



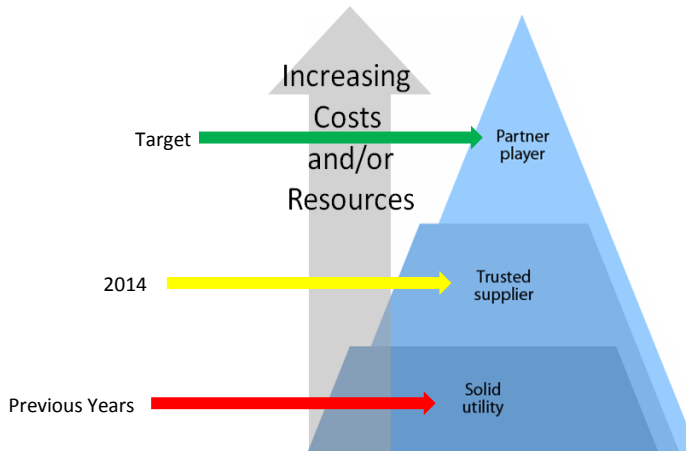
# Information Technology Annual Report For the year 2014

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## Introduction

**Vision:** “To transform the Information Technology Department from a solid utility to a partner player aligned with the business needs of the organization.”



**IT is integral to how we do business:** IT organization is expected to closely partner with the business to help identify, plan and deliver significant business transformation initiatives - plus be a trusted supplier.

**IT delivers critical functionality and services:** IT organization is expected to deliver application projects on time and on budget, based upon the operating units requirements and priorities - plus be a solid utility.

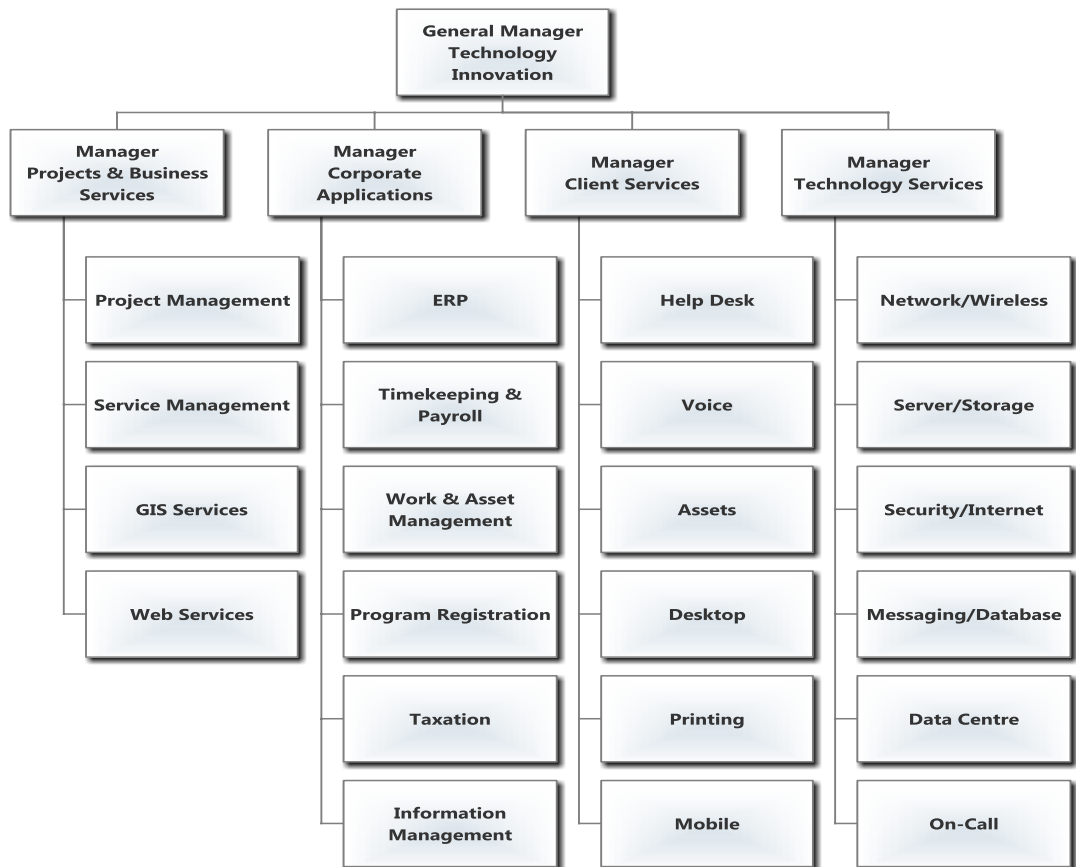
**Keep the lights on:** The IT organization is expected to provide cost effective-dial tone reliability with transparent costs.

### Mission Statement

“Enabling City departments to provide better service to the public through technology service and innovation”

### Organizational Structure

(Effective December 2014)



## Executive Summary

### Prelude

This is the fourth detailed IT Annual Report that also shows a summary of the previous three years. Its intent is to provide a snapshot of current progress, indicate positive or negative trends within key performance areas, and introduce new concepts for future direction on investment and use of technology. The report utilizes a number of sources to support the performance ratings including Industry Standards, Municipal Comparators, Best Practices, Maturity Models, and Previous Ratings.

The **Dashboard** visualizes overall performance with the use of intuitive gauges and a colour-coded table.

- Each gauge indicates the average performance of 18 KPIs (Key Performance Indicators). The previous three years performance has been provided for comparison.
- The table organizes the KPIs into four main categories; IT Governance, IT Service Delivery, IT Sustainability, and IT Innovation & Learning. These categories closely match the four pillars of the CTSP (Corporate Technology Strategic Plan).

The **Scorecard** adds more detail, including targets set for the future year. This is where you will see how the KPI is rated; as a level of maturity or as a percentage.

### Results

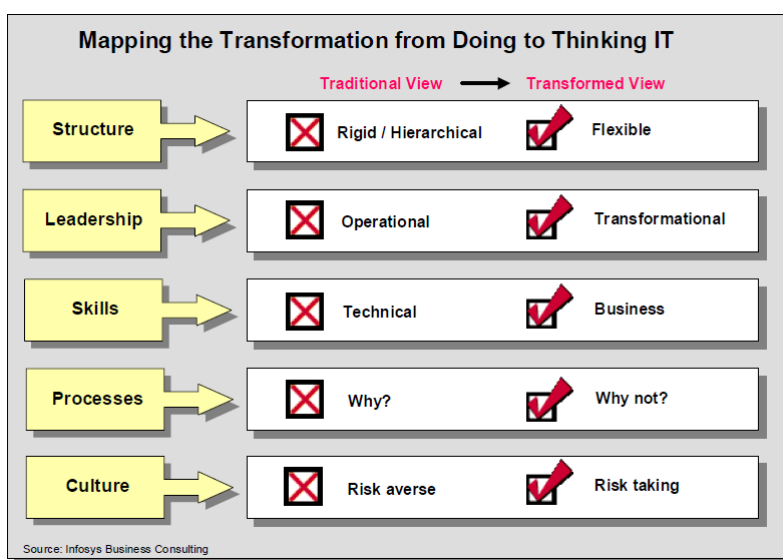
Based on the results provided in the report’s dashboard, the IT function at the City of Guelph has progressed from a “Solid Utility” to a “Trusted Supplier”. The improvements made in the delivery of projects, on-time and within budget, contributed to this designation. Positive results from the Customer Satisfaction Survey were also a major success factor. The department is well positioned to achieving its vision of becoming a “Partner Player” (Enabler of Technology), contributing to the success of all departments.

### The Transformation of IT

Becoming a “Partner Player” is the principle vision for IT. The transition to becoming an enabler of business is much more than simply providing each business unit with the technology they have scoped to enhance service levels and performance. At present, technology has the potential to drive business strategy. This means that IT must evolve from its current “Trusted Supplier” state to become an innovative catalyst within the City. IT must transition from serving primarily as an “operator” or as a “provider of technology” to play an “envisioning role” for the organization. This change will require a realignment of resources and a commitment to organizational leadership. There must also be a willingness and ability to adapt to ongoing change as well embrace and respond to risks associated with innovation. In short, IT must play four distinct roles within the organization – explore, engage, enable and evangelize.

As the illustration suggests, the transformation from a “doing” to a “thinking IT” requires a wholesale change to the legacy form and function of the department. The structure and skills within IT must be variable in order to maximize resources and positioned in such a way that they support the overall business. The culture of IT as an “operator” cannot be lost entirely, however, it must also provide effective leadership and an ability to support the transformation of the business. The concept of bimodal IT, provides for this balance – aspects of IT remain as a “Solid Utility”, while others focus on adaptation and innovation.

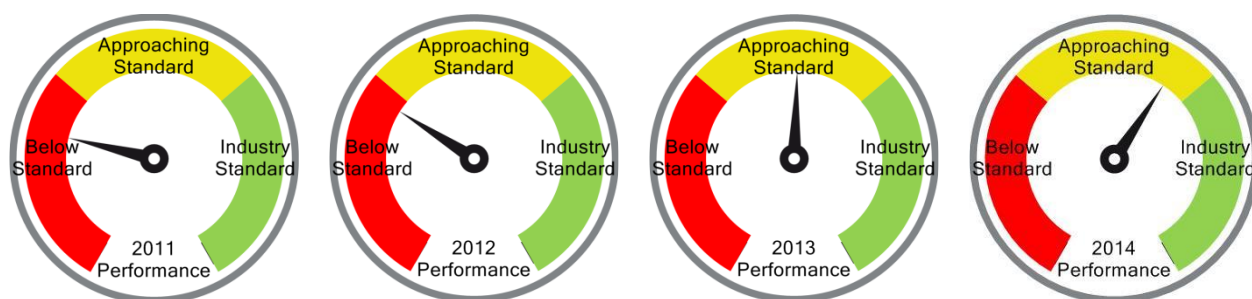
For IT to fully evolve into a “thinking” role, work must continue to augment several of the key performance indicators below. In 2015, a continuous improvement process will be established to ensure that the recommendations made in this report are tracked by way of an improvement register. This further commitment to ongoing performance management is a key to IT transformation. A functional realignment of the department will also take place in order to better align skills and resources. The transformation of IT will be an ongoing journey as a result of the environment being in a continual state of flux. IT, like the City at large, must constantly assess how best it can provide the maximum value to its customers and stakeholders, and transform itself to deliver this increased value.



## Information Technology Dashboard

As illustrated below by the Information Technology Dashboard, several KPIs (Key Performance Indicators) have been aligned into four categories to illustrate progress toward achieving the performance goals of the department. Items in the dashboard marked by **GREEN** indicate that the City of Guelph is reporting metrics that compare positively to industry standards. **YELLOW** and **RED** indicate items that are not currently in line with industry standards. PLUS and MINUS signs indicate the direction that these indicators are trending.

