

## Appendix A – CA-01-19

### Inherent Risk Assessment Methodology for Services

Approved by Council CC-13-15

#### Risk Factors and Associated Criteria

The audit work plan is established based on the assessment of risks and exposures in City services. The assessed risk is "inherent risk"; that is, the total risk absent of controls or raw risk. The level of inherent risk (as determined through risk factors) is used to ensure significant risks are addressed and there is effective use of audit resources.

#### Inherent Risk Factors

Risk factors include quantitative and qualitative criteria and attributes used to identify areas of City services that would benefit most from an internal audit. Inherent risk is determined by considering all the factors; not just an individual factor. However, not all factors are considered equal. A weighting is applied to each factor to reflect their relative importance which is a matter for judgment based on business practices, legislation and regulations, and the strategic plan. Also, criterion that does not apply to areas will not be considered in the overall factor ranking.

There are many risk factors that can be used in assessing inherent risk. For example, quantitative criteria may include: size of the budget and payroll, number of employees, value of capital equipment, the time elapsed since the last audit, client satisfaction, and extent of partnering/alliances. Qualitative criteria may include: areas of concern to management, possibility of adverse publicity, complexity of IT infrastructure, the effect of governmental or other regulations, technological innovation and information integrity.

The inherent risk factors must be tailored to the City and its operating environment.

#### Calculating the Overall Inherent Risk Ranking

The overall inherent risk ranking is calculated using the following formula:

OVERALL INHERENT RISK RANKING SCORE =  $\Sigma$ (INHERENT RISK ATTRIBUTE RANKING SCORE x FACTOR WEIGHTING)

Risk assessed audit entities will be listed from highest to lowest score.

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The following table contains the factors and a set of attributes for each criterion to assist in assessing the inherent risk of the service and/or sub-service.

## Inherent Risk Factors and Criteria for Services

Factor (Weighting) & Criteria	Inherent Risk Attribute Ranking (Score)				
	Very High (100)	High (75)	Moderate (50)	Low (25)	Very Low (1)
<p><b>Complexity of Service Operations (30%)</b></p> <ul style="list-style-type: none"> <li>Nature of technology/equipment used in service delivery (e.g. sophisticated vs. simple)</li> <li>Nature of process (e.g. customized vs. routine)</li> <li>Staff involved in service delivery</li> <li>Nature of service delivery (e.g. decentralized vs. centralized)</li> </ul>	<ul style="list-style-type: none"> <li>Requires sophisticated technology/equipment with multiple interfaces</li> <li>Custom process for each transaction</li> <li>More than 30 people involved in delivering the service</li> <li>Decentralized service delivery across multiple (&gt;5) locations <u>AND</u> contracted services</li> </ul>	<ul style="list-style-type: none"> <li>Requires sophisticated technology/equipment with minimal interfaces</li> <li>Specialized process for majority of the transactions; routine process for less than a quarter of transactions</li> <li>22 - 29 people involved in delivering the service</li> <li>Decentralized service delivery across multiple (&gt;5) locations <u>OR</u> contracted services</li> </ul>	<ul style="list-style-type: none"> <li>Requires stand alone sophisticated technology/equipment</li> <li>Routine process for half of transactions; remaining transactions require exceptions to process "rules"</li> <li>11 - 21 people involved in delivering the service</li> <li>Delivered through 3 – 4 locations</li> </ul>	<ul style="list-style-type: none"> <li>Requires simple technology/equipment with few interfaces</li> <li>Routine process for three quarters of transactions; minimal exceptions to process "rules" required</li> <li>6 - 10 people involved in delivering the service</li> <li>Delivered through 2 - 3 locations</li> </ul>	<ul style="list-style-type: none"> <li>Requires standalone simple technology/equipment</li> <li>Routine process for all transactions (same process each time; no exceptions)</li> <li>1 - 5 people involved in delivering the service</li> <li>Centralized service delivery in one location</li> </ul>
<p><b>Materiality &amp; Susceptibility to Error/Fraud (25%)</b></p> <ul style="list-style-type: none"> <li>Gross revenue (excluding recovery from capital)</li> <li>Gross operating expenditures (including human resource costs and</li> </ul>	<ul style="list-style-type: none"> <li>&gt; \$400,000</li> <li>&gt; \$1,000,000</li> </ul>	<ul style="list-style-type: none"> <li>Between \$250,001 and \$399,999</li> <li>Between \$700,001 and \$999,999</li> </ul>	<ul style="list-style-type: none"> <li>Between \$100,001 and \$250,000</li> <li>Between \$350,001 and \$700,000</li> </ul>	<ul style="list-style-type: none"> <li>Between \$25,001 and \$100,000</li> <li>Between \$10,001 and \$350,000</li> </ul>	<ul style="list-style-type: none"> <li>&lt; \$25,000</li> <li>&lt; \$100,000</li> </ul>

