:

As part of the JD Edwards upgrade project

Agenda Item # Page #

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APPENDIX E – Proposed Internal Audit Schedule - 2012

Department	Project	Timing
Community Services	Financial Management	March 2012
Planning, Environmental & Engineering Services	Project Tendering and Contracts	April 2012
Planning, Environmental & Engineering Services	Building Control Compliance	May 2012
Multiple Departments	Grant and Loan Program Administration	June 2012
Finance	Credit Cards	July 2012
Finance	Payroll	August 2012
Finance	Expenditure Approval and Payment	October 2012
CAO's Department	Succession Planning	November 2012

Appendix F - Quarterly Report on Internal Audit Results

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The Corporation of the City of London

Quarterly Report on Internal Audit Results

- Procurement Bid Process
- Brownfield Site Development
- Information Security Governance
Assessment and JDE IT General Controls

December 7, 2011

Agenda

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Rating Scale – Opportunities for Improvement

- **Satisfactory**

Controls are present to mitigate process/business risk, however an opportunity exists for improvement.

Satisfactory



- **Needs Improvement**

Existing controls may not mitigate process/business risk and management should consider implementing a stronger control structure.

Needs
Improvement



- **Unsatisfactory**

Control weaknesses are significant and the overall exposure to risk is unacceptable. Immediate attention and oversight from management is required.

Unsatisfactory



Finance - Procurement Bid Process

Summary of Risks & Scope

Finance - Procurement Bid Process

Scope

- Conflict of interest purchases
- Request for quotation, proposal, tender
 - Performance evaluations of suppliers
 - Custody and retention of documents
- Irregular result bids
- Emergency purchases
- No acceptable bids
- Sole and single sourced

Risks

- Conflict of interest exists when determining suppliers
- Non-compliance with purchasing policies resulting in inappropriate awards or prices
- Inadequate documentation to support bid and purchase processes
- Legislative requirements for procurement are currently changing for certain publicly accountable entities which will lead to increased focus in this area

Controls Operating Effectively

- There were no instances of non-compliance with purchasing policies noted during the course of the audit, only opportunities for improvement
- Procurement and bids handled centrally by Purchasing and Supply are in compliance with purchasing policies and well documented
- Bid evaluators are required to disclose a conflict of interest and excuse themselves from the evaluation process
- Policies governing the 'irregular bids' evaluation process are followed and documented
- Policies governing the 'no acceptable bids' evaluation process are followed and documented
- Documents relating to the bid process are properly maintained in accordance with City retention policies

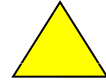
Value-for-Money Considerations

- There is an opportunity for cost savings by bringing the competitive bidding process in-house rather than allowing third party consultants to take control of the process and billing the City for time incurred.
- The other recommendations will reduce the risk of inappropriate supplier awards that could lead to the City paying too much.

Observations & Action Plans -#1

Finance - Procurement Bid Process

Needs
Improvement



Observation

Decentralized Request for Quotations, Proposals and Tenders

Decentralization of the purchasing process has resulted in inconsistent documentation to support compliance with the City procurement processes when Purchasing and Supply does not manage the process.

Business Impact

Purchasing and Supply does not exercise immediate oversight over the decentralized purchases, which creates an opportunity for non-compliance with the City Procurement of Goods and Services Policy (the “Policy”) and exposure to inequitable purchasing costs and supplier selection.

Action Plan

It is recommended that the City investigate centralization of the process within the Request for Quotation, Tender and Proposal processes to ensure that: (i) a consistent process is followed in all cases; (ii) the appropriate third party is awarded the contract; and (iii) appropriate documentation is retained.

Action Plan Lead

Manager of Purchasing and Supply

Timing

June 30, 2012

Observations & Action Plans -#2

Finance - Procurement Bid Process

Satisfactory



Observation

Decentralized Informal Quotations

The current process surrounding decentralized informal quotations do not require these purchases to be numbered. Subsequent review procedures are not performed by Purchasing and Supply to ensure compliance with the Policy.

Business Impact

Without sequential numbering, appropriate monitoring of the informal quotation process cannot occur. The lack of subsequent review of these purchases exposes the City to non-compliance with the Policy and exposure to inequitable purchasing costs and supplier selection.

Action Plan

It is recommended that the City number all informal decentralized quotations to ensure appropriate tracking and follow-up analysis can be performed. Furthermore, due to the decentralization of the informal quotation process, the City should investigate performing a periodic review or audit of a sample of informal quotations to ensure that: (i) the appropriate process is followed; (ii) appropriate approvals are obtained; and (iii) appropriate documentation is retained.

Action Plan Lead

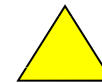
Manager of Purchasing and Supply

Timing

February 29, 2012

Observations & Action Plans -#3 ***Finance - Procurement Bid Process***

Needs
Improvement



Observation

Third Party Consultants

The list of approved consultants is continuously updated by identified individuals who are not members of the Purchasing and Supply team. The City does not maintain consistently documented processes by which this list is monitored and maintained.

Business Impact

Without formal processes to maintain this list, quality and cost effectiveness of consultants listed may be compromised as it may not be clear how a consultant is permitted to be added to the list, or how the list is monitored to ensure the approved consultants are monitored.

Action Plan

It is recommended that the City create processes regarding the use and maintenance of the third party consultant list, including assigning a “List Owner” to manage the list by division and share this information real-time with Purchasing and Supply. The processes should describe the following: (i) how a third party consultant becomes a member of the list; (ii) the time limit the third party consultant is permitted to remain on the list without supplying the City or being awarded a project; and (iii) the creation of a consultant rating system for all City departments to measure the consultants’ performance for determination of whether the third party consultant should remain on the list or be permitted to be awarded projects.

Action Plan Lead

Manager of Purchasing and Supply

Timing

June 30, 2012

Observations & Action Plans -#4

Satisfactory



Finance - Procurement Bid Process

Observation

Grouped Consultant Project Awarding

An explanation or description of the grouped consultant project awarding process is not explicitly described in the Policy as this process is used solely by Engineering and Environmental Services. The grouped consultant project awarding processes utilized by Environmental and Engineering Services leads to efficiencies in awarding projects.

Business Impact

The lack of explicit documentation within the Policy exposes the City to the potential of inequitable purchasing costs and supplier selection.

Action Plan

It is recommended that the City investigate the appropriateness of the grouped consultant award process to determine if it is in-line with City procurement policies. Furthermore, the City should determine whether specific guidance is needed within the Policy to describe the following regarding the grouped consultant project awarding process: (i) the tasks involved in completing the grouped awarding process; (ii) the City officials to be included in the awarding process; and (iii) the approval required to award the projects. This should include a description of the procedures to be used to determine the winner of each project.

Action Plan Lead

Manager of Purchasing and Supply and
City Engineer

PricewaterhouseCoopers LLP

Timing

June 30, 2012

Observations & Action Plans -#5 ***Finance - Procurement Bid Process***

Needs
Improvement



Observation

Requests for Tenders Managed by Third Party Consultants

The management of certain tenders by third party consultants at the request of decentralized purchasing processes has resulted in inconsistencies in documentation to support compliance with the Policy.

Business Impact

Purchasing and Supply does not exercise immediate oversight over third party consultants managing certain tenders, which creates exposure to the risk of non-compliance with the Policy and exposure to inaccurate information, inequitable purchasing costs and supplier selection.

Action Plan

It is recommended that the City continue to leverage the expertise of third party consultants in the Requests for Tenders for complex projects; however, the City should determine 'milestones' at which Purchasing and Supply is required to be involved in the process to ensure appropriate procedures are being followed. The City should investigate the business case for bringing the competitive bidding process for non-complex projects in-house as there may be an opportunity for cost savings.

Action Plan Lead

Manager of Purchasing and Supply

Timing

July 31, 2012

Observations & Action Plans -#6 ***Finance - Procurement Bid Process***

Needs
Improvement



Observation

Supplier Performance Evaluations

Supplier performance evaluations are not performed formally with consistent documentation.

Business Impact

The lack of formal performance evaluations could cause the City to miss identifying poor performing suppliers and could permit suppliers who have performed poorly on City contracts to continue to be awarded contracts.

Action Plan

It is recommended that Purchasing and Supply develop a performance evaluation system for their suppliers to ensure the services/products being provided are meeting the cost, quality, delivery and service needs of the City. Furthermore, the City should provide guidelines within the Policy for determining those suppliers that are prohibited from supplying the City for a specified period of time. (Note: Purchasing and Supply is currently working with TSD to create a performance evaluation system for all suppliers that will rate each supplier, each time they supply the City, to ensure they meet the cost, quality, value and service needs of the City).

Action Plan Lead

Manager of Purchasing and Supply

Timing

November 30, 2012

Observations & Action Plans -#7 ***Finance - Procurement Bid Process***

Needs
Improvement



Observation

Emergency Purchases

The Policy does not currently contain detailed examples of what instances constitute an 'emergency', allowing a non-emergency purchase to proceed through the 'emergency' purchasing section of the Policy.

Business Impact

This lack of clarity exposes the City to inequitable purchasing costs where a purchase has been incorrectly deemed an 'emergency.'

Action Plan

It is recommended that the City provide additional guidance and examples within the Policy to explain the criteria for determining what constitutes an 'emergency.'

The City should investigate formalizing the process for approval of 'emergency' purchases by department Executive Directors and Purchasing and Supply.

Action Plan Lead

Manager of Purchasing and Supply

Timing

April 30, 2012

Observations & Action Plans -#8

Finance - Procurement Bid Process

Satisfactory



Observation

Single and Sole Sourced Purchases >\$10,000

The current processes surrounding single and sole sourced purchases > \$10,000 do not require these purchases to be numbered. Subsequent analysis is not performed to determine compliance with the Policy.

Business Impact

The lack of numbered purchases does not allow for appropriate monitoring of the single and sole sourced purchases > \$10,000. The lack of subsequent review of these purchases exposes the City to the risk that an unusual amount of purchases are being awarded as single or sole sourced purchases.

Action Plan

It is recommended that the City number all single sourced and sole sourced purchases > \$10,000 to ensure appropriate tracking and analysis can be performed. The individual submitting the request for single or sole sourced purchases should complete a template form to ensure appropriate documentation is obtained to support compliance with the Policy. The City should investigate performing an annual analysis of the amount of single and sole sourced purchases completed and the results should be reported to City Council.