### Information Technology Dashboard 2014



<b>IT Governance</b>					<b>IT Service Delivery</b>				
	2011	2012	2013	2014		2011	2012	2013	2014
Strategic Alignment		+	+		Customer Satisfaction		+	+	
Business Value Delivery			+		Customer Engagement			+	+
Risk Management		+		-	IT Process Management		+		
Resource Management		+			Infrastructure Availability				
Performance Measurement				+					
<b>IT Sustainability</b>					<b>IT Innovation &amp; Learning</b>				
	2011	2012	2013	2014		2011	2012	2013	2014
Applications Management					Workforce Competency			+	
Project Performance	-	+			Strategic Technology Adoption				
Financial Management		+	+		Methodology Adoption				
Compliance				-	Employee Retention	+	+		+
Total Cost of Ownership (new KPI in 2013)									

## Information Technology Scorecard

<b>Governance</b>			
Measure	2014 Target	2014 Result	2015 Target
Strategic Alignment	Maturity Level 3	<ul style="list-style-type: none"> <li>Maintained Level 2, CTSP requires review and updating</li> </ul>	Maturity Level 3
Business Value Delivery	Maturity Level 3	<ul style="list-style-type: none"> <li>Achieved Level 2 (Basic), Business Value is evident but not tracked, require KPIs for both IT and business units</li> </ul>	Maturity Level 3
Risk Management	Maturity Level 3	<ul style="list-style-type: none"> <li>Maintained Level 2 (Developing), no IT Risk Manager, Risk Register requires updating</li> </ul>	Maturity Level 3
Resource Management	Maturity Level 2	<ul style="list-style-type: none"> <li>Exceeded the target and achieved Level 3 (Governed Capacity) for resource management</li> </ul>	Maturity Level 3
Performance Measurement	Maturity Level 2	<ul style="list-style-type: none"> <li>Achieved Level 1 (Beginner), identified more divisional KPIs, refined Annual Report, requires more focus on monitoring and analysis to move to a higher level</li> </ul>	Maturity Level 2
<b>Service Delivery</b>			
Measure	2014 Target	2014 Result	2015 Target
Customer Satisfaction	80%	<ul style="list-style-type: none"> <li>Exceeded target, 83.25% of all support calls completed within target times, FCR (First Call Resolution) was at 46.7% which is a 13% improvement over 2013</li> </ul>	85%
Customer Engagement	Maturity Level 2	<ul style="list-style-type: none"> <li>Maintained Level 2 (Progressive), collaborated with General Managers on their workplans and future strategic directions</li> </ul>	Maturity Level 3
IT Process Management	Maturity Level 2	<ul style="list-style-type: none"> <li>Maintained Level 2 (Repeatable) requires identification of process owners and comprehensive review of COBIT 5 processes.</li> </ul>	Maturity Level 3
Infrastructure Availability	99.90%	<ul style="list-style-type: none"> <li>Achieved an average availability of 99.78%, most downtime was from areas outside the department's control.</li> </ul>	99.90%
<b>Sustainability</b>			
Measure	2014 Target	2014 Result	2015 Target
Applications Management	Maturity Level 3	<ul style="list-style-type: none"> <li>Achieved target of Level 3 (Mature), completed major application assessments, reorganized Corporate Applications Division, plan to follow CTSP recommendations</li> </ul>	Maturity Level 3
Project Performance	100%	<ul style="list-style-type: none"> <li>99% of initial intake meetings were scheduled within 2 business days of submitting the request.</li> </ul>	100%
Financial Management	Maturity Level 3	<ul style="list-style-type: none"> <li>Achieved target of Level 3 (Defined), .8% variance on a 4.2M operating budget</li> </ul>	Maturity Level 3
Compliance	Maturity Level 3	<ul style="list-style-type: none"> <li>Did not meet target of Level 3 (Defined), a Compliance Manager needs to be appointed with a mandate to define external &amp; internal compliance requirements</li> </ul>	Maturity Level 3
Total Cost of Ownership	Maturity Level 3	<ul style="list-style-type: none"> <li>Did not meet target, limited progress, most calculations are basic and manually performed</li> </ul>	Maturity Level 3
<b>IT Innovation &amp; Learning</b>			
Measure	2014 Target	2014 Result	2015 Target
Workforce Competency	Maturity Level 3	<ul style="list-style-type: none"> <li>Maintained Level 3 (Defined), identified skills gap to support business needs, no P-CMM (People Capability Maturity Model) assessment performed</li> </ul>	Maturity Level 4
Strategic Technology Adoption	Middle of Adoption Cycle	<ul style="list-style-type: none"> <li>Limited progress, still focused on operational activities with limited budget for research and development/innovation</li> </ul>	Move closer to early adopter
Methodology Adoption	100% Compliance	<ul style="list-style-type: none"> <li>Limited progress, more staff trained on ITIL, added ISO security standard, requires methodology ownership to meet adequate level of integration</li> </ul>	100% Integration
Employee Retention	5% turnover	<ul style="list-style-type: none"> <li>Achieved a 6% turnover which is a significant improvement from 16% in 2013, employee engagement rose significantly</li> </ul>	5% turnover

## Key Initiative Summary for 2014

This is a summary of the department's key initiatives throughout the year 2014. It consolidates the 2014 CTSP initiatives, the 2014 IT Workplan, and major initiatives from the 2013 IT Annual Report.

CTSP Initiatives for 2014	Status	Comments
GIS Technology Plan	Completed	Completed the plan and presented to major stakeholders
GIS Upgrade	Completed	Upgrade GIS ArcPoint to latest version
Data Warehouse Plan	Completed	Production Infrastructure in place for several services
Eclipse Upgrade	Completed	Project and Portfolio management application moved to cloud based solution
ERP Financials Upgrade	Completed	JDE upgraded to version 9.1 and completed ERP-H/R assessment
Building Permit and Licensing	Completed	Upgraded Amanda to version 6 (Web-based) and completed process assessment
Transit Technology Plan	On Schedule	Installed network, server, wireless, and database infrastructure as per schedule
Mobile Device Management	On Schedule	Continued supporting existing fleet while piloting new management suites
Information Management Plan	In Progress	Records Information Management (RIM) scope updated
Help Desk Improvements	Delayed	Corporate engagement and some synthesis has been completed, however delivery is still in progress based on existing resource constraints
Collaboration Tools	On Hold	Lack of resources and budget, completed cost/functionality comparison
Major Initiatives from 2014 IT Workplan	Status	Comments
Voice Upgrade	Completed	Upgraded the City's VoIP phone system to the latest version
Guelph Hydro Phone System	Completed	Expanded our VoIP system to service Guelph Hydro at Southgate Road
2014 Municipal Election	Completed	Coordinated and deployed web, networking, and notebook computer needs
IT Annual Report	Completed	Prepared the yearly performance report for the year 2013
Active Directory Upgrade	Completed	Project closed July 2014, minor cleanup tasks completed late 2014
Building Security Upgrades	Completed	Replaced security system for City Hall, Courts, Waterworks, and River Run Centre
Initiatives from 2013 IT Annual Report	Status	Comments
Joint Wireless Phase 1	Completed	Phase 2 will continue in 2015 with corporate radio replacements
BYOD (Bring your own Device)	Delayed	Completed the draft BYOD policy, pilot delayed due to resources and funding
IT Business Continuity Plan	Delayed	New corporate framework requires completion first in early 2015
ITIL Change Management Process	On Hold	This will enhance service delivery, CTSP funding is scheduled for 2015
Email and File Archiving	On Hold	Infrastructure installed, require Electronic Data Retention Policy, continue in 2015
Content Indexing and Search	On Hold	Infrastructure installed, on hold due to lack of resources, review in 2015

## Detailed Performance Analysis

Preface: For each KPI a full explanation of what the indicator is measuring will be noted along with the current level of maturity/performance. This will be followed by the impact the current rating has on IT and the business. Lastly, there will be several recommendations for improvement noted which will be used to support continuous improvement efforts over the course of the year.

### Category: IT Governance

KPI: Strategic Alignment

Definition: A measure of how well the IT Strategic Plan aligns with the business objectives of organization.

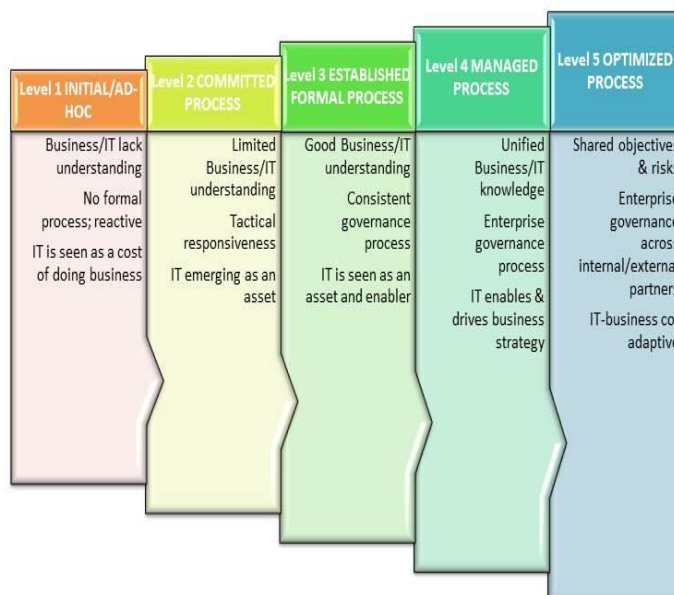
The IT Department qualifies for a Level 3 rating (Established Formal Process) for the strategic alignment performance indicator. A self-assessment was performed that considered the six IT-Business Alignment Criteria, Communication, Competency, Governance, Partnership, Skills, and Scope.

The impact of remaining at Level 3 will be missed opportunities for business units where technology is a key component. The IT Department will remain a trusted supplier but not reach its goal of becoming a partner player. Alignment is essential to ensure limited IT resources are assigned to corporate priorities.

*Recommendation 1:* Scope Phase 2 of the CTSP to reflect organizational and industry changes over the past 3 years, and to identify work to build on the foundation of Phase 1.

*Recommendation 2:* Create a learning opportunity for business leaders to understand the role of IT during strategic business planning.

### Strategic Alignment Maturity Summary



Source: Dr. Jerry N. Luftman, Global Institute for IT Management

### KPI: Business Value Delivery

Definition: A measure of how the services of IT can add value, aside from simply cost savings to the business.

