

## 1ST REPORT OF THE

### AUDIT COMMITTEE

Meeting held on December 7, 2011, commencing at 3:00 PM, in Committee Room #3, Second Floor, London City Hall.

**PRESENT:** Councillor P. Hubert (Chair), Councillors M. Brown, N. Branscombe and J. Swan, and W. DeShane and B. Westlake-Power (Secretary).

**ALSO PRESENT:** M. Hayward, P. McNally, J. Barber, J. Braam, B. Brock, D. Dhair (PwC), J. Edward, B. Edwards (PwC), J. Freeman, A. Gilliam, S. Houde, D. Ikeno, C. Shah (PwC), T. Thompson, R. Welker, B. Whitelaw and B. Winther.

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#### I. DISCLOSURES OF PECUNIARY INTEREST

1. None are disclosed.

#### II. SCHEDULED ITEMS

2. Election of Chair and Vice Chair for the term ending November 30, 2012

Recommendation: That Councillor Paul Hubert **BE ELECTED** Chair and Councillor Matt Brown **BE ELECTED** Vice Chair of the Audit Committee for the term ending November 30, 2012.

#### III. CONSENT ITEMS

3. 4th Report of the Audit Committee

Recommendation: That the 4th Report of the Audit Committee from its meeting held on September 29, 2011 **BE RECEIVED**.

#### IV. ITEMS FOR DIRECTION

4. PricewaterhouseCoopers, Internal Auditors - Quarterly Report on Internal Audit Results

Recommendation: That the following actions be taken with respect to the attached Quarterly Report on Internal Audit Results from PricewaterhouseCoopers:

- a) Procurement Bid Process Internal Audit Project –
  - i) the current policies and practices with respect to approved suppliers and potential blocking of suppliers from bidding on projects **BE REVIEWED**; and
  - ii) the Observations and Action Plans included in the above-noted report from PricewaterhouseCoopers **BE IMPLEMENTED**; it being noted that the recently-adopted Procurement Policy incorporates some of these recommendations;
- b) Brownsfield Site Development –
  - i) the Civic Administration **BE DIRECTED** to provide an update to the Audit Committee with respect to the previous confidential reports related to an ethics hotline; and
  - ii) the Action Plan included in the above-noted report from PricewaterhouseCoopers **BE IMPLEMENTED**;
- c) TSD IT Governance - the Action Plan included in the above-noted report from PricewaterhouseCoopers **BE IMPLEMENTED**; it being noted that a further report back to the Audit Committee with respect to implementation of this Action Plan was requested;

- d) JD Edwards IT General Controls - the Action Plan included in the above-noted report from PricewaterhouseCoopers **BE IMPLEMENTED**; and
- e) the proposed Internal Audit Schedule for 2012, as outlined by PricewaterhouseCoopers **BE APPROVED**.

**V. DEFERRED MATTERS/ADDITIONAL BUSINESS**

None

**VI. ADJOURNMENT**

The meeting adjourned at 4:40 p.m.

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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

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**#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



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## 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 policies 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

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- 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

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**#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

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**#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

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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