Action Plan Lead

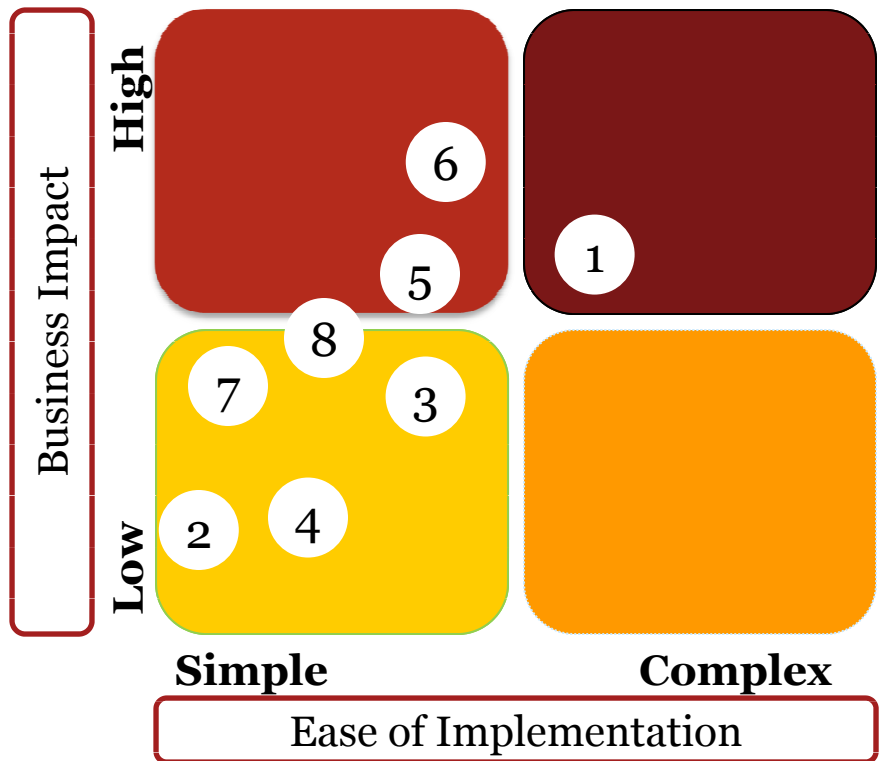
Manager of Purchasing and Supply

Timing

March 31, 2012

Action Plan Summary

Finance - Procurement Bid Process



- High Business Impact, Easy to Implement
- High Business Impact, Difficult to Implement
- Low Business Impact, Easy to Implement
- Low Business Impact, Difficult to Implement

Observations	Timing
#1: Decentralized Request for Quotations, Proposals and Tenders	June 30, 2013
#2: Decentralized Informal Quotations	Feb 29, 2012
#3: Third Party Consultants	June 30, 2012
#4: Grouped Consultant Project Awarding	June 30, 2012
#5: Requests for Tenders Managed by Third Party Consultants	July 31, 2012
#6: Supplier Performance Evaluations	Nov 30, 2012
#7: Emergency Purchases	April 30, 2012
#8: Single and Sole Sourced Purchases > \$10,000	Mar 31, 2012

Action Plan Lead
 Manager of Purchasing and Supply/City Engineer

Special Project – Brownfield Site Development

Summary of Risks & Scope

Special Project – Brownfield Site Development

Scope

- Review the BMO Soccer Dome project as an example for brownfield site developments that the City may enter into
- Provide recommendations based on the results of that project and identify best practices to follow in similar projects

Risks

- The City may incur unforeseen costs in developing brownfield sites
- The City may not obtain information in a timely manner on additional costs to be incurred to make effective decisions
- Development of brownfield sites is inherently risky

Summary

- It is unlikely that the City could have avoided the additional costs associated with the BMO Soccer Dome project
- However, the City could have been informed earlier of the unforeseen costs, which would have allowed for better decision making abilities
- In some instances, recommendations were partially in place for the BMO Soccer Dome project, but have been reiterated for future brownfield site developments
- In hindsight, there should have been a more formalized agreement in place in relation to the BMO Soccer Dome regarding roles and responsibilities and any limits to the City's liability
- The City Treasurer, in conjunction with the City Engineer, should create formally documented processes for brownfield site developments which incorporates the recommendations presented

Observations & Action Plans -#1 ***Special Project – Brownfield Site Development***

Needs
Improvement



Observation

Project Liaison Role Assignment

A Project Liaison should be in place for the entire length of the project to monitor the project's process on behalf of the City of London (the City) and act as the City's point of contact for all parties involved. This was attempted for the BMO Soccer Dome project; however, due to retirements and other movements, the role became unclear.

Business Impact

A potential risk exists that information is not being communicated to the City from the General Contractor and Consultants when a Project Liaison is not in place.

Projects may not be completed efficiently and in line with planned timelines and budget without a designated main point of contact for the City.

Action Plan

It is recommended that the City assign an individual to the Project Liaison role for projects going forward and consider future succession planning for this role. In addition, a documented process for brownfield site developments should be created which incorporates this and other recommendations.

Appropriate clauses within the project contracts should be included to ensure the Project Liaison is permitted to communicate with the General Contractor and Consultants at any time throughout the project.

Action Plan Lead

City Treasurer and Chief Financial Officer

Timing

June 30, 2012

Observations & Action Plans -#2 ***Special Project – Brownfield Site Development***

Satisfactory



Observation

Collaboration with Environmental Consultants

After assignment of the Environmental Consultants, the City was not sufficiently involved to ensure that risk assessment activities were in agreement with the City's expectations for the due diligence process.

Business Impact

A potential risk exists that a conflict may arise between the expectations and objectives of the City and those of third party Environmental Consultants. The project due diligence may not be completed in line with environmental or City requirements.

Action Plan

It is recommended that the City's Project Liaison works in collaboration with third party Environmental Consultants during the risk assessment phase to ensure City objectives are met.

The City's Project Liaison should get regular updates from the Environmental Consultants. This recommendation should be included in the formal processes for any future brownfield site projects.

Action Plan Lead

City Engineer

Timing

June 30, 2012

Observations & Action Plans -#3

Special Project – Brownfield Site Development

Satisfactory



Observation

Formal Sign-off of Due Diligence Procedures

A formal policy is not in place requiring the City to sign-off on the results of the Environmental Consultant's risk assessment process and results to evidence that the due diligence procedures have met City expectations and objectives.

Business Impact

A potential risk exists that detailed budgeting and project planning activities may commence prior to ensuring that sufficient due diligence procedures have been performed by Environmental Consultants.

Action Plan

It is recommended that the City provide final sign-off of the Environmental Consultant's risk assessment process to ensure the City's objectives have been met prior to commencing any detailed budgeting or project planning activities for future brownfield site developments. This recommendation should be incorporated within formal process documentation.

Action Plan Lead

City Engineer

Timing

June 30, 2012

Observations & Action Plans -#4

Special Project – Brownfield Site Development

Satisfactory



Observation

Determination of Remediation Costs

Estimates of remediation costs are not developed by utilizing probabilities of assessed risk factors for the site.

For example, the probability of a remediation cost arising would be impacted by the amount of time the site has been in use, the documented history of the site (if available), the previous issues noted at the site, the uncertainty involved with the site conditions, etc.

Business Impact

A potential financial risk exists that remediation cost estimates are not accurately developed, resulting in unplanned future expenses.

Action Plan

It is recommended that the City requests the Environmental Consultant to assign probabilities to each type of remediation cost in their detailed risk assessment report.

The City should consider these probabilities in determining the expected remediation costs of the site and the project budget for future brownfield projects and should incorporate this recommendation within formal process documentation.

Action Plan Lead

City Treasurer and Chief Financial Officer and City Engineer

Timing

June 30, 2012

Observations & Action Plans -#5

Special Project – Brownfield Site Development

Needs Improvement 

Observation

Defined Reporting Structure

A clear reporting structure has not been defined to ensure that periodic status and financial updates are provided from the General Contractor to the Project Liaison where the contractor is hired by a third party.

Business Impact

A potential risk exists that projects may not be executed efficiently or effectively without a defined communication structure.

Action Plan

It is recommended that the City implement a reporting structure within project contracts for future brownfield site developments whereby the General Contractor reports to the Project Liaison on a periodic basis.

For example, time delays, budget overages and project issues should be communicated to the Project Liaison in a timely manner to facilitate timely reporting of issues to City management and Council and to ensure efficient completion of the entire project.

Prior to reporting to the Project Liaison, the General Contractor should be responsible for obtaining updates from all Sub-Contractors and Consultants in order to provide a robust and complete report to the Project Liaison.

The City should include appropriate clauses within project contracts to provide the City with the right to refuse inappropriate expenditures.

Action Plan Lead

City Treasurer and Chief Financial Officer

PricewaterhouseCoopers LLP

Timing

June 30, 2012

Observations & Action Plans -#6

Special Project – Brownfield Site Development

Satisfactory 

Observation

Periodic Reporting to City Council

There is no formal requirement for project updates to be regularly communicated to City Council.

For example, time delays, budget overages and project issues are not required to be formally communicated to City Council on a periodic basis.

Business Impact

A potential risk exists that City Council may not be fully informed regarding project status in a timely manner.

Action Plan

It is recommended that the Project Liaison be required to provide a project status report to City Council on a periodic basis in accordance with a specified timeline.

City Council should be requested to approve any additional remediation costs incurred or additional estimates through the current purchase approval processes.

Action Plan Lead

City Treasurer and Chief Financial Officer

Timing

June 30, 2012

Observations & Action Plans -#7

Special Project – Brownfield Site Development

Satisfactory



Observation

Project Debrief Meetings

As the BMO Soccer Dome project is not yet complete, formal meetings have not yet been held among all parties involved in the project to debrief the overall effectiveness of the project and lessons learned.

Business Impact

A potential risk exists that successes and lessons learned during the project will not be considered in future projects.

Action Plan

It is recommended that a formal meeting is held at the completion of each significant project for future brownfield site developments which would allow all City officials and third parties involved to discuss the overall effectiveness of the project (i.e. what went well, what went wrong, what could have been improved, etc.).

These individuals should include the Project Liaison, Finance, Engineering, Environmental Consultant, General Contractor, other Consultants, etc. This recommendation should be incorporated within formal process documentation.

Action Plan Lead

City Treasurer and Chief Financial Officer

Timing

June 30, 2012

Observations & Action Plans -#8

Special Project – Brownfield Site Development

Satisfactory



Observation

Standardized Agreements

The scope of the relationship between the City and the General Contractors has not been formally documented in standardized agreements.

Business Impact

A potential risk exists that the limit of the City's liability in development arrangements has not been clearly documented.

Action Plan

It is recommended that formal agreements are developed to standardize the relationship between the City and the General Contractors, including roles and responsibilities, reporting requirements and any limits to the City's liability.

Action Plan Lead

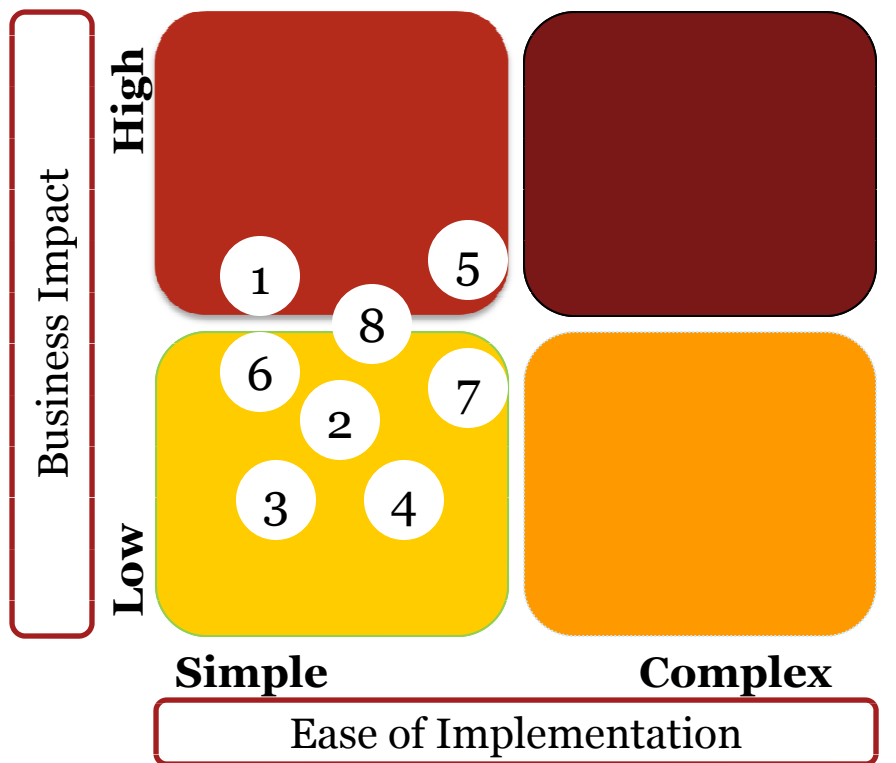
City Treasurer and Chief Financial Officer