The IT Department has progressed to maturity Level 3 (Intermediate) from Level 2 (Basic), when benchmarked against Martin Curley’s framework. Major projects like the Transit Technology Plan, GIS, and the Building Security Replacement certainly demonstrated value to City business units. The ability to design, build, and integrate goes beyond just a technology supplier.

Remaining as a technology expert will still not qualify the department as a “Partner Player” aligned with the business. There still remains the risk that business units will seek solutions without IT involvement. This results in acquiring technology that may not be the best fit or the most cost effective when it comes to implementation.

*Recommendation:* Define a common set of business value metrics that can be applied across all business units whenever IT is engaged for projects or service

Maturity Levels	Major Strategies			
	Managing the IT Budget	Managing the IT Capability	Managing IT for Business Value	Managing IT Like a Business
5. Optimizing	Sustainable Economic Model	Corporate Core Competency	Optimized Value	Value Centre
4. Advanced	Expanded Funding Options	Strategic Business Partner	Options and Portfolio Management	Customer/ Service Focus
3. Intermediate	Systemic Cost Reduction	Technology Expert	ROI & Business Case	Customer/ Service Orientation
2. Basic	Predictable Performance	Technology Supplier	TCO	Technology/ Product Focus
1. Initial		Beginning		

Source: Dr. Martin Curley, Intel

improvements.

**KPI: Risk Management**

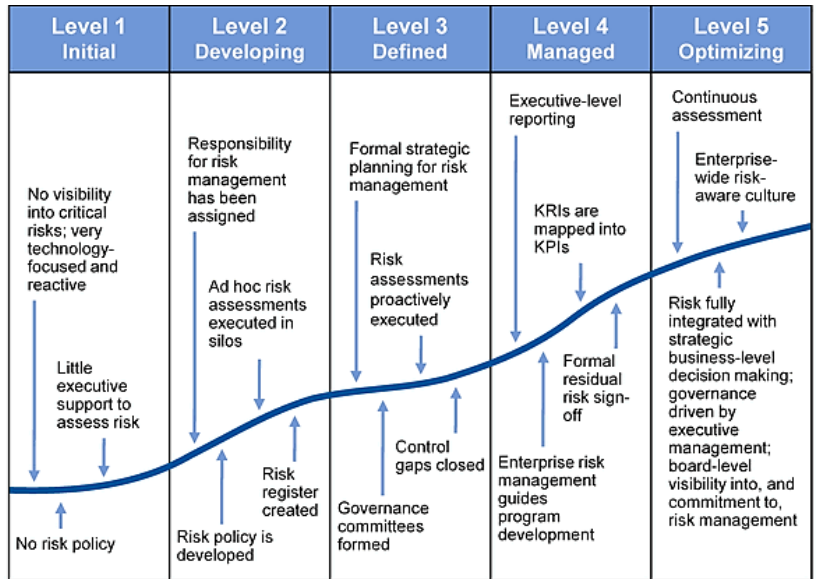
Definition: A measure of how effective the IT organization is at managing the risks associated with the use, ownership, operation, involvement, influence and adoption of IT within an enterprise.

The IT Department remains at Level 2 (Developing) which translates to a KPI rating of yellow on the dashboard. Because greater risks have been introduced with Cloud-based services and open-by-default policies, the KPI is trending in a negative direction.

There is a published ERM (Enterprise Risk Management) Framework that is controlled by our Internal Auditor. It includes risk categories, a risk matrix, and risk impact criteria. There is also a corporate level Risk Register. Since IT Risk Management is a subset of ERM, the department should follow the guidelines established at the enterprise level.

The impact of remaining at Level 2 is that the process remains loosely coupled with no ownership. Other than the yearly IT Audit, there are no centralized controls to address risk management.

Overview of ITScore Maturity Levels for Risk Management



Source: Gartner (September 2010)

*Recommendation 1:* Develop an IT Risk Manager function within the department.

*Recommendation 2:* Update the IT Risk Register that rolls up to the Enterprise Risk Management level.

**KPI: Resource Management**

Definition: A measure of how effective IT management is at balancing capacity with demand for operational needs and project resourcing.

The IT Department was rated at Level 3 of Oracle Corporation’s RMMM (Resource Management Maturity Model) which translates into a dashboard rating of green.

In 2014, IT moved to the latest version of their PPM (Project & Portfolio Management) software which provides resource approval workflow. There is also a formal project prioritization process in place.

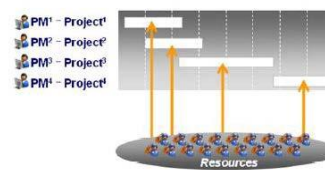
The impact of remaining at this level is minimal. Oracle states for Level 3: “Based on priority and resource availability information, the governance body can dynamically launch, suspend, delay, and/or cancel projects to balance capacity with demand.” Oracle also feels that Level 3 is the sweet spot for many organizations because it assigns resources at the project level rather than at the WBS (Work Breakdown Structure) level.

*Recommendation 1:* In 2015, all IT management and staff time should be entered into the PPM software.

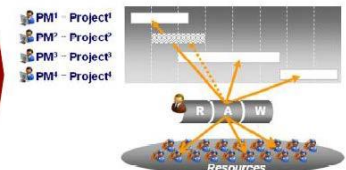
*Recommendation 2:* Exploit the enhanced reporting capabilities of the PPM software for better visibility and decision making by the governing body.

**RMMM Pictorial Summary**

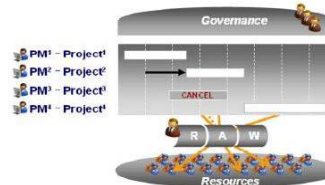
**At Level 1** there is a uncontrolled resource grab



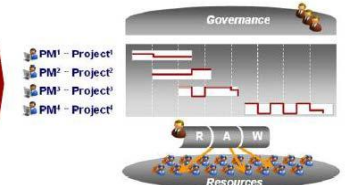
**Level 2** introduces a resource approval workflow



**At Level 3** a governance body considers project priority



**Level 4,5** considers project activity-level demand

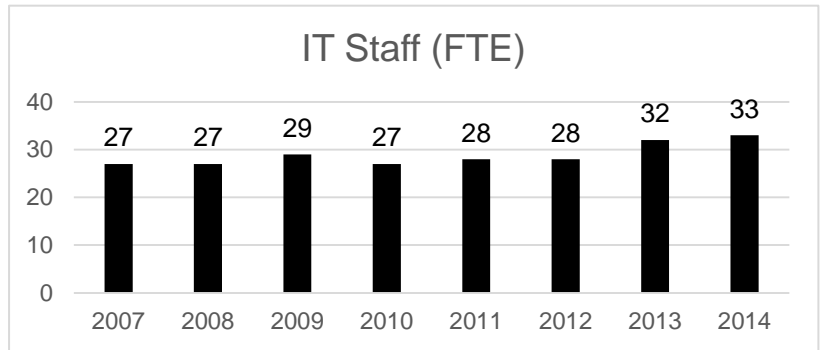


Source: Oracle Corporation Feb 2013



**Staffing levels** were increased in 2014 with the addition of 1 FTE (Full Time Equivalent) which was approved by Council during the 2014 budget process. This FTE completes the department’s ability to successfully support the City’s corporate applications as recommended in the CTSP.

In 2014 there were several FTE requests made including a Server Specialist, Asset Control & Mobility Specialist, GIS Program Manager, and a full time Administrative Assistant. These are needed to reduce bottlenecks and free up management time.



Growth of IT staff over last 9 years Source: Internal – IT Management

**KPI: Performance Measurement**

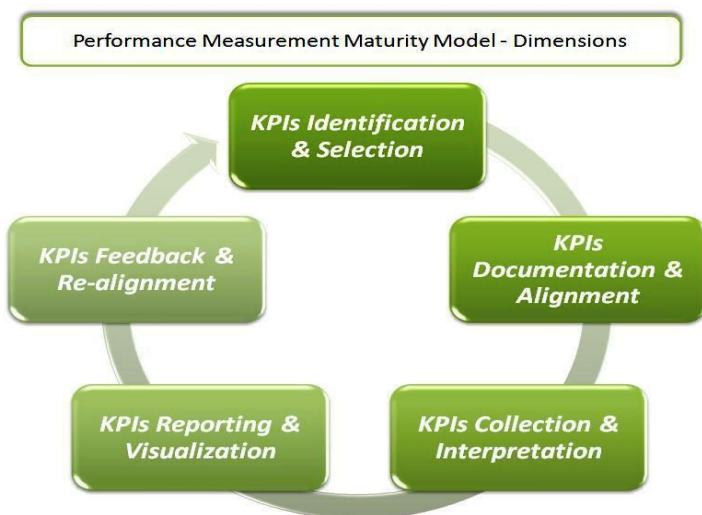
**Definition:** The effectiveness of IT management to identify, collect, and report on performance metrics relevant to the services they provide.

The IT Department made minor progress but remains at the novice stage of performance measurement. It is rated at the lower part of Level 2 (Beginner) using SmartKPI’s maturity model. This translates into a KPI rating of Red on the IT dashboard with trending in a positive direction. Although the department is diligent with the IT Annual Report, it continues to formally track mainly “Utility Provider” statistics from various divisions within IT.

The impact of remaining at the beginner level will be the inability to measure key performance and key risk indicators beyond the IT Annual Report. The saying “If you can’t measure it, you can’t manage it” rings true, especially for a department so essential to business success. Measurement and reporting will remain a manual process and provide only a yearly view of performance.

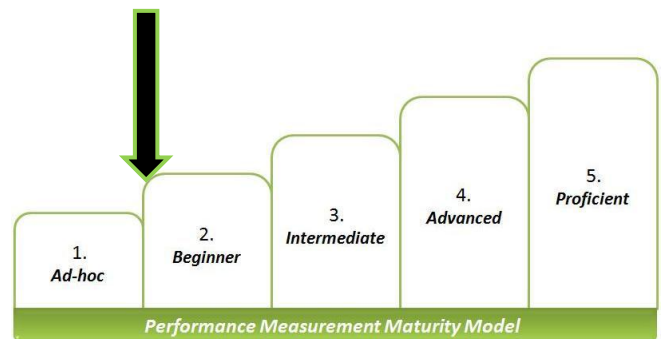
*Recommendation 1:* Develop IT leadership and a team dedicated to addressing performance management in an ongoing fashion.

*Recommendation 2:* Identify KPIs relevant to both IT and business, and encode how they will be measured and visualized.



\*Source: The KPI Institute

When using the model provided by SmartKPIs we are at the low end of Level 2 (Beginner)



\*Source: The KPI Institute

**Category: Service Delivery**

**KPI: Customer Satisfaction**

Definition: A measure of how satisfied the IT stakeholders are with the performance and contribution of IT services.