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Factor (Weighting) & Criteria	Inherent Risk Attribute Ranking (Score)				
	Very High (100)	High (75)	Moderate (50)	Low (25)	Very Low (1)
excluding one-time project costs) • Transparency/openness to scrutiny  • Staffing levels  • Nature of Assets Used in Service Delivery (i.e. tangible/intangible, convertibility to cash)  • Involvement in known risk areas of misconduct <sup>1</sup>  • Dollar value of daily cash deposits	– One person responsible for tracking, reporting and monitoring  – Service is supported with less than 65% of full complement  – Liquid (e.g. cash includes cheques and debit/credit card, bonds, etc.)  – Involved in more than one of procurement/contracting, approvals/permits and licensing, by-law enforcement  – greater than \$5,001	– Limited number (1-2) of people involved in tracking, reporting and monitoring  – Service is supported between 65% and 75% of full complement  – Easily converted to cash (i.e. < 14 days); readily available market; highly liquid  – between \$2,501 and \$5,000	– Small group (3-4) of people involved in tracking, reporting and monitoring  – Service is supported between 76% and 89% of full complement  – Can be converted to cash (i.e. between 15 days and 29 days); market is specialized; somewhat liquid  – Involved in any of procurement/contracting, approvals/permits and licensing, by-law enforcement  – between \$1,501 and \$2,500	– Group (5-6) of people involved in tracking, reporting and monitoring  – Service is supported between 95% and 99% of full complement  – Difficult to convert to cash (i.e. 30 days); small market  – Not involved in any of procurement/contracting, approvals/permits and licensing or by-law enforcement  – between \$251 and \$1,500	– Larger number of people (6+) involved in tracking, reporting and monitoring  – Service is supported with full complement  – No cash value; not liquid  – less than \$250

<sup>1</sup> International Centre for Criminal Law Reform and Criminal Justice Policy, *Municipal “Best Practices”: Preventing Fraud, Bribery and Corruption* (Vancouver: ICCLR 2013) < <http://icclr.law.ubc.ca/sites/icclr.law.ubc.ca/files/publications/pdfs/Municipal%20Best%20Practices%20-%20Preventing%20Fraud,%20Bribery%20and%20Corruption%20FINAL.pdf>>

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	Very High (100)	High (75)	Moderate (50)	Low (25)	Very Low (1)
<p><b>Public Exposure (15%)</b></p> <ul style="list-style-type: none"> <li>Public/customer reaction</li> </ul>	<ul style="list-style-type: none"> <li>Public/customer reaction severe - City's profile raised within provincial boundaries</li> </ul>	<ul style="list-style-type: none"> <li>Public/customer reaction major - City's profile raised within GTA boundaries</li> </ul>	<ul style="list-style-type: none"> <li>Public/customer reaction considerable - City's profile raised within Regional boundaries</li> </ul>	<ul style="list-style-type: none"> <li>Public/customer reaction contained – City's profile raised within local boundaries</li> </ul>	<ul style="list-style-type: none"> <li>Public/customer reaction minimal - no effect on City's profile</li> </ul>
<p><b>Degree of Change (20%) (over last 12 months)</b></p> <ul style="list-style-type: none"> <li>Staff turnover (due to reasons such as retirement, leaves of absence, job rotations, etc.)</li> <li>Changes to service strategy and/or process (manual and/or automated)</li> </ul>	<ul style="list-style-type: none"> <li>More than 50% of all staff has changed in last year <b>OR</b> key person dependency/expertise required and has left/pending retirement within 3 months</li> <li>Totally new service strategy and/or delivery process</li> </ul>	<ul style="list-style-type: none"> <li>Between 30% - 50% of all staff have changed in last year <b>OR</b> small group (3-6) of knowledgeable people and 35% of group have left area</li> <li>Multiple/major changes to service strategy and/or delivery process</li> </ul>	<ul style="list-style-type: none"> <li>Between 20% - 30% of all staff have changed in last year <b>OR</b> large group (10+) of knowledgeable people and 20% of group have left area</li> <li>Small number changes to service strategy and/or delivery process</li> </ul>	<ul style="list-style-type: none"> <li>Between 10% - 20% of all staff have changed in last year</li> <li>Infrequent/minor changes to service strategy and/or delivery process</li> </ul>	<ul style="list-style-type: none"> <li>Less than 10% of all staff has changed in last year</li> <li>No changes to service strategy and/or delivery process</li> </ul>
<p><b>Financial Loss/Cost (5%)</b></p> <ul style="list-style-type: none"> <li>Potential loss/cost due to error, fraud, fines, litigation (e.g. settlements) and/or insurance claims</li> </ul>	<ul style="list-style-type: none"> <li>Unable to accommodate within budget</li> </ul>	<ul style="list-style-type: none"> <li>Able to accommodate within existing budget but only with service cuts and/or reserve funds</li> </ul>	<ul style="list-style-type: none"> <li>Able to accommodate within corporate budget</li> </ul>	<ul style="list-style-type: none"> <li>Able to accommodate within department budget</li> </ul>	<ul style="list-style-type: none"> <li>Little or no impact on budget</li> </ul>

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	Very High (100)	High (75)	Moderate (50)	Low (25)	Very Low (1)
<p><b>Non Compliance (5%)</b></p> <ul style="list-style-type: none"> <li>Laws and regulations (specific to the service (e.g. Planning Act for Community Design and Development Review Service, Municipal Act for Council and Citizen Committee Service, Highway Traffic Act for Transit Service, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Litigation; Prosecution; Criminal charges; Provincial intervention</li> </ul>	<ul style="list-style-type: none"> <li>Moratorium; Suspension and administrative monetary penalty</li> </ul>	<ul style="list-style-type: none"> <li>Suspension or administrative monetary penalty</li> </ul>	<ul style="list-style-type: none"> <li>Letter received – increased monitoring</li> </ul>	<ul style="list-style-type: none"> <li>Letter received, no impact</li> </ul>