Timing

June 30, 2012

Action Plan Summary

Special Project – Brownfield Site Development



- High Business Impact, Easy to Implement
- High Business Impact, Difficult to Implement
- Low Business Impact, Easy to Implement
- Low Business Impact, Difficult to Implement

Observations	Timing
#1: Project Liaison Role Assignment	June 30, 2012
#2: Collaboration with Environmental Consultants	June 30, 2012
#3: Formal Sign-off of Due Diligence Procedures	June 30, 2012
#4: Determination of Remediation Costs	June 30, 2012
#5: Defined Reporting Structure	June 30, 2012
#6: Periodic Reporting to City Council	June 30, 2012
#7: Project Debrief Meeting	June 30, 2012
#8: Standardized Agreements	June 30, 2012

Action Plan Lead

City Treasurer & Chief Financial Officer/City Engineer

IT – TSD IT Governance & JDE IT General Controls

Summary of Risks & Scope

IT – TSD IT Governance

Scope

- IT strategy and decision making
- Project portfolio/program management
- Systems support capability
- Security management
- Disaster recovery and continuity
- Project management and benefits realization
- Governance structure
- IT policies and standards
- IT compliance
- IT performance management

Risks

- IT strategy may not be aligned to business strategy
- Success of IT projects may not be measurable
- There may be a failure to identify a legal, contractual, policy or regulatory requirement related to information and the IT organization, processes and infrastructure
- Current IT infrastructure may not support new business initiatives
- Continuity plans may not reflect the current personnel, business structures or processes

Controls Operating Effectively

- Management has a clear understanding of the key decisions that drives IT and business strategy and of its legal and other obligations.
- Business representatives and the Technology Services Division (“TSD”) share responsibility for managing projects through the customer relationship
- The IT security infrastructure, applications, policies, principles and standards are aligned with the organization's risk appetite and current legal requirements

Value-for-Money Considerations

- The recommendations in this report will help to make TSD more efficient and effective which will increase value to the City.

Observations & Action Plans -#1

IT – TSD IT Governance

Satisfactory



Observation

IT Strategy

IT strategy is currently being developed to align with business strategy.

Area for Improvement

To support the City's business objectives a formal IT strategy must be approved by senior management and the IT steering committee, widely communicated and understood across the organization, and align the IT strategy with stakeholder priorities and business objectives.

Action Plan

TSD should continue developing a formal IT Strategy. The strategy should be presented to both the senior management team ("SMT") and City Council, as well as to all TSD staff. Alignment with corporate objectives must be a key component of the City's IT strategy.

Action Plan Lead

TSD Division Manager

Timing

December 31, 2012

Observations & Action Plans -#2

IT – TSD IT Governance

Satisfactory 

Observation

Decision Making

Stakeholders that are involved in key decisions are well defined and understood. Management has an understanding of the key decisions that drives IT and business strategy.

Area for Improvement

Roles and responsibilities of persons involved with critical IT decision making should be clearly communicated to mitigate the risk of process breakdown in a critical situation.

Action Plan

The City should employ an Enterprise IT Governance model that will address the overall decision making. Specifically, an RACI (Responsible, Accountable, Consulted, Informed) chart for critical decisions should be employed which identifies stakeholders and responsibilities, as well as who should be consulted during a decision making process.

Action Plan Lead

TSD Division Manager

Timing

December 31, 2012

Observations & Action Plans -#3

Satisfactory



IT – TSD IT Governance

Observation

Governance Structure

The IT governance structure is in its development phase having operated for less than a year. The IT governance structure is being defined with the proper mandate, roles and responsibilities to make decisions. Communication is taking place on a regular basis; however, the scope, function and operating principles of the governance bodies is still being developed.

Area for Improvement

To maintain its effectiveness, the mandate, roles and responsibilities of the governance structure should be known to everyone. Furthermore, the scope, function, and operating principles of governance bodies should be widely communicated and understood by everyone.

Action Plan

Once the IT governance structure is fully defined, a communication plan should be developed to ensure that all appropriate staff are informed of the roles, responsibilities, scope, function and principles of the IT governance structure.

Action Plan Lead

TSD Division Manager

Timing

December 31, 2012

Observations & Action Plans -#4 ***IT – TSD IT Governance***

Needs
Improvement



Observation

IT Policies and Standards

Most IT policies and standards require updating to reflect current processes. TSD has adopted an informal process of communicating IT policies and standards across the organization.

Area for Improvement

To ensure effective policies are in place, IT policies and standards should be aligned to corporate strategy and reflect IT best practices. TSD should establish a formal process to maintain and update IT standards.

Action Plan

TSD should identify IT policies, procedures and standards which require updating and correspond with relevant departments such as Human Resources and Legal to update these polices as necessary.

Action Plan Lead

TSD Division Manager

Timing

December 31, 2012

Observations & Action Plans -#5

IT – TSD IT Governance

Needs
Improvement



Observation

IT Compliance

Although management has a clear understanding of its legal and other obligations regarding IT compliance, processes to support compliance are not addressing all relevant compliance needs.

Area for Improvement

TSD should have formal and robust compliance management processes with roles and responsibilities clearly defined. All relevant statutory, regulatory and contractual requirements should be explicitly defined and documented for each major information system.

Action Plan

TSD should implement formal compliance management processes with roles and responsibilities as well as relevant statutory, regulatory and contractual requirements clearly defined. TSD should consider whether external resources should be consulted to support the implementation of these compliance management processes.

Action Plan Lead

TSD Division Manager

Timing

December 31, 2012

Observations & Action Plans -#6 ***IT – TSD IT Governance***

Needs
Improvement



Observation

IT Performance Management

IT performance management is not robust and relies on limited service level agreements. No formal capacity planning process is in place.

Area for Improvement

IT performance should be measured and monitored with roles and responsibilities formally defined and agreed. Formal, periodic performance meetings should occur to discuss the current TSD performance as well as ensure that capacity exists to respond to corporate demands and requirements.

Action Plan

TSD should continue its implementation of the Information Technology Infrastructure Library (“ITIL”) best practices, and should consider other performance management tools such as a balanced scorecard and identification and measurement of key performance indicators to support continuous improvement of the division.

Action Plan Lead

TSD Division Manager

Timing

December 31, 2012

Observations & Action Plans -#7 ***IT – TSD IT Governance***

Unsatisfactory **X**

Observation

Project Portfolio/ Program Management

IT projects often run late and require additional resources.

Area for Improvement

The IT project portfolio should be reviewed and evaluated at key milestones and events. Furthermore, accountability of the success of the portfolio should be clearly defined and measured.

Action Plan

TSD is in the process of ensuring the established project management office (“PMO”) uses formal processes to manage the portfolio of projects. TSD should investigate adding additional performance benchmarks to its current portfolio review to improve the portfolio performance evaluation process, including cross-organizational feedback processes.

Action Plan Lead

TSD Division Manager

Timing

December 31, 2012

Observations & Action Plans -#8

IT – TSD IT Governance

Needs
Improvement



Observation

Project Management and Benefits Realization

Business cases for projects are authorized, but benefits are informally defined. Furthermore, project management is affected by inadequate planning, unclear assumptions, lack of business involvement and additional resource requirements. IT projects are often perceived as unsuccessful by the business and new projects have gone live with issues.

Area for Improvement

Key performance indicators should be identified for each benefit and measured post implementation to measure the realization of identified benefits. Projects should be managed and resourced based on their criticality, complexity and priority and evaluated through milestone reporting. A process to evaluate lessons learned from problematic projects and to implement the appropriate corrective actions on future projects should be considered.

Action Plan

TSD should require benefits of a project be clearly defined prior to project approval. A Corporate IT Governance Committee should be created to prioritize projects. Furthermore, every project should have a lessons learned assessment prior to project closure. Business should be engaged throughout the process.

Action Plan Lead

TSD Division Manager

Timing

December 31, 2012

Observations & Action Plans -#9 ***IT – TSD IT Governance***

Needs
Improvement



Observation

Systems Support Capability

There is very little systems documentation maintained for the majority of systems. There are dedicated teams responsible for the support of key systems. These teams have relevant skills, but are under-resourced.

Area for Improvement

TSD should identify key systems that each require a separate dedicated support team and ensure each team is well resourced and generally has significant 'hands on' experience in the support of each system. Good up-to-date systems documentation is required for most systems.

Action Plan

TSD should create a documentation plan to ensure adequate documentation is maintained for all systems. TSD should examine the need for resource alignment for better allocation of resources.

Action Plan Lead

TSD Division Manager

Timing

December 31, 2012

Observations & Action Plans -#10

IT – TSD IT Governance

Satisfactory



Observation

Disaster Recovery and Continuity Planning

Backups are made for major systems, but they may not be routinely tested. Disaster Recovery (“DR”) and Business Continuity Plan (“BCP”) documentation are under development.

Area for Improvement

TSD should create backups and restore policy that describes the requirements for all systems. Backups should be periodically tested to check that they contain the right information and that this can be restored when required. The DR and BCP plans should be updated and tested on a periodic basis.

Action Plan

TSD should continue development of its DR and BCP plans. The plans should document and clearly define backup and restore procedures. Regular restore tests outside of the normal restore process should occur daily.

Action Plan Lead

TSD Division Manager

Timing

December 31, 2012

Observations & Action Plans -#11

Satisfactory



IT – TSD IT Governance

Observation

Security Management

Budgets and plans for information security management are prepared annually and reviewed through the year. An information security policy is being developed. There is no information security strategy and information risk assessments are not conducted. There are no checks of compliance with policy and there is no formal reporting of the status of information security projects/initiatives.

Area for Improvement

The information security policy should be approved and supported by detailed standards and guidelines. The security strategy should be signed off by TSD senior management and information risk assessments should be formalized and assessed at least on an annual basis. Security audits should be held to ensure compliance.

Action Plan

- a) TSD should provide a status update to the Audit Committee on the Deloitte IT Access Review.
- b) After security policies have been finalized, TSD should create the necessary detailed standards and guidelines. A security strategy should be included in the IT Strategy which should be approved by TSD senior management. Procedures and processes which are in place to check compliance should be improved. Monthly reporting should continue to occur to provide updates on security projects and initiatives.