The IT Department had notable improvement in Help Desk statistics and is rated as green on the performance dashboard. The departmental statistic for resolving support calls on time almost met the industry standard of 85%. Achieving 83.25% warrants a rating of green on the performance dashboard.

Summary for 2014	Assignments Resolved	Resolved on Time (Target 85%)
IT Department	19299	83.25%

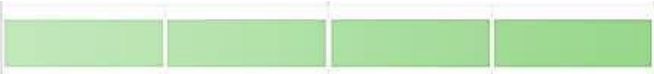



Source: Internal HEAT Incident Management System

The percentage of IT Service Desk calls dropped was better than the industry average of 10%. The FCR (First Call Resolution) statistic identifies the percentage of Service Desk calls that are solved on first contact with the client. The department approached the target of 50%. These two statistics also warrant a rating of green on the performance scale.

2499 Service Desk Statistics for 2014		FCR (First Call Resolution) Target 50%
Total Issues Handled (phone calls, Emails)	Percentage of Calls Dropped (Target <10%)	
13523	3.42%	46.67%

Source: Internal HEAT Incident Management System

The results of an organization wide survey on customer satisfaction were very positive as illustrated below.

I am satisfied (but I can think of a couple of ways to improve service)		133	65%
I am extremely satisfied (cannot imagine better I.T support!)		38	19%
I am not satisfied (I can think of a few ways to improve the service)		29	14%
Needs Improvement I am very unsatisfied (There needs to be a lot of improvements to the service!)		5	2%

The impact of not improving these statistics will be minimal however there is always room for improvement. Listening closely to our clients through surveys can identify pain points that support staff are not aware of. It can build the loyalty and reputation necessary to move to a partner player.

*Recommendation 1:* Provision Help Desk staff with more tools and privileges so they can complete more support calls on first contact.

*Recommendation 2:* Consolidate, prioritize, cost, and track progress on recommendations from the Customer Satisfaction Survey.

**KPI: Customer Engagement**

Definition: Renamed from Customer Partnership, this is a measure of how much focus and effort goes into creating a unique customer experience.

The department remains at Stage 2: (Progressive) of Demand Metrics’ maturity model on the following page. This translates into a performance rating of Yellow on the dashboard. The General Manager of IT facilitated meetings with every Manager within the organization in preparation for

their annual workplan, and to hold a “visioning” session to better support strategic planning with respect to technology. This is a positive trend and will be repeated as an annual practice.

Customers can be internal staff, business units, Mayor and Councillors, businesses within the community, and citizens of Guelph. The goal of customer engagement is to improve the customer experience and provide a two-way communication channel for mutual benefit. Unfortunately there is no defined strategy specific to the department.

If the department remain at this stage of maturity it may miss opportunities to build confidence and loyalty with our clients. This will be a barrier to the departmental goal of becoming a “Partner Player” aligned with the business.

*Recommendation:* Add a Customer Engagement function to the current IT staff responsibilities. This can be achieved by having an assigned IT person for each of the City’s divisions. They would meet on a regular basis to ensure the division’s IT needs are being met; discuss industry trends, and how they apply to their business units.

Customer Engagement Maturity Model

Customer Engagement	Stage 1: Undefined	Stage 2: Progressive	Stage 3: Mature	Stage 4: World-Class
Orientation	No defined strategy or process for Customer Engagement	Strategy is uncoordinated; Aware of need to create a customer journey experience; Projects are developed and delivered ad hoc	Defined strategy and processes exist for Customer Engagement across an Enterprise; Touch points are coordinated across functions to meet customer expectations	Defined, integrated strategy for Customer Engagement exists across an Enterprise; Coordinated effort to provide closed loop engagement
Leadership	Sees Customer Engagement as just one part of partnership, not a focus	Views Customer Engagement as important; Allocates budget & staff resources to explore program and campaign options	Views Customer Engagement as the primary focus of partnership; Long-term commitment to Customer Engagement; Willing participant; Resources for growth	Views Customer Engagement as the primary focus; Organization aligned around Customer Engagement
Customer Success	Relies on traditional engagement tactics, Lack of customer journey; One-way dialog	Understands need for creating buyer journey and personas to better target content; Has implemented point tactics to improve conversion and close rates, improve retention and reduce churn	Aligns programs and campaigns to consistently deliver full Customer Engagement to drive loyalty; Supports robust external & internal online communities and advocacy & loyalty programs	Focused on creating a differentiated customer experience and operationalizing it through all marketing, sales and customer care touch points, programs and campaigns



**KPI: IT Process Management**

Definition: A measure of the department’s ability to identify, document, communicate, monitor, measure, and automate processes necessary to becoming a partner player with the business.

This KPI was renamed from Business Process Support to IT Process Management. The IT Department was assessed at Level 2 (Repeatable) which translates into a dashboard colour of Yellow. Gartner’s Process Management assessment tool was used to validate the rating.

COBIT 5 is a framework for IT Governance and covers 37 processes that are critical to a successful IT department. As



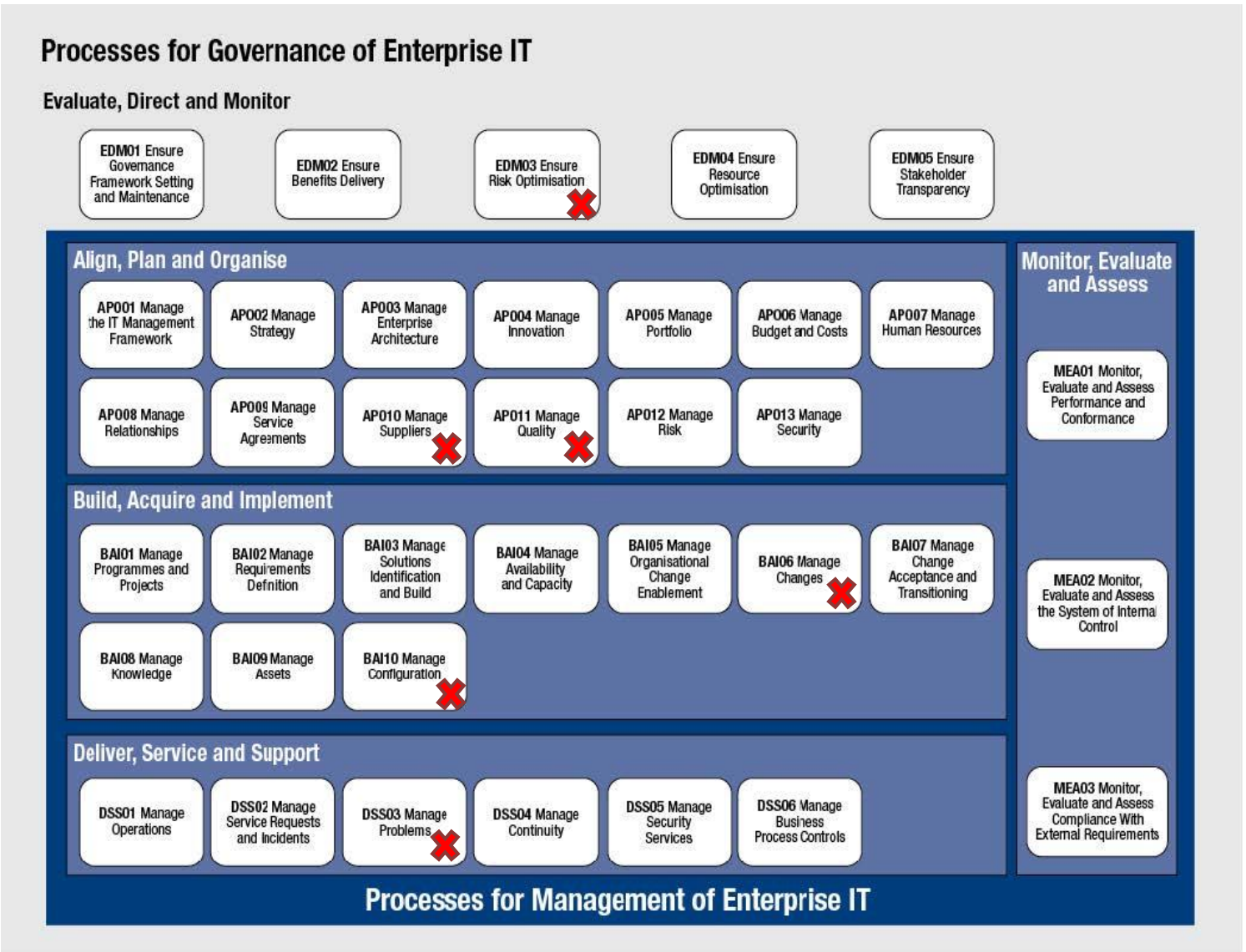
stated in earlier reports, COBIT specifies “What You Should Do” whereas ITIL specifies “How You Should Do It”.

To date almost all IT staff and management have foundational certification in ITIL but only a few have formal training in COBIT. As such we often miss the holistic view of the department and only deal with overlooked processes when they become a crisis.

The following graphic identifies several processes with a red X, that will need to be addresses in 2015 and beyond if the departments wants to move to a maturity level of 3 (Defined).

*Recommendation 1:* Continue work on developing Standard Operating Procedures to ensure IT staff are providing consistent service to our clients.

*Recommendation 2:* Investigate tools that will enable processes to be automated like self-service password lock-out.



Source: ISACA (Information Systems Audit and Control Association)

**KPI: Infrastructure Availability**

Definition: This KPI measures the IT Department’s ability to provide reliable networks, servers, and data storage for the organization.

The applications, data, and services the department provides cannot run without well managed technology infrastructure. Private sector corporations that generate revenue from on-line transactions will calculate how much money they will lose on a per minute, per hour, or per day basis. Then they build their data centres, networks, and services based on how much downtime they can tolerate without severe impact to their business.

In the municipal world the availability of networked based services affects both public facing and internal customers. The emphasis is on providing citizens with fast, reliable, and easily accessible services and information, rather than generating revenue. Internal staff depend heavily on IT infrastructure so they can in turn serve the public better.

To maintain public and internal customer confidence, the IT Department has chosen its target uptime as 99.9%. In 2014 an average uptime of 99.9% was achieved which warrants a rating of “green” on the dashboard. Statistics exclude planned maintenance and downtime from forces outside the control of IT. Some examples are hydro failures and network services providers.

Note: Availability of networks and services is typically measured in terms of 9’s.