Action Plan Lead

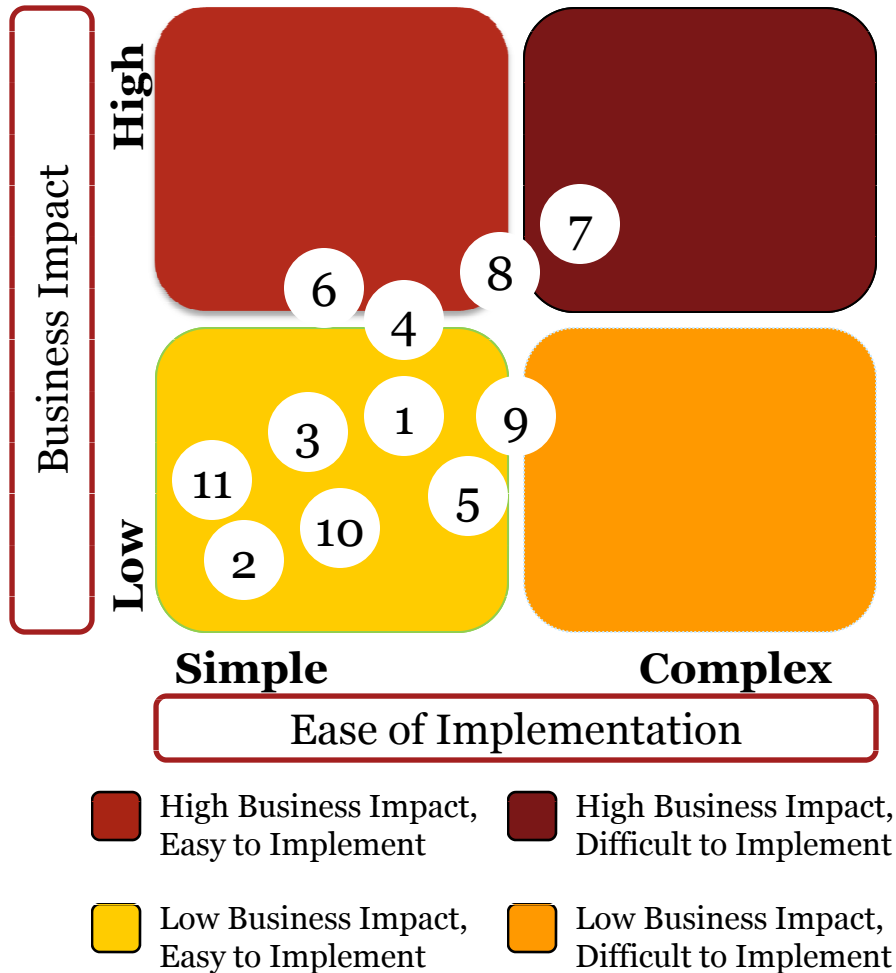
TSD Division Manager

Timing

- a) April 30, 2012
- b) December 31, 2012

Action Plan Summary

IT – TSD IT Governance



Observations	Timing
#1: IT Strategy	Dec. 31, 2012
#2: Decision Making	Dec. 31, 2012
#3: Governance Structure	Dec. 31, 2012
#4: IT Policies and Standards	Dec. 31, 2012
#5: IT Compliance	Dec. 31, 2012
#6: IT Performance Management	Dec. 31, 2012
#7: Project Portfolio/Program Management	Dec. 31, 2012
#8: Project Management and Benefits Realization	Dec. 31, 2012
#9: Systems Support Capability	Dec. 31, 2012
#10: Disaster Recovery and Continuity Planning	Dec. 31, 2012
#11: Security Management	April 30, 2012 Dec. 31, 2012

Action Plan Lead
TSD Division Manager

Summary of Risks & Scope

IT – JDE IT General Controls

Scope

- User administration
- Logical security
- Operating system security
- Database security
- Back-up restore operations
- Incident management
- Change management (application and database)

Risks

- Access to programs and data may not be appropriately restricted
- Data may be lost or corrupted resulting from improper migration/conversion, backup/recovery or data change management practices
- There may be unauthorized access to data outside the application
- Errors in transaction processing may not be corrected and/or identified

Controls Operating Effectively

- Access requests for new users are authorized before being granted to the network and JD Edwards
- Management reviews JD Edwards access rights periodically to ensure individual access rights are commensurate with job responsibilities and exceptions are appropriately followed up
- Logical security controls are in place for users accessing the network and JD Edwards
- Super-users/privileged access to the network, database and JD Edwards are appropriately restricted
- Changes to application programs and application configurations appropriately approved and are tested by appropriate personnel prior to being moved to production
- JD Edwards data is backed up on an appropriate basis
- The system is configured to detect errors in automated transaction processing

Observations & Action Plans -#1

Satisfactory



IT – JDE IT General Controls

Observation

Roles and Responsibilities

There is no formal description of roles and responsibilities related to IT functions; however, staff interviewed are aware of their current role and responsibilities within TSD.

Area for Improvement

TSD should consider defining the roles and responsibilities for each key role and communicate them in a defined manner.

Action Plan

TSD should update the descriptions of roles and responsibilities for each IT function during its re-organization.

Action Plan Lead

Project Manager – JD Edwards Upgrade

Timing

As part of the JD Edwards upgrade project

Observations & Action Plans -#2

IT – JDE IT General Controls

Satisfactory



Observation

Logical Security

1. 37 active JDE users have more than one user ID giving them access to either more than one role or environment. This increases the complexity of managing segregation of roles and access to different JDE environments.
2. Database administrators (“DBA”) have super-user application access to all of JD Edwards.
3. One group has DBA access to the JD Edwards database as they have access to the DBAADM safe.
4. There is currently no process to review super-user access on a periodic basis.

Area for Improvement

- TSD should review the process of creating multiple user IDs to ensure that they are appropriate.
- TSD should limit the super-user access at the application level to only the CNC Administrators and that at the database level to the DBAs only.
- TSD should limit DBA access to the appropriate personnel only.
- TSD should consider reviewing the database, server and domain administrators access rights on a periodic basis to ensure that access remains appropriate.

Action Plan

TSD should investigate whether users with more than one ID require this access and remove access for DBAs where appropriate. TSD should review network access with the CNC Administrator, DBAs, and TSD senior management. TSD should complete a review of user access on an annual basis.

Action Plan Lead

Project Manager - JD Edwards Upgrade

Timing

As part of the JD Edwards upgrade project

Observations & Action Plans -#3

IT – JDE IT General Controls

Satisfactory 

Observation

Database Security

No processes are in place to review transactions and activities of super-user at the application level on a periodic basis. The database audit logging is not turned on to monitor DBA transactions and activities. DBAs are using generic user IDs to login to the database for database administration.

Area for Improvement

TSD should review on a periodic basis the transactions or activities performed by super-users and investigate any unexpected items. Consideration should be given to tracking the DBA activities through logging and review of the logs on a periodic basis. TSD should consider assigning unique user IDs to each DBA in order to trace accountability and to review the password parameters to comply with policy.

Action Plan

TSD should consider auditing super-user transactions and activities on a periodic basis. TSD should review application tools which could assist with tracking DBA activities.

Action Plan Lead

Project Manager - JD Edwards Upgrade

Timing

As part of the JD Edwards upgrade project

Observations & Action Plans -#4

IT – JDE IT General Controls

Satisfactory



Observation

Change Management Process

There is no process in place to provide a complete list of all datafix changes completed during the review period. The “Database Action Request” form which is used to document datafix changes is not sequentially numbered.

Area for Improvement

TSD could set up a process to review all the objects that were checked in on a periodic basis to ensure that they are appropriate and consider tracking the logging of the DBAs transactions and activities.

Action Plan

TSD should consider developing a report which includes details of all datafix changes completed.

Action Plan Lead

Project Manager - JD Edwards Upgrade

Timing

As part of the JD Edwards upgrade project

Observations & Action Plans -#5

IT – JDE IT General Controls

Satisfactory



Observation

Back-Up and Restore Process

There is no formal backup and restore policy and procedure document. There is no document that describes the criticality of the JD Edwards data (both application and database) in order to determine the risk and the appropriate backup and restore policy that would mitigate the risk. Escalation processes with regards to backup failures are not documented.

Area for Improvement

TSD could formalize the backup and restore policy for each of the critical data components and could set up procedures to log evidence of review of backup logs and the escalation of any backup errors and their resolution.

Action Plan

TSD should improve the documentation surrounding its data backups before upgrades, data updates, etc. A formal risk assessment should be created to support the development of formal back-up and restore policies. An escalation process should be developed to support the backup and restore policy.

Action Plan Lead

Project Manager - JD Edwards Upgrade

Timing

As part of the JD Edwards upgrade project

Observations & Action Plans -#6 ***IT – JDE IT General Controls***

Needs
Improvement



Observation

Incident Management

No formal incident management policy currently exists and there is no process in place to monitor open calls/tickets.

Area for Improvement

TSD should formalize the incident management policy describing the escalation and remediation procedure and should consider monitoring of open calls/tickets procedures on a periodic basis to ensure that tickets/calls are closed on a timely basis.

Action Plan

TSD should create an incident management program through ITIL, including JD Edwards. Furthermore, CNC staff call should document all calls and tickets to allow for effective monitoring.

Action Plan Lead

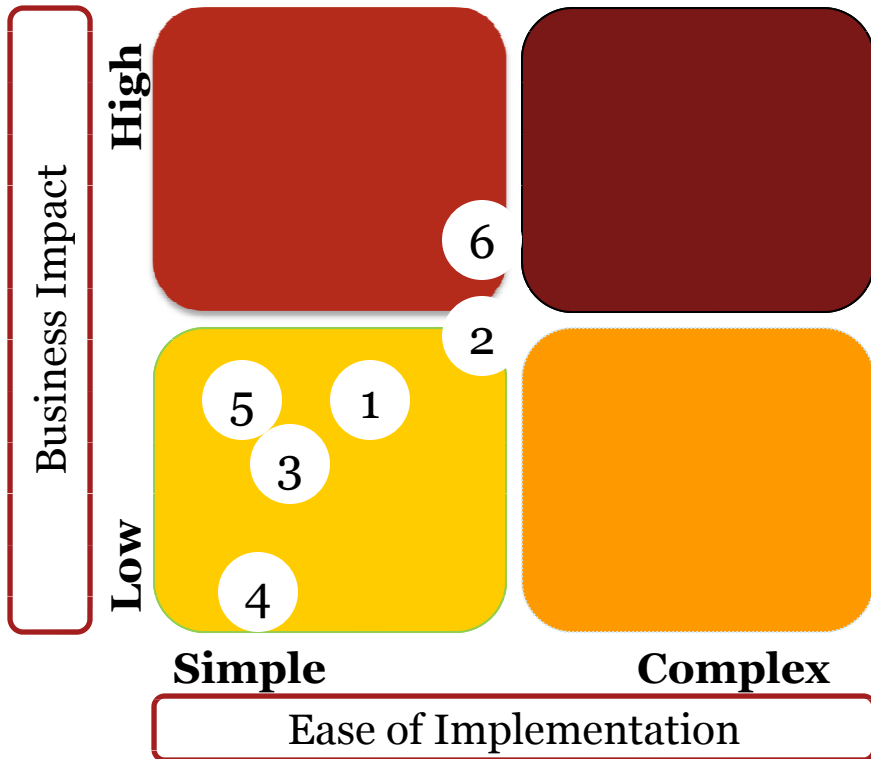
Project Manager - JD Edwards Upgrade

Timing

As part of the JD Edwards upgrade project

Action Plan Summary

IT – JDE IT General Controls



- High Business Impact, Easy to Implement
- High Business Impact, Difficult to Implement
- Low Business Impact, Easy to Implement
- Low Business Impact, Difficult to Implement

Observations Timing




- #1: Roles and Responsibilities
- #2: Logical Security
- #3: Database Security
- #4: Change Management
- #5: Back-up and Restore Process
- #6: Incident Management

As part of the JD Edwards upgrade project

Action Plan Lead

Project Manager – JD Edwards Upgrade

Internal Audit Projects in Progress

Department	Project		Stage
Community Services	Municipal Housing		Completion
CAO's Department	Attendance Management		Completion
Environmental & Engineering Services	Fleet Asset Management		Completion



Higher risk











Moderate Risk



Lower Risk

Proposed Internal Audit Schedule - 2012

Department	Project	Timing								
		Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov
Community Services	Financial Management									
Environmental & Engineering Services	Project Tendering and Contracts									
Environmental & Engineering Services	Building Control Compliance									
Multiple Departments	Grant and Loan Program Administration									
Finance	Credit Cards									
Finance	Payroll									
Finance	Expenditure Approval and Payment									
CAO's Department	Succession Planning									