Uptime	Termed As	Amount of Downtime per Year
99%	Two nines	3.65 days
<b>99.9% (City’s Target)</b>	<b>Three nines</b>	<b>8.76 hours</b>
99.99%	Four nines	52.5 minutes
99.999%	Five nines	5.26 minutes

There is minimal impact of remaining at this level however in some cases; downtime was experienced by exceeding hardware life expectancy.

*Recommendation 1:* Adhere to the Life Cycle replacement schedules for network, server, wireless, and security hardware.

*Recommendation 2:* Take leadership to deploy an Electronic Data Retention Policy to prevent uncontrolled disk space usage.

**Category: IT Sustainability**

**KPI: Applications Management**

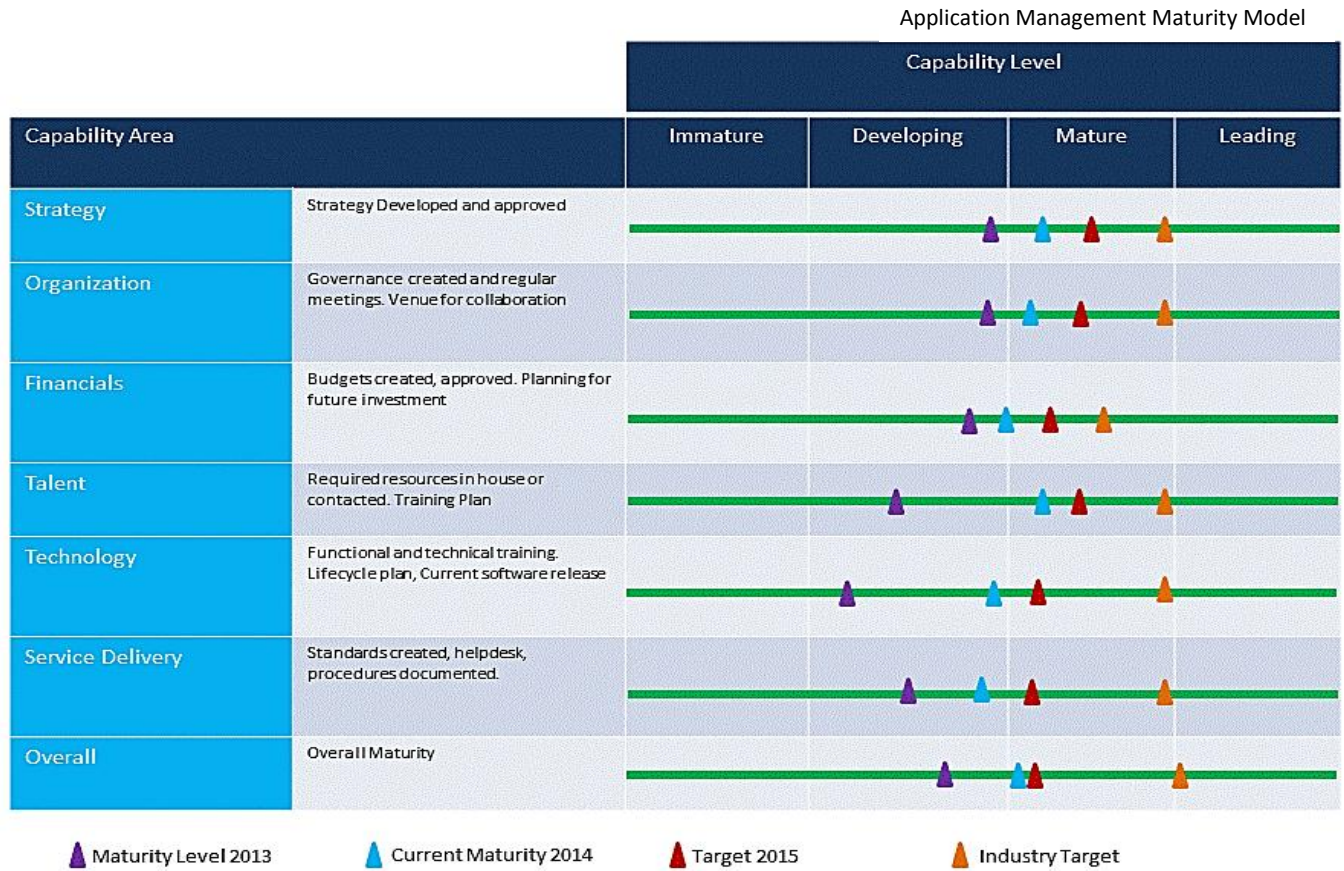
Definition: A measure of how effectively the IT Department can provide and support critical business and productivity applications throughout their entire lifecycle.

The IT Department achieved an overall rating of Level 3 (Mature) using Gartner’s IT Score for Application Organizations. This translates into a performance rating of green on the dashboard. The reasons for a better rating in 2014 were life cycle completions, fit-gap analysis and recommendations, as well as roadmaps for all major applications. All of these were done with the involvement of the business through steering committees, user groups, and the IT Governance Committee.

The impact of remaining at this level is that the organization would eventually fall behind in vendor versions, losing benefit from advancements. Functionality will fail to meet the changing needs of business units and the organization.

*Recommendation 1:* Standardize change management and approval procedures for enhanced application management.

*Recommendation 2:* Develop an assessment process to determine the effectiveness of the change.



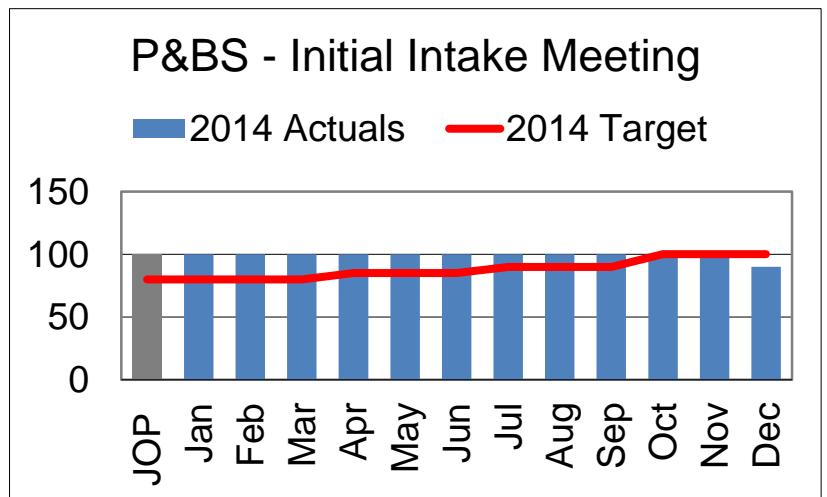
Please Note: Areas recently addressed will be allocated to developing as additional adjustments may be required

**KPI: Project Performance**

Definition: This is a measure of how long it takes the Project Management Office (PMO) to complete an initial intake with the client once the request has been submitted.

The target is 100% of the intake meetings to be scheduled within 2 business days of submitting the request. With the exception of the month of December, the PMO achieved its target. This warrants a rating of maturity Level 4 (Monitor) based on Pricewaterhouse Coopers model, translating into a KPI rating of green on the performance dashboard.

The jumping off point (JOP) in January was based on the measurement achieved during December 2013. With the exception of the month of December, the PMO achieve its target. This gap was due to requests coming in during the holiday season. Moving forward holiday coverage will be used to achieve target.



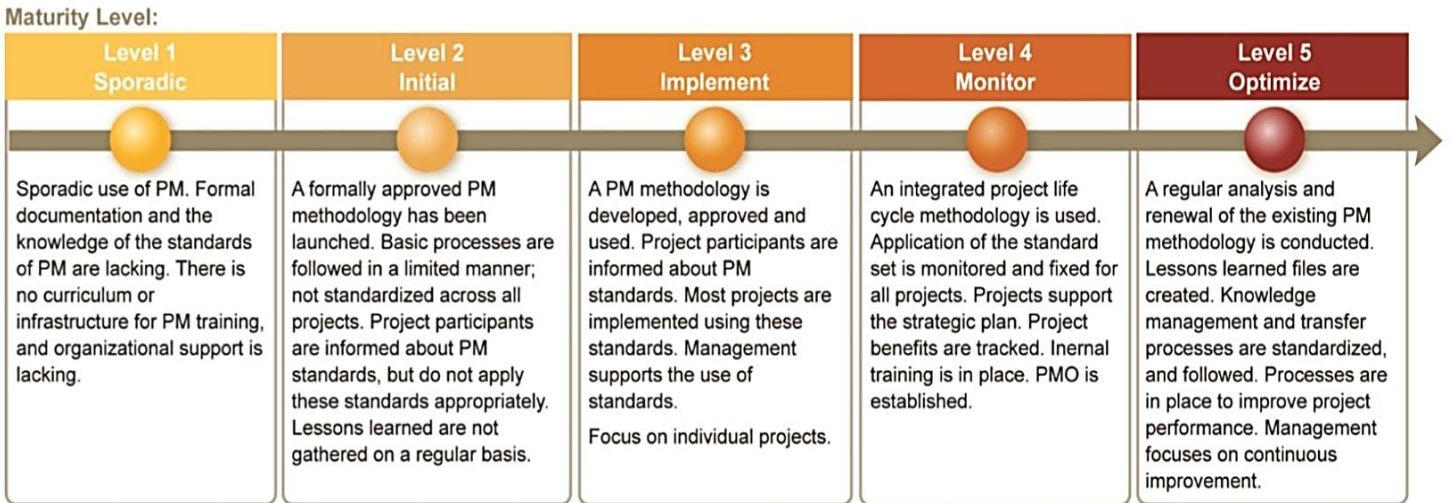
Source: IT Project Management Office

By remaining at level 4 in this maturity model, the PMO will have the opportunity to continue to deliver projects that are aligned with the strategic plan, and start tracking project benefits including return on investment (ROI).

*Recommendation 1:* IT PMO should focus on increasing adoption of PMO templates, processes, and tools, and should sponsor use of such things throughout the organization.

*Recommendation 2:* IT PMO should continue to develop lesson learned documents from each project and utilize them to improve project performance.

**Figure 4: PwC's PM Maturity Model**



Source: Insights and Trends: Current Portfolio, Programme, and Project Management Practices - The Third Global Survey on the Current State of Project Management, Pricewaterhouse Coppers (PwC), 2012

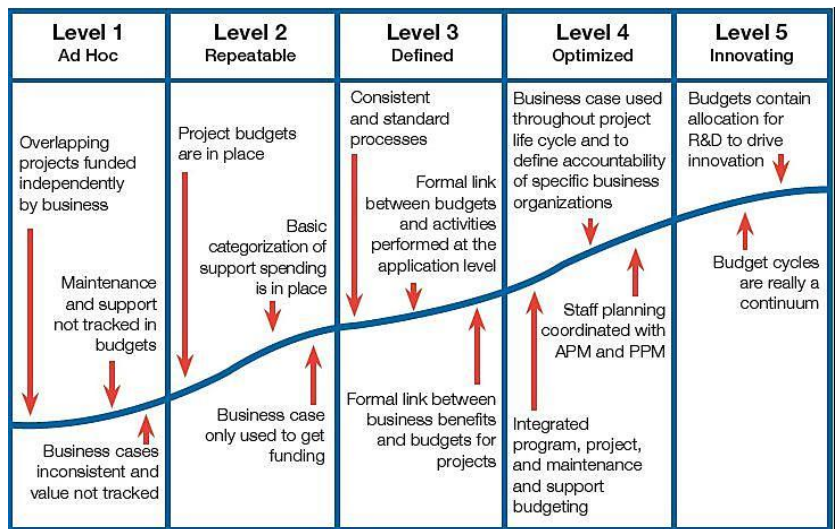
**KPI: Financial Management**

Definition: A measure of how effective the department is at budgeting, monitoring, and distributing the funds allocated to them to provide IT services to the Organization.

**Financial Management Maturity Model**

In 2014 the IT Department had a negative variance of .8% on a 4.2M operating budget. This is the department's best budget to actual performance to date. This achievement was the result of IT management working very closely with Finance during the last quarter of 2014. Capital budgets for Projects and Life Cycle replacements also showed minor variances. Overall the department achieved a maturity rating of Level 4 out of 5 translating into a KPI performance rating of green on the dashboard.

In 2015, the IT Operating Budget will be more granular with each division responsible for creating and monitoring their financials. Finance has already created the required system changes to accommodate this recommendation. This will give each Manager and the General Manager more visibility and accountability of their spending. This will keep the department on track with the exemplary performance it had in 2014. To move even further up the maturity scale, the

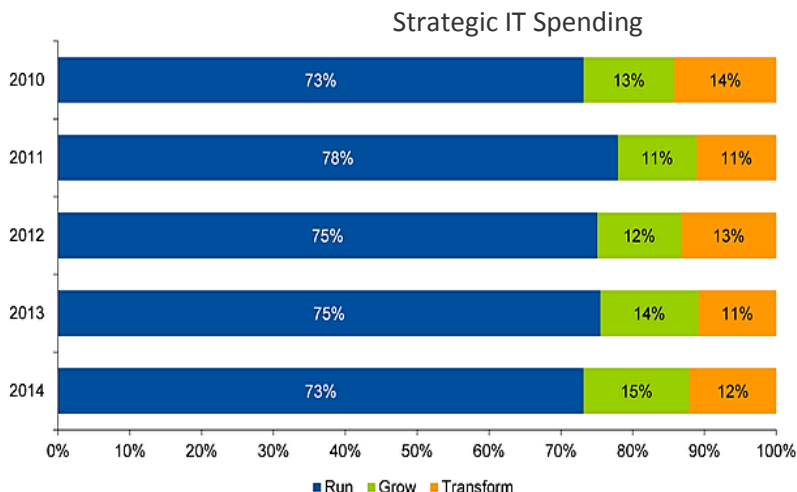


Source: Gartner (June 2013)

department will need to budget for initiatives that spark innovation, automation, and cost savings. A perfect example would be the proliferation of City owned fibre-optics rather than paying huge networking bills to external providers.

This brings us to the graphic to the right that depicts the percentage of budget allocated to Running, Growing, and Transforming the business in state and local governments.

In the last two years the City has allocated 85% of its IT budget to running the business, 12% on growth, and only 3% on transforming the business. In future years there needs to be a reduction in the “keep the lights on” costs and an increase in “transformational initiatives”. This is the recommended approach in supporting the transformation of IT into a “Partner Player” and a “thinking” organization.



Source: Gartner IT Key Metrics Data 2014

Operational efficiencies, automation, and improved processes will decrease the Run costs. Budgets could then include allocation for Research & Development to drive innovation.

The next 3 tables compare IT spending at the organizational level. The amount of spending per supported staff member is less than half the industry standard. As investments in mobility and collaboration grow, the spending per staff member will inevitably increase. One result should be a more efficient workforce in the field. Another will be an improved team environment to share ideas and foster innovation.

Year	2010	2011	2012	2013	2014
City of Guelph’s IT Cost per Municipal Staff Member Supported	\$3378	\$3957	\$3481	\$3733	\$3603
State and Local Government*	\$7600	\$7773	\$7100	\$8581	\$8355
Canada & US IT Industry Wide**	\$7464	\$7114	\$7531	\$8118	\$7385

\*Source: Gartner IT Key Metrics Data – 2014

\*\*Source: Computer Economics – 2014

IT staffing continues to lag behind other government entities. The primary reason is that our current IT department is staffed as “Operational” with limited resources for development, innovation, and integrated business partnership.

Year	2010	2011	2012	2013	2014
IT Staff as a Percentage of Total City Staff	2.2%	2.2%	2.2%	2.4%	2.2%
State and Local Government Percentage*	3.5%	3.6%	3.6%	4.3%	3.9%

\*Source: Gartner IT Key Metrics Data – 2014

As mentioned previously, if operational staffing is complemented by “transformational” staff, the IT operating budget will move closer to other government averages.

Year	2010	2011	2012	2013	2014
IT Operating as a Percentage of City Operating	1.2%	1.3%	1.7%	1.8%	1.7%
State and Local Government Percentage*	3.2%	3.6%	3.6%	3.8%	3.6%

\*Source: Gartner IT Key Metrics Data – 2014

*Recommendation 1:* Track budget to actuals at the divisional level, working closely with Finance to improve performance.

*Recommendation 2:* Develop actions to reduce “Run” costs, and then increase the “Transformation” budget.

*Recommendation 3:* Monitor and budget for external resource pools to provide the necessary gap fits to operational costs.



**KPI: TCO (Total Cost of Ownership)**

Definition: A measure of how well IT management measures, manages, and reduces costs to improve the overall value of IT investments.

The IT Department remains at maturity Level 2, as TCO was limited to major initiatives and was not used as a standard process to calculate. This translates into a KPI performance rating of Yellow on the dashboard.

The impact of remaining at this level will be poor visibility into the “real” cost of providing IT services at the City. Without a comparison to alternatives like Cloud or other outsourcing options, opportunities to reduce costs may be missed.

Past studies and experiences have proven that a financial comparison of technology solutions based solely on purchase price and service costs is fundamentally flawed. Other operational factors, including the costs to manage and maintain these assets, as well as reliability and downtime costs, have a far greater financial impact on most organizations than just the system's acquisition cost. The introduction of cloud computing has further complicated the analysis as trade-offs between investment in infrastructure must be weighed against third party offerings. This concept attempts to include service levels, security, availability and redundancy as factors in determining TCO.

Factors Included in a Total Cost of Ownership Model a) System pricing and acquisition b) Service contracts c) Installation and training d) Operational costs (Energy/consumables), e) Ongoing management, maintenance and support (Resources/Salaries), f) Reliability/Redundancy, and g) Opportunity Savings (Outsourcing expertise/Cloud).

Maturity Levels for Total Cost of Ownership	
<b>Level 1:</b>	Little or no awareness of the need for or benefits of a management program that includes a TCO approach. TCO efforts involve searching for data or making educated guesses.
<b>Level 2:</b>	There is some awareness of the value of a TCO approach. TCO methodologies are simplified using basic cost of acquisitions and support costs. Application of this approach is random or limited to major projects.
<b>Level 3:</b>	The Benefits of a TCO approach are fully acknowledged. TCO methodologies and tools have been identified and standards addressing when and how to applying these processes have been introduced.
<b>Level 4:</b>	TCO processes have matured to the point where organizations routinely and independently conduct TCO assessments. They obtain highly reliable metrics which have been vetted by the organization and incorporate them into budgeting and planning.
<b>Level 5:</b>	TCO assessments are routinely communicated to stakeholders, executives and senior management. Results from these assessments are routinely included in the decision making process. Assessment values are regularly compared with peer groups to vet effectiveness of processes.

*Recommendation 1:* Adopt and customize a framework for Total Cost of Ownership.

*Recommendation 2:* Select one major 2015 acquisition and perform a TCO to TBO (Total Benefit of Ownership) analysis.

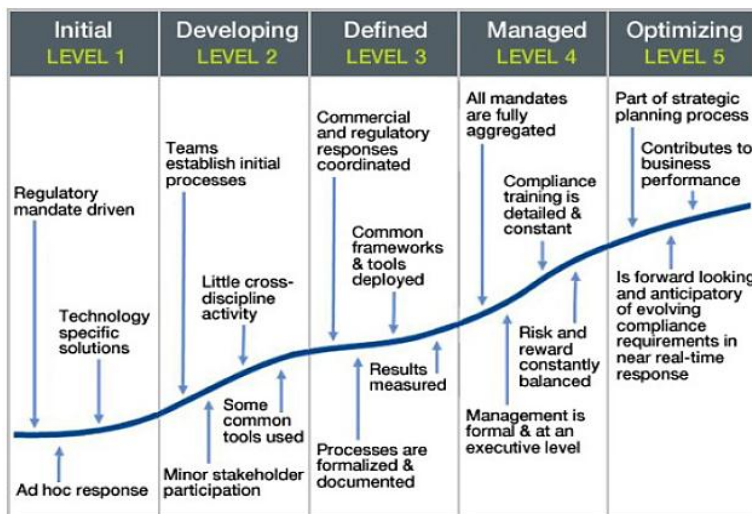
**KPI: Compliance**

Definition: A measure of how well the department adheres to policies and decisions. Policies can be derived from internal directives, procedures and requirements, or external laws, regulations, standards, and agreements.

This KPI remains at Level 2 (Developing) of the compliance maturity model which maps to a dashboard rating of Yellow. An increase in industry regulations means it is trending in a negative direction.

The IT Department is primarily focused on regulatory mandates, such as maintaining its PCI (Payment Card Industry) certification. There is no formal compliance committee at the IT departmental level, or at the Enterprise level.

The impact of remaining at Level 2 will not be felt immediately. However as a trend Gartner states: Corporate governance, security breach notification, privacy and data protection, and industry-specific regulations have added layer upon layer of compliance to



Source: Gartner (January 2013)

IT processes and activities.

- Recommendation 1:* Assign an IT Compliance Manager function within the department. This could be a combined role with the Risk Manager.
- Recommendation 2:* Catalogue all internal and external compliance requirements like software licensing, Anti-SPAM, and internal controls.
- Recommendation 3:* Develop processes and reporting protocols that feed into an Enterprise Compliance or Auditing Program.