Higher risk



Moderate Risk



Lower Risk

Internal Audit Scorecard – December 2011

		Key Measures	Target	J	F	Mr	Ap	My	Jn	Jy	Au	S	O	N	
CORPORATE STRATEGY	Audit Committee	Approval of annual risk-based audit plan	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	
		Number of reports presented to the Audit Committee	4	0	0	1	1	1	1	2	2	3	3	3	
		Timely reporting of recommendations	Y	N/A					Y	Y	Y	Y	Y	Y	Y
		Estimated quantification of future cost savings		-	-	-	-	-	-	-	\$300K	\$300K	\$300K	\$300K	
	Management / Auditees	Number of closing meetings held with management	8	0	0	0	0	0	2	2	3	3	3	3	6
		Number of concise, value-added recommendations		0	0	0	0	0	4	4	12	27	27	27	61*
INTERNAL AUDIT STRATEGY	Innovation/ Capabilities	Number of best practices identified by internal audit		0	0	0	0	4	4	12	27	27	27	61*	
		Use of internal audit resources and processes	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
	Internal Audit Processes	Percentage of projects completed	60%	0%				6%	24%	34%	47%	60%	63%	83%	96%
		Completion of annual risk assessment and updates to audit plan	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

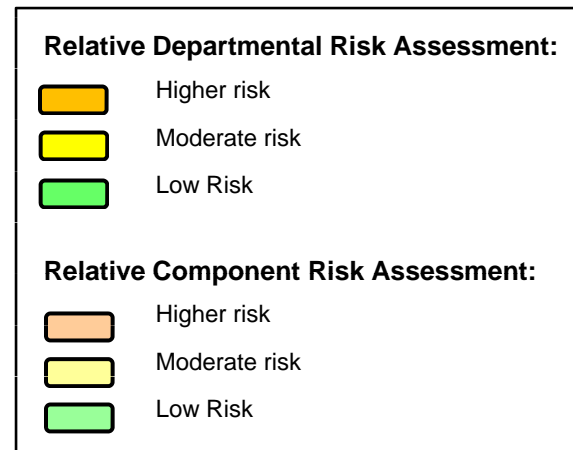
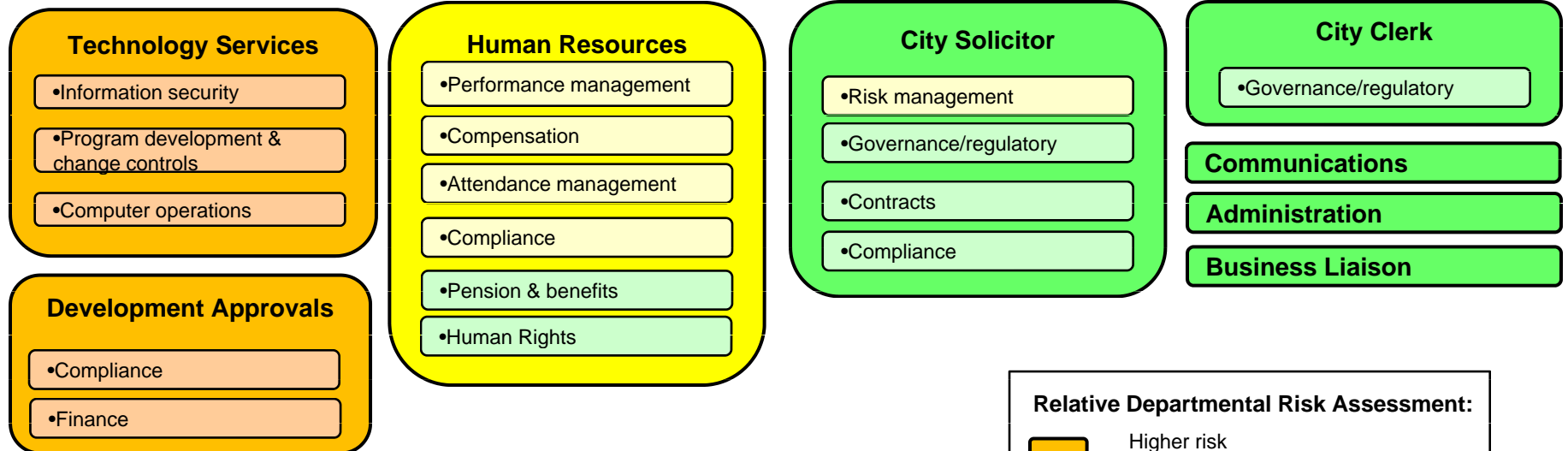
*estimated at the time of drafting this report

Appendix - Summary of Past Due Action Plans

Project	Item	Action Plan	Target Date	Status
Long-term Care Compliance	<i>Business Office Resident Admissions Checklist:</i>	A business office admissions checklist will be developed.	June 30, 2011	The checklist has been approved and implemented.
	An admissions checklist is not utilized to ensure completeness of business office related admissions documentation.	The Power-of-Attorney admission form will be amended to incorporate a statement of guarantee for outstanding bills. This admissions checklist will be used consistently, maintained at the front of the resident's business office file and reviewed for completeness by the business office staff.		Management is in process of working with legal to update the POA form regarding guarantee of outstanding bills.

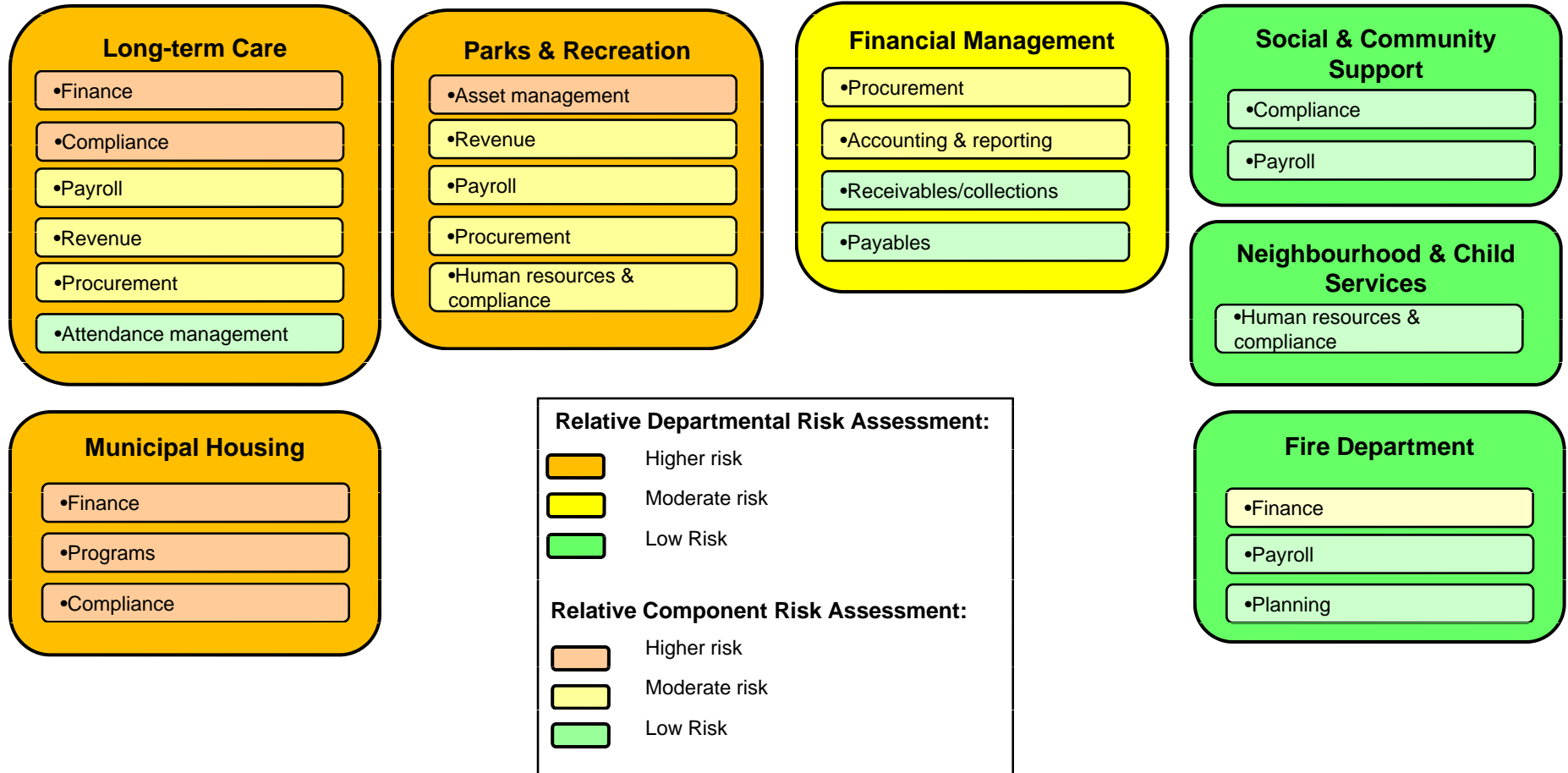
Appendix – Updated Risk Assessment

CAO's Department



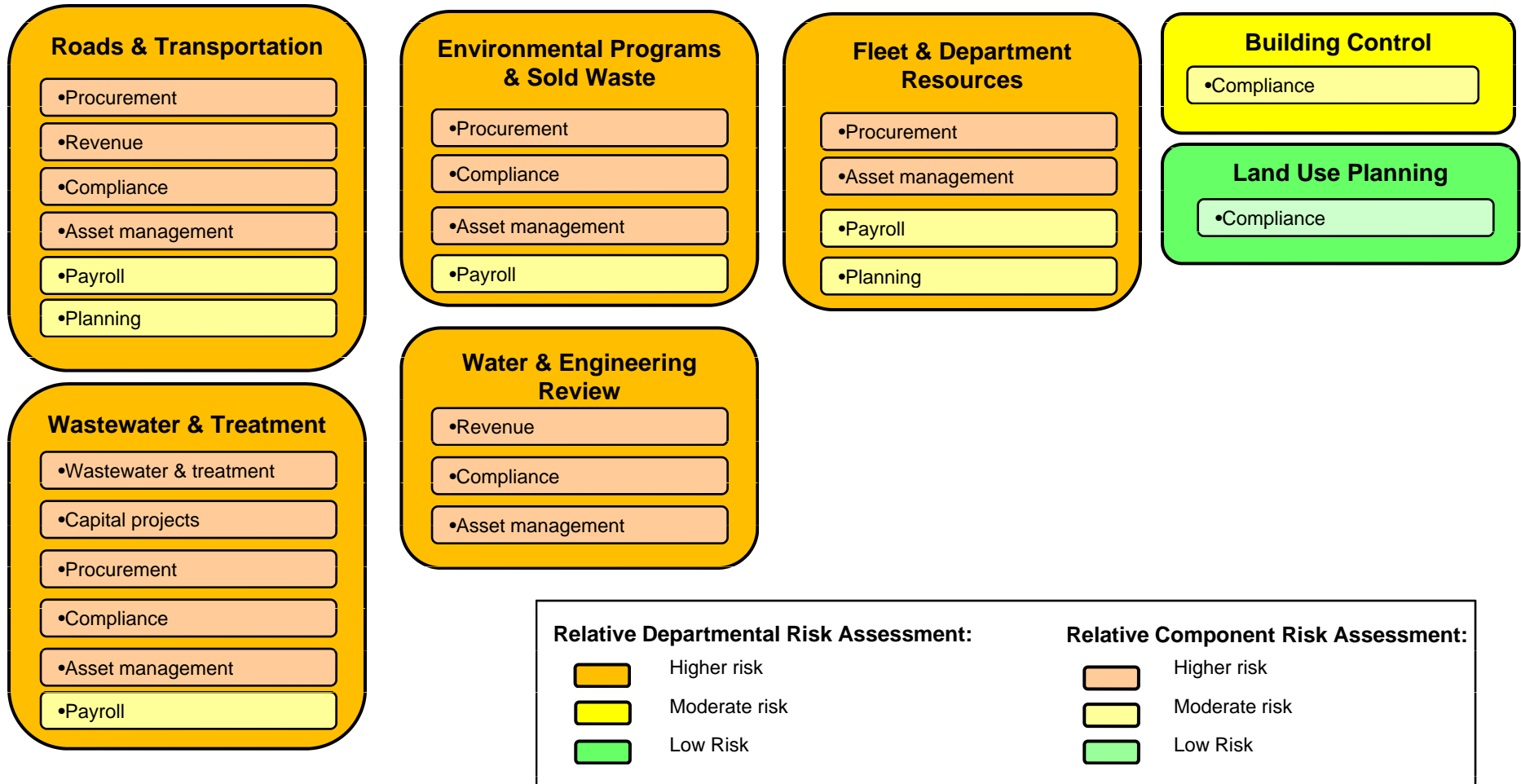
Appendix – Updated Risk Assessmentcontinued

Community Services



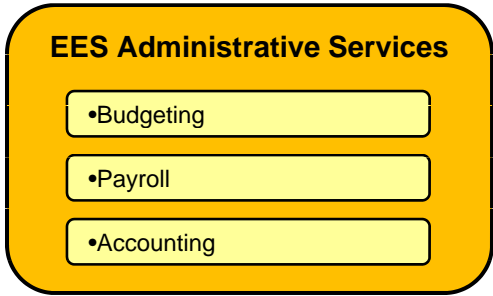
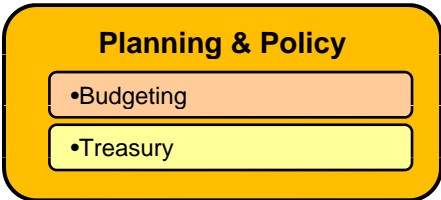
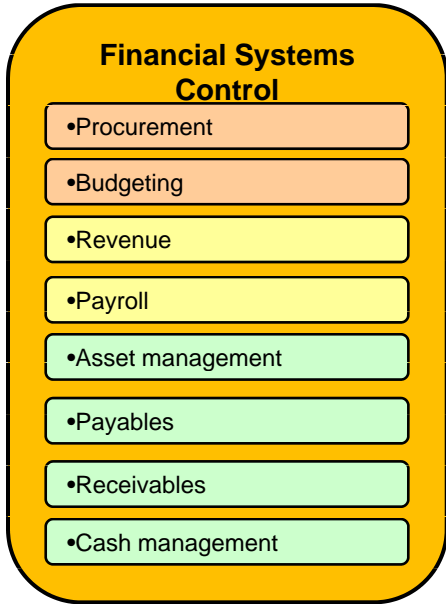
Appendix – Updated Risk Assessmentcontinued

Planning, Environmental & Engineering Services



Appendix – Updated Risk Assessment ...continued

Finance



Relative Departmental Risk Assessment:

- Higher risk
- Moderate risk
- Low Risk

Relative Component Risk Assessment:

- Higher risk
- Moderate risk
- Low Risk

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Appendix G - Summary of findings - Finance -
Procurement Bid Process

Summary of Findings

Auditable Areas: **Finance – Procurement Bid Process**

Rating Scale:

<i>Satisfactory</i>	Controls are present to mitigate process/business risk and are operating effectively and efficiently.
<i>Needs Improvement</i>	Existing controls may not mitigate process/business risk and management should consider implementing a stronger control structure.
<i>Unsatisfactory</i>	Control weaknesses are significant. Overall exposure is unacceptable. Requires management’s immediate attention and oversight.

Finance – Procurement Bid Process

Process: Decentralized Request for Quotations, Proposals and Tenders

Rating: Needs Improvement

Situation: Decentralization of the purchasing process, which dates back over 20 years, has resulted in inconsistent documentation to support compliance with the City procurement processes when Purchasing and Supply does not manage the process.

Business Impact: The Purchasing & Supply department does not exercise immediate oversight over the decentralized purchases, which creates an opportunity for non-compliance with the City Procurement of Goods and Services Policy (the “Policy”) and exposure to inequitable purchasing costs and supplier selection.

Recommendation: It is recommended that the City investigate centralization of the process within the Request for Quotation, Tender and Proposal processes to ensure that: (i) a consistent process is followed in all cases; (ii) the appropriate third party is awarded the contract; and (iii) appropriate documentation is retained.

Action Plan Lead:	Manager of Purchasing and Supply
Expected Target Date:	June 30, 2013
Status:	Open

Process: Decentralized Informal Quotations

Rating: Satisfactory

Situation: The current processes surrounding decentralized informal quotations do not require these purchases to be numbered. Additionally, subsequent review procedures are not performed by Purchasing and Supply to ensure these purchases are being completed in accordance with the Policy.

Business Impact: Without sequential numbering, appropriate monitoring of the informal quotation process cannot occur. Furthermore, the lack of subsequent review of these purchases exposes the City to non-compliance with the Policy and exposure to inequitable purchasing costs and supplier selection.

Recommendation: It is recommended that the City number all informal decentralized quotations to ensure appropriate tracking and follow-up analysis can be performed. Furthermore, due to the decentralization of the informal quotation process, the City should investigate performing a periodic review or audit of a sample of informal quotations to ensure that: (i) the appropriate process is followed; (ii) appropriate approvals are obtained; and (iii) appropriate documentation is retained.

Action Plan Lead: Manager of Purchasing and Supply
Expected Target Date: February 29, 2012
Status: Open

Process: Third Party Consultants

Rating: Needs Improvement

Situation: The list of approved consultants is continuously updated by identified individuals who are not members of the Purchasing and Supply team; however, only the most up-to-date version is retained and forwarded to Purchasing and Supply at least annually. Furthermore, the City does not maintain consistently documented processes by which this list is monitored and maintained.

Business Impact: Without formal processes to maintain this list, quality and cost effectiveness of consultants listed may be compromised as it may not be clear how a consultant is permitted to be added to the list, or how the list is monitored to ensure the approved consultants are monitored.

Recommendation: It is recommended that the City create processes regarding the use and maintenance of the third party consultant list, including assigning a “List Owner” to manage the list by division and share this information real-time with Purchasing and Supply. The processes should describe the following: (i) how a third party consultant becomes a member of the list; (ii) the time limit the third party consultant is permitted to remain on the list without supplying the City or being awarded a project; and (iii) the creation of a consultant rating system for all City departments to measure the consultants’ performance for determination of whether the third party consultant should remain on the list or be permitted to be awarded projects.

Action Plan Lead: Manager of Purchasing and Supply
Expected Target Date: June 30, 2012
Status: Open

Process: Grouped Consultant Project Awarding

Rating: Satisfactory

Situation: An explanation or description of the grouped consultant project awarding process is not explicitly described in the Policy as this process is used solely by Engineering and Environmental Services. The grouped consultant project awarding processes utilized by Environmental and Engineering Services leads to efficiencies in awarding projects.

Business Impact: The lack of explicit documentation within the Policy exposes the City to the potential of inequitable purchasing costs and supplier selection.

Recommendation: It is recommended that the City investigate the appropriateness of the grouped consultant award process to determine if it is in-line with City procurement policies. Furthermore, the City should determine whether specific guidance is needed within the Policy to describe the following regarding the grouped consultant project awarding process: (i) the tasks involved in completing the grouped awarding process; (ii) the City officials to be included in the awarding process; and (iii) the approval required to award the projects. This should include a description of the procedures to be used to determine the winner of each project.

Action Plan Lead: Manager of Purchasing and Supply and City Engineer
Expected Target Date: June 30, 2012
Status: Open

Process: Requests for Tenders Managed by Third Party Consultants

Rating: Needs Improvement

Situation: The management of certain tenders by third party consultants at the request of decentralized purchasing processes has resulted in inconsistencies in documentation to support compliance with the Policy.

Business Impact: Purchasing and Supply department does not exercise immediate oversight over third party consultants managing certain tenders, which creates exposure to the risk of non-compliance with the Policy and exposure to inaccurate information, inequitable purchasing costs and supplier selection.

Recommendation: It is recommended that the City continue to leverage the expertise of third party consultants in helping to develop details in the Requests for Tenders for complex projects; however, the City should determine ‘milestones’ at which Purchasing and Supply is required to be involved in the process to ensure appropriate procedures are being followed. For example, the Purchasing & Supply department should be involved in the process of sending out all addenda. Furthermore, the City should investigate the business case for bringing the competitive bidding process in-house rather than allowing third party consultants to take control of the process, as there may be an opportunity for cost savings.

Action Plan Lead:
Manager of Purchasing and Supply
Expected Target Date:
July 31, 2012
Status:
Open

Process: Supplier Performance Evaluations

Rating: Needs Improvement

Situation: Supplier performance evaluations are not currently being performed in a formal way with common information being maintained.

Business Impact: The lack of formal performance evaluations could cause the City to miss identifying poor performing suppliers and could permit suppliers who have performed poorly on City contracts to continue to be awarded contracts.

Recommendation: It is recommended that Purchasing and Supply develop a performance evaluation system for their suppliers to ensure the services/products being provided are meeting the cost, quality, delivery, and service needs of the City. Furthermore, the City should provide guidelines within the Policy for determining those suppliers that are prohibited from supplying the City for a specified period of time. (**Note:** Purchasing and Supply is currently working with TSD to create a performance evaluation system for all suppliers that will rate each supplier, each time they supply the City, to ensure they meet the cost, quality, value, and service needs of the City).

Action Plan Lead: Manager of Purchasing and Supply
Expected Target Date: November 30, 2012
Status: Open

Process: Emergency Purchases

Rating: Needs Improvement

Situation: The Policy does not currently contain detailed examples of what instances constitute an ‘emergency’, allowing a non-emergency purchase to proceed through the ‘emergency’ purchasing section of the Policy.

Business Impact: This lack of clarity exposes the City to inequitable purchasing costs where a purchase has been incorrectly deemed an ‘emergency.’

Recommendation: It is recommended that the City provide additional guidance and examples within the Policy to explain the criteria for determining what constitutes an ‘emergency’. Additionally, the City should investigate formalizing the process for approval of ‘emergency’ purchases by department Executive Directors and Purchasing & Supply.

Action Plan Lead: Manager of Purchasing and Supply
Expected Target Date: April 30, 2012
Status: Open

Process: Single & Sole Sourced Purchases > \$10,000

Rating: Satisfactory

Situation: The current processes surrounding single and sole sourced purchases > \$10,000 do not require these purchases to be numbered. Additionally, subsequent analysis is not performed to determine the level of purchases proceeding through the single and sole sourced sections of the Policy.

Business Impact: The lack of numbered purchases does not allow for appropriate monitoring of the single and sole sourced purchases > \$10,000. Furthermore, the lack of subsequent review of these purchases exposes the City to the risk that an unusual amount of purchases are being awarded as single or sole sourced purchases.

Recommendation: It is recommended that the City number all single sourced and sole sourced purchases > \$10,000 to ensure appropriate tracking and follow-up analysis can be performed. For all single sourced and sole sourced purchases, the individual submitting the request should be required to complete a template form to ensure appropriate documentation is obtained to evidence the reasoning for single sourcing or sole sourcing the purchase and to ensure appropriate levels of authorization are obtained. Furthermore, the City should investigate performing an annual analysis of all single sourced and sole sourced purchases to review the amount of expenditures being completed in this manner and the results should be reported to City Council.