**Category: IT Innovation and Learning**

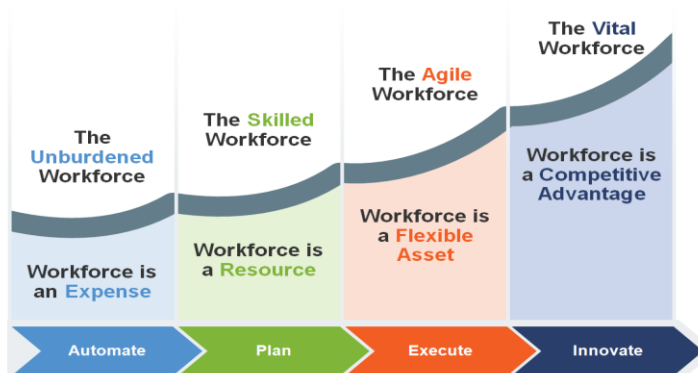
**KPI: Workforce Competency**

Definition: A measure IT management’s ability to hire, train, develop skills, and assign staff to build a competent and agile workforce.

The IT Department remains at the “Skilled Workforce” phase which maps to Level 3 (Defined) of the People CMMR Maturity Model, provided by the SEI (Software Engineering Institute).

The impact of remaining at this level of maturity is that the department will not be flexible enough to deal with the changing demands of the organization. An “Agile Workforce” allows for the redistribution of staff when priorities shift, while maintaining a high level of productivity.

In 2014, IT management used the department’s “Roles and Responsibilities” matrix to better identify gaps in skill sets. The matrix also identified opportunities for primary and backup staff to engage in cross-training. This enhances the department’s ability to maintain support during staff absences and single resource overloading.



\*Source: Kronos Global Workforce Management Solutions

Beyond skills and talent, there needs to be a change in culture within the department. Gartner describes this as being “Change-Aware” and an “Outside-In” mindset, so the department can meet the challenges of organizational and technology changes.

- Recommendation 1:* Improve the hiring process, selecting individuals that have a broad range of skills and a record of adaptability. This is called a “Competency Based Talent System” and ensures the new employee will be successful regardless of the role they are assigned within IT.
- Recommendation 2:* For existing IT staff, a comprehensive skills inventory should be completed and reviewed on a yearly basis. The workforce for a successful digital business requires a combination of soft, technical, and business skills. IT leaders will need to develop their staff in all three areas to make their staff more agile.

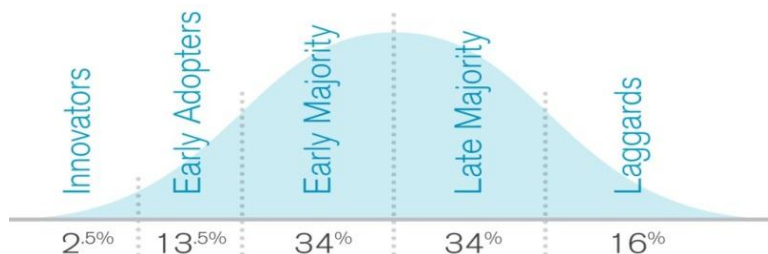
**KPI: Strategic Technology Adoption**

Definition: Renamed from “Advanced Technology Use”, this KPI is a measure of identifying and utilizing new technologies that will benefit the IT Department and the business units they support.

Overall the department identifies with the majority of organizations hovering closer to the Late Majority of the Innovation Adoption Lifecycle. This translates into a KPI performance rating of Yellow on the dashboard.

The impact of remaining at this level of maturity level is that there is less risk to the organization and likely minimal disruption to services. The downside is missed opportunities for automation, innovation, and preparation for technologies once they become mainstream.

**Innovation Adoption Lifecycle**



\*Source: Diffusion of Innovations by Everett Rogers

- Recommendation 1:* Create a framework for IT investment where "faith based" investment for innovation is a supported funding option.
- Recommendation 2:* Communicate to stakeholders and IT Staff, future trends and how they may affect the way IT delivers services in the future.

### The Top 10

Gartner Research has identified the Top 10 Strategic Technology Trends for 2015 which is represented by the graphic below. Many of the trends may seem out of touch for municipal government operations. However if you consider the citizens, businesses, and devices everyone interacts with, the department must at least be “aware” of these trends and how they may affect our organization as they become mainstream. IT management can build this awareness or monitoring into our continuous improvement model. Departmental meetings could be the forum for discussing the progress and impact of these trends on our organization.

1. Web-scale IT is a pattern of computing that delivers the capabilities of large cloud service providers within an enterprise IT setting. Their capabilities go beyond scale in terms of sheer size to also include scale as it pertains to speed and agility. If enterprises want to keep pace, then they need to emulate the architectures, processes and practices of these exemplary cloud providers.
2. Software-Defined Applications follow a Services Oriented Architecture (SOA) to become more agile and suitable for Web-scale performance. This is a fundamental shift away from the traditional monolithic design which usually produces an “instant legacy” application. Feature-bloated applications are giving way to “Apps” that perform a limited function set, targeted at a specific set of users.
3. Risk-Based Security refers to a new approach taken by organizations; one that is driven by the level of appetite for risks rather than the simple evaluation of its impact or probability. The concern for security can no longer be a roadblock to becoming a “Digital Business”. The business benefits have to be balanced with an acceptable level of risk. The City has already started to practice this approach by providing Internet users with an “Open by Default” policy.



4. Cloud/Client Computing is a newer model that is replacing the traditional Client/Server model. In the Client/Server model, a fat client would make requests to a back-end server. In Cloud/Client computing the cloud is the coordination point and system of record, which can be accessed by applications spread across a multitude of devices. The City needs to be aware that many of these devices are outside the control of IT. Gartner recommends adopting a “treat internal as external” strategy for devices. Source: Gartner (January 2015)
5. Computing Everywhere is a trend that goes beyond the post-PC mobile world. It includes wearable and even embedded technologies that change our human interaction with the physical world. Examples are vehicles equipped with Bluetooth to extend your smartphone and NFC (Near Field Communication) for smartphone payments at Tim Horton’s. Devices are not mobile, people are mobile, and the City’s mobile strategies need to take this into consideration.
6. The Internet of Things (IoT) as it applies to the City is more about information gathering. Intelligent sensors in vehicles and machinery can gather enormous amounts of data. Further analysis can change the way staff operate and manage equipment. An early adopter of an IoT ecosystem is the Transit Technology Plan. The IT Department will be integral to its implementation and success.
7. 3-D Printing is the manufacturing of a three-dimensioned product from a computer driven digital model. Early adopters have primarily been in the manufacturing sector however there are many local governments using the technology already. City planners can create detailed models of buildings, landscapes, and entire neighbourhoods. As prices decline, expect to see 3-D printers at the City of Guelph.
8. Context-Rich Systems can gather and consume contextual information to provide a better user experience. Information sources can be personal data like age & sex, sensory devices for sound/sight/speed/temperature/etc., and situational context like location & preferences. The human is at the centre surrounded by technology. Understanding how to gather information and act in the best interest of the citizen/user will be key for the City in the future.

9. Advanced Analytics is a top level category of inquiry that is future-oriented. It includes but is not limited to predictive analytics, data mining, big data analytics, and location intelligence. Governments are one of the biggest collectors of big data, and most of it comes from the citizens they serve. Predictive algorithms can be used to determine everything from future crime hotspots to the effects of transit disruptions. Building invisible analytics into mobile apps and Websites to track user activity will help the City deliver a better user experience.
10. Smart Machines can be physical or software based entities. Doing what everyone thought only people could do, and machines could not do, is becoming a reality with inventions like driverless vehicles and robotic vacuum cleaners. The City must be at least aware of the possible social and political disruptions of the future “Digital Workforce”.

**KPI: Methodology Adoption**

Definition: Renamed from “Methodology Currency”, it is a measure of how well key methodologies, standards, and frameworks are integrated into the everyday processes within the IT Department.

The department maintained a dashboard rating of Yellow for this KPI, based on self-assessment and mutual agreement amongst IT management. It is not easy to measure this but it remains an important metric.

The impact of remaining at a rating of Yellow will not be significant. IT management continues to pick the most relevant parts of each methodology rather than full implementation. This has provided consistency in services like the Help Desk and project management.

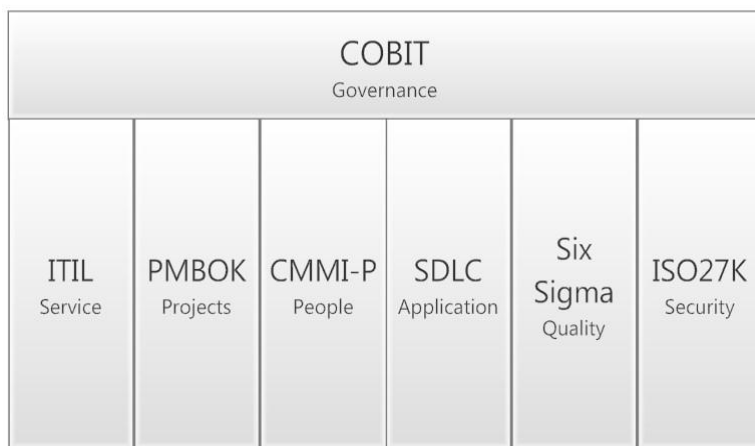
An additional Information Security methodology (ISO27K) has been added to the model to position the department for the future.

Although the department has a rigorous security program for internal data and systems protection, it now needs to consider protecting its assets in a hybrid cloud environment.

Cloud based applications and services inherently store data on external servers, thereby introducing the need for awareness and control. The City requires standards that ensure that confidentiality, integrity, and compliance requirements are met.

*Recommendation 1:* Appoint a leader for each of the methodologies to coordinate training and levels of integration within the department

*Recommendation 2:* Investigate the ISO2700x series of security standards and document processes to meet requirements



Prepared by City of Guelph IT Management

**KPI: Employee Retention**

Definition: A measure of IT management’s ability to minimize employee turnover.

The IT Department had an improvement for this KPI moving from Yellow to Green on the performance dashboard. In 2014, the IT Department had 2 resignations resulting in a voluntary turnover rate of 6%. This is close to the corporate benchmark for voluntary turnover of 5.1%. The department’s involuntary turnover rate was 3%, which is slightly above the Public Sector rate of 2.3%. Source: Conference Board of Canada. The department’s average of voluntary and involuntary turnover rate is 9%.

The impact of remaining at this level of performance is very positive. It stabilizes both management and staff, with less focus on replacements and training.