Action Plan Lead:

Manager of Purchasing and Supply

Expected Target Date:

March 31, 2012

Status:

Open

Appendix H - Summary of findings - BMO Centre
Project (Soccer Dome)

Summary of Findings

Auditable Areas: BMO Centre Project (Soccer Dome)

Rating Scale:

<i>Satisfactory</i>	Controls are present to mitigate process/business risk and are operating effectively and efficiently.
<i>Needs Improvement</i>	Existing controls may not mitigate process/business risk and management should consider implementing a stronger control structure.
<i>Unsatisfactory</i>	Control weaknesses are significant. Overall exposure is unacceptable. Requires management's immediate attention and oversight.

Project Liaison Role Assignment

Rating: Needs Improvement

Situation: A Project Liaison should be in place for the entire length of the project to monitor the project's process on behalf of the City of London (the City) and act as the City's point of contact for all parties involved. This was attempted for the BMO Soccer Dome project; however, due to retirements and other movements, the role became unclear.

Business Impact: A potential risk exists that information is not being communicated to the City from the General Contractor and Consultants when a Project Liaison is not in place.

Furthermore, a potential risk exists that projects may not be completed efficiently and in line with planned timelines and budget without a designated Project Liaison acting as the main point of contact for the City.

Recommendation: It is recommended that the City assign an individual to the Project Liaison role for projects going forward, as well as a Secondary Project Liaison to back-up the Project Liaison in the case of illness or absence.

Appropriate clauses within the project contracts should be included to ensure the Project Liaison is permitted to communicate with the General Contractor and Consultants at any time throughout the project.

Action Plan Lead: City Treasurer and Chief Financial Officer
Timing: June 30, 2012
Status: Open

Collaboration with Environmental Consultants

Rating: Satisfactory

Situation: After assignment of the Environmental Consultants, the City was not sufficiently involved to ensure that risk assessment activities were in agreement with the City’s expectations for the due diligence process.

Business Impact: A potential risk exists that a conflict may arise between the expectations and objectives of the City and those of third party Environmental Consultants. The project due diligence may not be completed in line with environmental or City requirements.

Recommendation: It is recommended that the City’s Project Liaison work in collaboration with third party Environmental Consultants during the risk assessment phase.

The City’s Project Liaison should receive regular updates from Environmental Consultants.

Action Plan Lead: City Engineer
Timing: June 30, 2012
Status: Open

Formal Sign-off of Due Diligence Procedures

Rating: Satisfactory

Situation: A formal policy is not in place requiring the City to sign-off on the results of the Environmental Consultant’s risk assessment process and results to evidence that the due diligence procedures have met City expectations and objectives.

Business Impact: A potential risk exists that detailed budgeting and project planning activities may commence prior to ensuring that sufficient due diligence procedures have been performed by Environmental Consultants.

Recommendation: It is recommended that the City provide final sign-off of the Environmental Consultant’s risk assessment process to ensure the City’s objectives have been met prior to commencing any detailed budgeting or project planning activities for future brownfield site developments. This recommendation should be incorporated within formal process documentation.

Action Plan Lead: City Engineer
Timing: June 30, 2012
Status: Open

Determination of Remediation Costs

Rating: Satisfactory

Situation: Estimates of remediation costs are not developed by utilizing probabilities of assessed risk factors for the site.

For example, the probability of a remediation cost arising would be impacted by the amount of time the site has been in use, the documented history of the site (if available), the previous issues noted at the site, the uncertainty involved with the site conditions, etc.

Business Impact: A potential financial risk exists that remediation cost estimates are not accurately developed, resulting in unplanned future expenses.

Recommendation: It is recommended that the City requests the Environmental Consultant to assign probabilities to each type of remediation cost in their detailed risk assessment report.

The City should consider these probabilities in determining the expected remediation costs of the site and the project budget for future brownfield projects and should incorporate this recommendation within formal process documentation.

Action Plan Lead: City Treasurer and Chief Financial Officer and City Engineer
Timing: June 30, 2012
Status: Open

Defined Reporting Structure

Rating: Needs Improvement

Situation: A clear reporting structure has not been defined to ensure that periodic status and financial updates are provided from the General Contractor to the Project Liaison where the contractor is hired by a third party.

Business Impact: A potential risk exists that projects may not be executed efficiently or effectively if a defined communication structure has not been determined.

Recommendation: It is recommended that the City implement a reporting structure within project contracts for future brownfield site developments whereby the General Contractor reports to the Project Liaison on a periodic basis to provide a status and financial update for the entire project.

For example, time delays, budget overages and project issues should be communicated to the Project Liaison in a timely manner to facilitate timely reporting of issues to City management and Council and to ensure efficient completion of the project.

Prior to reporting to the Project Liaison, the General Contractor should be responsible for obtaining the appropriate information and updates from all Sub-Contractors and Consultants in order to provide a robust and complete report to the Project Liaison.

The City should include appropriate clauses within project contracts to provide the City with the right to refuse inappropriate expenditures.

Action Plan Lead:
City Treasurer and Chief Financial Officer
Timing:
June 30, 2012
Status:
Open

Periodic Reporting to City Council

Rating: Satisfactory

Situation: There is no formal requirement for project updates to be regularly communicated to City Council.

For example, time delays, budget overages and project issues are not required to be formally communicated to City Council on a periodic basis.

Business Impact: A potential risk exists that City Council may not be fully informed regarding project status in a timely manner.

Recommendation: It is recommended that the Project Liaison be required to provide a project status report to City Council on a periodic basis in accordance with a specified timeline.

City Council should be requested to approve any additional remediation costs incurred or additional estimates through the current purchase approval processes.

Action Plan Lead: City Treasurer and Chief Financial Officer
Timing: June 30, 2012
Status: Open

Project Debrief Meetings

Rating: Satisfactory

Situation: As the BMO Soccer Dome project is not yet complete, formal meetings have not yet been held among all parties involved in the project to debrief the overall effectiveness of the project and lessons learned.

Business Impact: A potential risk exists that successes and lessons learned during the project will not be considered in future projects.

Recommendation: It is recommended that a formal meeting is held at the completion of each significant project which would allow all City officials and third parties involved to discuss the overall effectiveness of the project (i.e. what went well, what went wrong, what could have been improved, etc.).

These individuals should include the Project Liaison, Finance, Engineering, Environmental Consultant, General Contractor, other Consultants, etc. This recommendation should be incorporated within formal process documentation.

Action Plan Lead: City Treasurer and Chief Financial Officer
Timing: June 30, 2012
Status: Open

Standardized Agreements

Rating: Satisfactory

Situation: The scope of the relationship between the City and the General Contractors has not been formally documented in standardized agreements.

Business Impact: A potential risk exists that the limit of the City’s liability in development arrangements has not been clearly documented.

Recommendation: It is recommended that formal agreements are developed to standardize the relationship between the City and the General Contractors, including roles and responsibilities, reporting requirements and any limits to the City’s liability.

Action Plan Lead: City Treasurer and Chief Financial Officer
Timing: June 30, 2012
Status: Open

**Appendix I - TSD IT Governance & JDE IT General
Controls Review - Internal Audit Findings**



*TSD IT Governance &
JDE IT General Controls
Review*

Internal Audit Findings

The Corporation of the City
of London

October 2011

Contents

- Scope of Work
- IT Governance Review Findings
- JDE IT General Controls Findings

Scope of Work

Scope of IT Governance

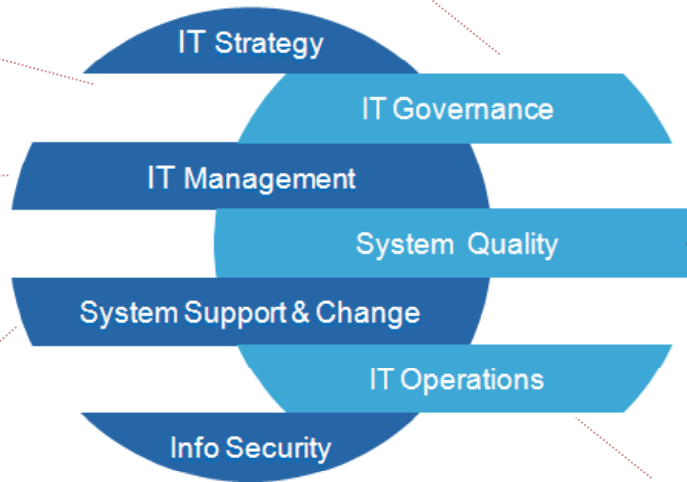
The scope was to review the effectiveness of the current TSD IT Governance structure and their ability to manage, control and monitor IT activities.

Out of the 36 key IT focus areas, we have scoped in a sample of 11 areas for this review (refer to those in bold).

- **IT Strategy**
- **Decision making**
 - Emerging technology
 - Sustainability/Green IT
 - ERP strategy
 - Centralization and standardisation
- **Governance structure**
- **IT policies and standards**
 - Cost and charge back
 - IT risk management
- **IT compliance**
- **IT performance management**

- IT management information
- **Project portfolio/program management**
 - People management
 - Third party management
 - Software licensing
 - Hardware asset management

- **Systems support capability**
 - Changes management process
 - Promotion (and access) to live



- **Security management**
 - Security awareness and training
 - Identity and access management
 - Monitoring unusual and privileged access
 - Threat and vulnerability management
 - Data loss prevention

- Systems quality and business intelligence
- Data quality
- End-user computing
- **Project management and benefits realisation**
 - Acquiring and developing new technology

- Physical data centre security
- Service delivery and problem management
- **Disaster recovery and continuity**
 - Data retention

Scope of ITGC for JD Edwards

JD Edwards IT General Controls

The following IT General Control domains were assessed

- User administration
- Logical security
- Operating system security
- Database security
- Back-up and restore operations
- Incident management
- Change management (application and database)

IT Governance Review Findings

Section 1 : Strategic Decision-Making

Area	Current State	Area for Improvement	Action Plan
IT Strategy	<ul style="list-style-type: none"> IT strategy is being developed to align with business strategy. 	<ul style="list-style-type: none"> To develop a formal IT strategy that is approved by senior management and IT steering committee. To have the strategy widely communicated and understood. To align the IT strategy with stakeholder priorities and business objectives. 	<ul style="list-style-type: none"> TSD is currently developing a formal IT Strategy The strategy will be presented to both SMT and Council, as well as to all TSD staff Alignment with corporate objectives is a key component of the strategy
Decision making	<ul style="list-style-type: none"> Stakeholders that are involved in key decisions are well defined and understood. Management has an understanding of the key decisions that drives IT and business strategy. 	<ul style="list-style-type: none"> To define a RACI chart for critical decisions showing the stakeholders who are responsible and accountable, who are consulted during a decision and those who are informed about decisions. 	<ul style="list-style-type: none"> Our Enterprise IT Governance model will address the overall decision making

Section 2 : IT Governance

Area	Current State	Area for Improvement	Action Plan
Governance Structure	<ul style="list-style-type: none"> • Governance structure is being defined with proper mandate, roles and responsibilities to make decisions. • The governance bodies have been operating for less than a year and have not fully matured yet. • Communication is taking place on a regular basis; however the scope, function and operating principles of the governance bodies are still being developed. 	<ul style="list-style-type: none"> • To have the mandate, roles and responsibilities for the governance structure to be known to everyone. • To have the scope, function, and operating principles of governance bodies widely communicated and understood by everyone. 	<ul style="list-style-type: none"> • Once the Governance Structure is fully defined, a communication plan will be developed to ensure that all appropriate staff are informed of the roles, responsibilities, scope, function and principles