IT staff and management continued to focus on the top 3 factors influencing engagement; Learning & Development, Work Processes, and Resourcing. The results were very positive as indicated in the most recent Employee Engagement Survey. The 2014 level of engagement for the IT Department rose significantly from the 2012 survey, above the City average. \*Source: Aon Hewitt

In late 2014 the department reset the top 3 priorities to Succession/Mentorship Planning, Setting Clear Priorities, and Job Shadowing.

*Recommendation:* IT leaders and staff must continue to develop and monitor action plans for each of the 3 priorities. Highly engaged employees immersed in a consumer-like computing environment will foster innovation and contribute to the reduction of employee turnover.

## Divisional Analysis

### Client Services Division....where the customer meets IT

#### Mandate

The Client Services Division`s mandate is to plan, implement, manage and maintain the corporate desktop, printing, telephone, and converged infrastructure to ensure that they meet the business needs of the corporation by:

- ✓ Providing Level 1, 2 and 3 technical support for all desktop, printing and telephony issues.
- ✓ Engineer and maintain the corporate distributed desktop architecture and mobile device fleet.
- ✓ Manage and maintain the corporate phone system.
- ✓ Providing a Technical Service Help Desk for the entire corporation.
- ✓ Implement convergence technologies involving access control, security camera systems, and building automation.

#### Key Accomplishments for 2014:

- ✓ 2499 Service Desk processed 13,523 support requests received over the phone and through email.
- ✓ Engaged City staff through surveys and stakeholder group meetings for service improvements to the 2499 Help Desk.
- ✓ Upgraded 816 City computers to Windows 7 and Office 2010.
- ✓ Completed the rollout of AutoCAD 2013 products.
- ✓ Completed the expansion of City of Guelph Voice phone system to Guelph Hydro.
- ✓ Renegotiated the mobility services agreement with expected savings of \$110,000.00 annually.
- ✓ Deployed communications towers that will support a modern, digital, City owned, outdoor wireless radio network. When fully implemented and amortized, this network will help reduce operating cost by \$75,000.00 annually.

### Technology Services Division....building and securing the IT infrastructure

#### Mandate

The Technology Services Division`s mandate is to provide a reliable, secure, easily accessible, and high performance IT infrastructure to meet the business and service needs of the organization by:

- ✓ Designing quality network, server, and IT security systems that accommodate and protect the City`s electronic information
- ✓ Deploying, maintaining , and replacing systems according to industry best practices for IT life cycle management
- ✓ Developing and implementing IT policies, procedures, and processes that safeguard the City`s IT investments
- ✓ Supporting departmental and corporate technology initiatives through network integration and automation

#### Key Accomplishments in 2014

- ✓ Upgraded the City`s Active Directory database of user and computer accounts to the most recent version.
- ✓ Replaced the City`s web gateway to provide an open-by-default environment for Internet access.
- ✓ Replaced the City`s email gateway to reduce SPAM and increase protection against malicious emails.
- ✓ Prevented 3 Million SPAM messages from reaching users` email inboxes.
- ✓ Facilitated the transfer of 4 million internal emails and 2.8 million external (Internet) emails.
- ✓ Replaced all legacy backup tape devices with latest LTO-6 technology (6.25TB per tape).
- ✓ Replaced 80% of legacy SAN (Storage Area Network) doubling the backbone speed to 8Gbps.
- ✓ Introduced a network distribution layer between servers and the core switch (reduces cabling/improves reliability)
- ✓ Completed the Information Technology Annual Report for the year 2013.
- ✓ Installed outdoor wireless access points at Guelph Central Transit Station.
- ✓ Extended the municipal fibre optic network to downtown Parkade for increased speed and reliability.
- ✓ Hired a replacement for the Corporate Network Specialist position.

## Corporate Applications Division....supporting the applications of the organization

### Mandate

The Corporate Applications Division is responsible for supporting the applications the corporation uses as a municipal services provider by:

- ✓ Providing application support for bookings, permits, licensing, on-line maps, and geospatial data
- ✓ Acting as a gateway between the City and external sources for geospatial, parcel, and ownership data
- ✓ Facilitate advisory groups, steering committees, and user groups in support of application governance

### Key Accomplishments in 2014

- ✓ Upgraded to ERP (JDE) application from version 8.1.2 to 9.1
- ✓ Upgraded Buildings Permit/Licensing (Amanda) application to Web-based version.
- ✓ Upgraded Program Registration (CLASS) application and Payment Server.
- ✓ Completed Time and Attendance review for JDE – Human Resources.
- ✓ Developed Process Map and recommendations for Work & Asset Management (WAM) application.
- ✓ Developed Data Warehouse workplan and governance strategy.

## Projects and Business Services....Providing IT Services to the Organization

This IT Division is comprised of three sections; GIS (Geographical Information Systems), IT-PMO (Project Management Office), and Web Services.

**GIS Mandate:** To provide leadership and support to City departments through GIS technology services and innovation.

### Key Accomplishments in 2014

- ✓ Completion of GIS Technology Plan
- ✓ Completion of upgrade of all ArcGIS products across the City
- ✓ Completion of poll boundary study and changes to support 2014 election

**Project Management Office Mandate:** To develop project and program management strategically focusing on Governance, Financial, Risk, Resource, Quality, and Scope management. The team is responsible for project prioritization, process improvement, and strategic project planning with IT and City staff.

### Key Accomplishments in 2014

- ✓ Upgrade of Project Portfolio Management tool – Eclipse
- ✓ Expansion of Eclipse to include pilots in Solid Waste, Planning and By-law
- ✓ Implementation of a project change management process
- ✓ Implementation of technology and business processes to address Canada's Anti-Spam Legislation
- ✓ Completed the modernization of security system for City Hall, Courts, Waterworks, and River Run

**Web Services Mandate:** To develop and support the City's public web site (guelph.ca) and internal Intranet. The team fosters new web technologies and the development of e-business strategies utilizing social media like Facebook, Twitter, and YouTube.

### Key Accomplishments in 2014

- ✓ Supported 1st online voting for municipal election
- ✓ Creation and deployment of new River Run Center website
- ✓ Development and support of Open Data catalog
- ✓ Development and deployment of Priority Customer Online Enrolment System – Water Services
- ✓ Rebuilt Guelph-Wellington Immigration website

## 2015 and Beyond

### 2015 IT Workplan

<i>CTSP Priorities for 2015</i>	<i>Description</i>	<i>Target</i>
<i>Business Continuity Plan (Phase 2)</i>	<i>Implement the framework for a cloud based Corporate Business Continuity platform</i>	<i>Apr 2015</i>
<i>Buildings and Inspection System</i>	<i>Implement recommendations from Fit-Gap Analysis for Amanda corporate application</i>	<i>Jun 2015</i>
<i>Work &amp; Asset Management System</i>	<i>Implement process standardization for WAM corporate application</i>	<i>Jun 2015</i>
<i>Transit Technology Plan</i>	<i>17 month project to implement the IT infrastructure and integration needs for Transit</i>	<i>Jul 2015</i>
<i>Geographical Information System</i>	<i>Develop and deploy easement layer and 311 system on GIS (Budget dependent)</i>	<i>Sep 2015</i>
<i>Enterprise Resource Planning System</i>	<i>Implement recommendations from HR Fit-Gap analysis into JDE (Resource dependent)</i>	<i>Sep 2015</i>
<i>Data Warehouse</i>	<i>Master Data Management Pilot – Address Master File</i>	<i>Sep 2015</i>
<i>Cloud Strategy</i>	<i>Develop a Cloud Strategy scalable to optimizing business value</i>	<i>Nov 2015</i>
<i>Information Management</i>	<i>Develop a roadmap for Information Management</i>	<i>Nov 2015</i>
<i>Collaboration Platform/Office 365</i>	<i>Investigate SharePoint cloud collaboration platform and Office 365 migration</i>	<i>Dec 2015</i>
<i>Help Desk Improvements</i>	<i>Implement recommendations from Customer Satisfaction Survey</i>	<i>Dec 2015</i>
<i>CTSP Phase 2 Scoping</i>	<i>Finalize scope of CTSP Phase 2 - Digital Business Plan</i>	<i>Dec 2015</i>
<i>Customer Relationship Management</i>	<i>Perform an assessment to determine corporate needs and options for cloud solution</i>	<i>Dec 2015</i>
<i>Operational Priorities for 2015</i>	<i>Comments</i>	
<i>Remote Access Upgrade</i>	<i>Redesign and implement latest version of remote access system for applications</i>	<i>Jul 2015</i>
<i>Mobile Device Management</i>	<i>Upgrade Management System for BlackBerrys, Apple, Android, &amp; Windows Mobile Devices</i>	<i>Sep 2015</i>
<i>Server Virtualization</i>	<i>Implement a VMware server virtualization presence at the backup data centre</i>	<i>Jun 2015</i>
<i>Hardware Life Cycle Replacements</i>	<i>Replace Servers, Mass Data Storage, Network Devices, Wireless, Firewalls, and Email/Web Gateways, desktops, printers, and voice equipment according to Life Cycle timelines</i>	<i>Dec 2015</i>
<i>Database Upgrades</i>	<i>Upgrade existing SharePoint, MS-SQL, and Oracle databases with latest supported version</i>	<i>Dec 2015</i>
<i>Web Services</i>	<i>Redesign Sleeman Centre &amp; Museum websites, update Guelph.ca for IOR program and CMT</i>	<i>Dec 2015</i>
<i>2015 IT Annual Report</i>	<i>IT management will prepare the yearly performance report for the year 2015</i>	<i>Apr 2016</i>
<i>Priority Projects for 2015</i>	<i>Comments</i>	
<i>Departmental Realignment</i>	<i>Functional realignment of the department to support evolution of IT</i>	<i>May 2015</i>
<i>Performance Management</i>	<i>Deploy a continuous improvement cycle to track progress of recommendations made herein</i>	<i>Jun 2015</i>
<i>Wastewater POC Building</i>	<i>Provide network connectivity, redesign underbuilding fibre-optics, wireless access</i>	<i>July 2015</i>
<i>Joint Wireless</i>	<i>Replace the corporate digital radio system</i>	<i>Sep 2015</i>

<i>E911</i>	<i>Replace the legacy 911 Emergency system at the main Fire Station</i>	<i>Dec 2015</i>
<i>Guelph Police Services</i>	<i>Secure network connectivity, access to security videos, Command Vehicle integration</i>	<i>Dec 2015</i>
<i>BYOD (Bring Your Own Device)</i>	<i>Pilot a project that allows staff to use their personal mobile devices for business purposes</i>	<i>Dec 2015</i>

End of Report