Section 2 : IT Governance

Area	Current State	Area for Improvement	Action Plan
IT Policies and Standards	<ul style="list-style-type: none"> • Some policies or standards exist within the organization but most of them require updating. • Informal process of communicating IT policies and standards across the group. 	<ul style="list-style-type: none"> • To develop IT policies and standards that are mostly aligned to strategy and best practices. • To have a process to maintain and update the policies and standards up to date. 	<ul style="list-style-type: none"> • Some policies, procedures and standards within TSD are being updated. Others are on a roadmap to be created and/or updated. Corporate policies relating to IT are being updated working with HR and Legal
IT Compliance	<ul style="list-style-type: none"> • Management has a clear understanding of its legal/other obligations. • Processes to support compliance are in place for most of the compliance needs. 	<ul style="list-style-type: none"> • To have in place a formal and robust compliance management processes and roles and responsibilities clearly defined . • To have all the relevant statutory, regulatory and contractual requirements explicitly defined and documented for each information system. 	<ul style="list-style-type: none"> • This will be a project that will likely begin in 2012 with the assistance of an external resource

Section 2 : IT Governance (cont'd)

Area	Current State	Area for Improvement	Action Plan
IT performance management	<ul style="list-style-type: none"> • Only a limited service level agreements (SLA) have been agreed with the business. • IT performance is now being measured and monitored but not fully operationalised. • No formal capacity planning process is in place. 	<ul style="list-style-type: none"> • To define the IT performance measurement and monitoring with roles and responsibilities formally defined and agreed. • To have in place formal periodic performance meetings with the business to discuss the current TSD performance. • To have capacity planning aligned with business demands and requirements. 	<ul style="list-style-type: none"> • TSD is committed to Continuous Service Improvement and is implementing ITIL to effect this. • A Balanced Scorecard and KPIs will be developed to measure and report on IT performance

Section 3 : IT Management

Area	Current State	Area for Improvement	Action Plan
<p>Project Portfolio/ Programme Management</p>	<ul style="list-style-type: none"> • IT projects often run late and require additional resources. • Recognition that a formal approach is required to manage the portfolio of systems. • Business representatives through customer relationship and IT share responsibility for managing the project portfolio. • Project / Program managers are in place to understand and report on the status of overall programmers of activity. 	<ul style="list-style-type: none"> • To review the project portfolio at key milestones and events. • To have a process where the impacts of dependencies between projects are acted on to a resolution or clarity. • To set up clear responsibility and accountability for the success of the portfolio that is measurable and is shared between business and IT. 	<ul style="list-style-type: none"> • A PMO has been established. • The PMO uses formal processes to manage the portfolio of projects • While some measurements are in place, others need to be added • Reporting on projects is in place • All of the above are still in their infancy and need to mature

Section 4 : System Quality

Area	Current State	Area for Improvement	Action Plan
<p>Project Management and Benefits Realization</p>	<ul style="list-style-type: none"> • Business cases for projects are authorized, but benefits are informally defined. • Weak project management (inadequate plans or poor assumptions, projects run late and require additional resources). • In some cases, IT projects are perceived as unsuccessful by the business and new systems often have gone live with issues. • Lack of business involvement. 	<ul style="list-style-type: none"> • To define key performance indicators for each benefit and benefit realization post-implementation is formally measured. • To manage and resource all the projects based on their criticality, complexity and priority. • To set up regular formal project milestone reporting. • To set up a process to evaluate and assess lessons learned from problematic projects and implement the appropriate corrective actions on future projects. 	<ul style="list-style-type: none"> • Clearly define benefits for each project – add this to project approval requirements • A corporate IT Governance Committee will be put in place to prioritize projects • Every project has a Lessons Learned item at the end. This must be completed before project closure • Business is involved but not always engaged

Section 5 : System Support

Area	Current State	Area for Improvement	Action Plan
Systems Support Capability	<ul style="list-style-type: none"> • There is very little systems documentation at all for the majority of systems. • There is a dedicated team responsible for the support of the key systems. The team has relevant skills, but is under-resourced. 	<ul style="list-style-type: none"> • A dedicated team supports the key systems. The team is well resourced and generally have significant 'hands on' experience in the support of such systems. • Good up-to-date systems documentation for most systems. 	<ul style="list-style-type: none"> • Create a documentation plan • Examine the need for resource alignment

Section 6 : IT Operations

Area	Current State	Area for Improvement	Action Plan
Disaster Recovery and Continuity Planning	<ul style="list-style-type: none"> • Backups are made for major systems, but they may not be routinely tested. • DR (Disaster Recovery) and BCP (Business Continuity Plan) plans are under development. 	<ul style="list-style-type: none"> • To define the backups and restore policy that describe the requirements for all systems. • To setup a process where backups are periodically tested to check that they contain the right information and that this can be restored when required. • To have the DR and BCP plans updated and tested on a periodic basis. 	<ul style="list-style-type: none"> • Document backup and restore procedures • Regularly test restores outside of the normal restore process that occurs daily • DR and BCP plans need to be created first

Section 7 : Information Security

Area	Current State	Area for Improvement	
Security Management	<ul style="list-style-type: none"> • Budgets and plans for information security management are prepared annually and reviewed through year. • Information security policy is being developed. • There is no information security strategy and information risk assessments are not conducted. • There is no checks of compliance with policy and there is no formal reporting of the status of information security projects/initiatives. 	<ul style="list-style-type: none"> • To have the information security policy approved and supported by detailed standards and guidelines. • To have the security strategy signed off by senior management and information risk assessments is formalized and is assessed at least on an annual basis. • Security audits are to be held to ensure compliance. 	<ul style="list-style-type: none"> • Create necessary standards and guidelines after security policies have been finalized • Security Strategy will be included in IT Strategy which will be approved by senior management • A number of procedures and processes are in place to check compliance. These will be added to and/or refined • Reporting is done on a monthly basis on security projects and initiatives

JDE IT General Controls Review Findings

JDE IT General Control Review

ITGC Area	Observations	Recommendations	Action Plan
Roles and Responsibilities [ITGC 1]	<ul style="list-style-type: none">No formal description of role and responsibilities related to IT Functions; however staff interviewed are aware of their current role and responsibilities within the TSD.	<ul style="list-style-type: none">To consider defining the roles and responsibilities for each key role and communicate in a defined manner.	<ul style="list-style-type: none">We are currently undergoing a full re-organization of TSD. This will include descriptions of roles and responsibilities for each function.

JDE IT General Control Review (cont'd)

ITGC Area	Observations	Recommendations	Action Plan
Logical Security [ITGC 4]	<ul style="list-style-type: none"> 37 active JDE users have more than 1 user ID which give them access to either more than 1 role or environment and as such there is a high risk that segregation of roles and access to different JDE environments becomes complex to maintain. 	<ul style="list-style-type: none"> To review the process of creating multiple user IDs to ensure that these do not result in failures in segregation of roles and access to environments. 	<ul style="list-style-type: none"> During the JDE upgrade, we will migrate to role based security. This will remove the need for a handful of staff that have two Prod accounts. These situations are well known, and the person's name has been used on both ID's for easy identification.

JDE IT General Control Review (cont'd)

ITGC Area	Observations	Recommendations	Action Plan
<p>Logical Security [ITGC 5, ITGC 13, ITGC 15, ITGC 21]</p> <p>Database Security [ITGC 8]</p>	<ul style="list-style-type: none"> • 2 DBAs have super-user application access to all the 3 JD Edwards environment. • CyberArkAdmin group has DBA access to the JD Edwards database as they have access to the DBAADM safe. 	<ul style="list-style-type: none"> • To limit the super user access at the application level to only the CNC Administrators and that at the database level to the DBAs only. • To limit the network privilege access and database administrator access to the appropriate personnel only. 	<ul style="list-style-type: none"> • Remove access for DBAs • Review with CNC, DBA, and TSD Management. Combine with database logging.

JDE IT General Control Review (cont'd)

ITGC Area	Observations	Recommendations	Action Plan
Logical Security [ITGC 5, ITGC 8]	<ul style="list-style-type: none"> No process to review super-user access on a periodic basis; such review should include DBAs, server administrators, domain administrators. 	<ul style="list-style-type: none"> To consider reviewing the database, server and domain administrators access rights on a periodic basis to ensure that access remain appropriate. 	<ul style="list-style-type: none"> A review will be completed annually
Database Security [ITGC 10]	<ul style="list-style-type: none"> No process in place to review transactions and activities of super-user at the application level on a periodic basis The database audit logging is not turned on to monitor DBAs transactions and activities. DBAs are using generic user ID to login the database for database administration. 	<ul style="list-style-type: none"> To review on a periodic basis the transactions or activities performed by super-users and investigate any unexpected items. To consider tracking the DBAs activities through logging and review the log on a periodic basis and investigate any unexpected items. To consider assigning unique user IDs to each DBA in order to trace accountability and to review the password parameters to comply with the company policy. 	<ul style="list-style-type: none"> An audit style review will be completed periodically Database audit logging affects performance. We will review tools that may assist This will be reviewed and implemented where practical

JDE IT General Control Review (cont'd)

ITGC Area	Observations	Recommendations	Action Plan
Change Management Process [ITGC 18, ITGC 19, ITGC 21]	<ul style="list-style-type: none"> There is no process in place to provide a complete list of all datafix changes completed during the review period. The "Database Action Request" form which is used to document datafix changes is not sequentially numbered. 	<ul style="list-style-type: none"> To set up a process to review all the objects that were checked in on a periodic basis to ensure that they are appropriate. To consider tracking the logging of the DBAs transactions and activities and reconcile them with the relevant Database Action Request on a periodic basis. 	<ul style="list-style-type: none"> A report will be developed to track base objects that have been checked into Prod. The report will be run on a semi-annual basis. All database change requests follow a formal process and the signed requests are stored centrally within TSD. Once a DB change is completed, the logs are sent to all stakeholders. Any improvement on this process is directly tied to our ability to add DB logging for specific users – see item ITGC10

JDE IT General Control Review (cont'd)

ITGC Area	Observations	Recommendations	Action Plan
Back-up and Restore Process [ITGC 22]	<ul style="list-style-type: none"> • There is no formal backup and restore policy and procedure document. • There is no document that describes the criticality of the JD Edwards data (both application and database) in order to determine the risk and the appropriate backup and restore policy that would mitigate the risk. • Escalation process with regard to backup failures is not documented. No evidence showing that operation team has escalated and resolved backup failures. 	<ul style="list-style-type: none"> • To formalize the backup and restore policy for each of the critical data components. • To set up procedures to log evidence of review of backup logs and the escalation of any backup errors and their resolution. 	<ul style="list-style-type: none"> • Some documentation exists with regards to backups before upgrades, updates etc • Create formal risk assessment for JDE backup and restore • Backups are monitored by Data Centre staff already • Create escalation process

JDE IT General Control Review (cont'd)

ITGC Area	Observations	Recommendations	Action Plan
Incident Management [ITGC 23]	<ul style="list-style-type: none"> • No formal incident management policy. • No process in place to monitor open calls/tickets 	<ul style="list-style-type: none"> • To formalize the incident management policy describing the escalation and remediation procedure. • To consider set-up monitoring of open calls/tickets procedure on a periodic basis to ensure that tickets/calls are closed on a timely basis. 	<ul style="list-style-type: none"> • Create Incident Management program through ITIL. JDE will be a part of the total Incident Management program. • CNC staff monitor open calls effectively. Process needs to be documented.

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