



City of Waterloo –

Planning & Building Services Workforce Review

Final Report

—

April 24th, 2023



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Project Objectives

- Provide an agile framework for estimating headcount needs to support the anticipated development review workload requirements.
- Identify talent risks due to upcoming retirements, turnover, and other factors impacting the supply of talent.
- Identify resourcing gaps that can be addressed through proactive planning and strategic recruiting.



Project Drivers

Staffing Needs: City of Waterloo (the “City”) is looking to conduct a staffing model review for the services impacted by recent Provincial legislation (Bills 109 and 23 and associated regulation). This staffing model review **only considered activities related to development review work**. Additional work performed outside of the development review was not analyzed as part of this project.



Project Principles

- The knowledge and expertise of City staff will be fully engaged and built upon, to arrive at recommended actions through a transparent, participative and inclusive process facilitated by KPMG.
- The project will be conducted in a way that engages City employees.
- The aim is to, wherever possible, transfer knowledge and necessary “tools” to City staff to enable them to build an internal workforce planning capability.
- The framework and approach will be based on leading practices from other municipalities, or other levels of government experience and/or private sector.
- Lastly, this not an audit. This is a project to assess the impact of legislative, political, and community changes on the workload demands in order to proactively identify staffing requirements and strategic sourcing solutions to fill them.

City of Waterloo | Planning & Building Services Workforce Review

The Engagement Process

Engaging Internal Stakeholders

During this project, KPMG engaged key stakeholders a minimum of four occasions to complete the process of developing and validating the workforce models for the 6 divisions. The diagram and description below summarizes the goals and key activities related to each step in the stakeholder engagement process.



KPMG began the engagement process by interviewing members of the leadership group. The purpose of these interviews was to obtain their perspectives of the key factors or trends impacting workload in the next three years and the implications on the current operating model – as input into the workforce model. This input was used to populate the **Step 2: Strategy tab** in the workforce models – which includes the internal and external factors impacting the workload as well as the pain points and operating model changes.

The second step in the engagement process was to interview the leaders and their direct reports to validate internal and external factors affecting workload, pain points, and the operating model changes. The leaders' direct reports also validated the current supply of labour or headcount documented in the **Step 1: Planning Assumptions tab**. The data included the roles, employee name, current overtime levels and percentage of time each resource spends on Development Review activities.

The third step in the engagement process was to meet with the leaders and their direct reports to estimate the resources required for the next 3 years. The outputs of these interviews were used to populate the **Step 3: Driver-Based Estimate tab** and the **Step 4: Top Down Hypothesis tab**. The discussion focused on identifying and validating the demand drivers and weightings for each role, which was used to formulate an evidence-based bottom up estimate. They also were asked for their hypothesis or estimate of the additional resources they would need over the next 3 years.

The final step in the engagement process was to meet with the leader's direct reports to review and finalize the model projections, which was used to populate the **Step 5: Final Headcount Estimate**. KPMG reviewed the entire model with the direct reports to demonstrate how the model used their data to calculate the two estimates: a) a bottom up Driver-Based Estimate; and b) a top-down Hypothesis-Based Estimate – which appear in a side-by-side comparison, in the **Step 5 tab** to facilitate making the final headcount estimating decision..

City of Waterloo | Planning & Building Services Workforce Review

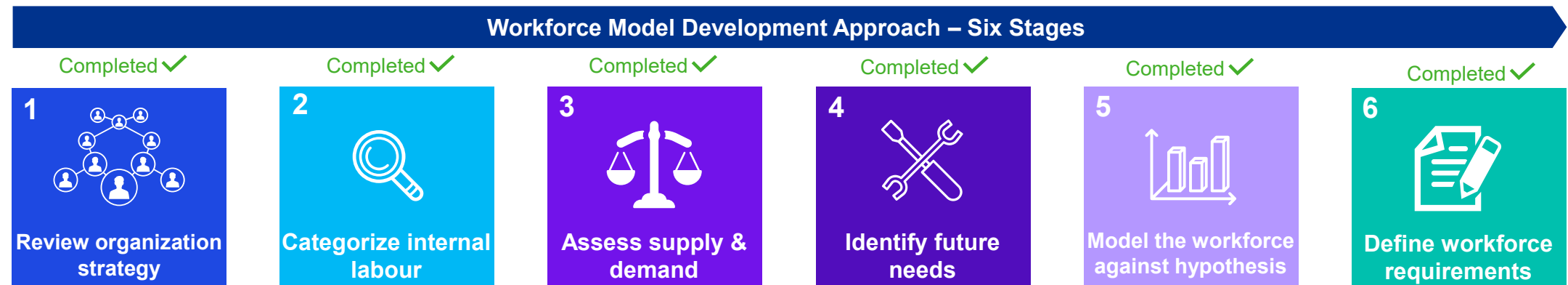
Workforce Model Development

Workforce Model Development Scope

The workforce model development process has been designed to achieve the City of Waterloo's goal of having a tool for determining the City's staffing needs over the targeted three year period, and refreshing the estimate over time. The scope of the workforce models can be described as 'any activity that relates to the Development Review process in the broadest sense', rather than only reviewing tasks. This broad definition of scope was adopted by the following divisions when designing their workforce models for estimating Development Review resources:

- Building Standards
- Engineering Services
- Finance
- Legal Services
- Planning
- Transportation Services

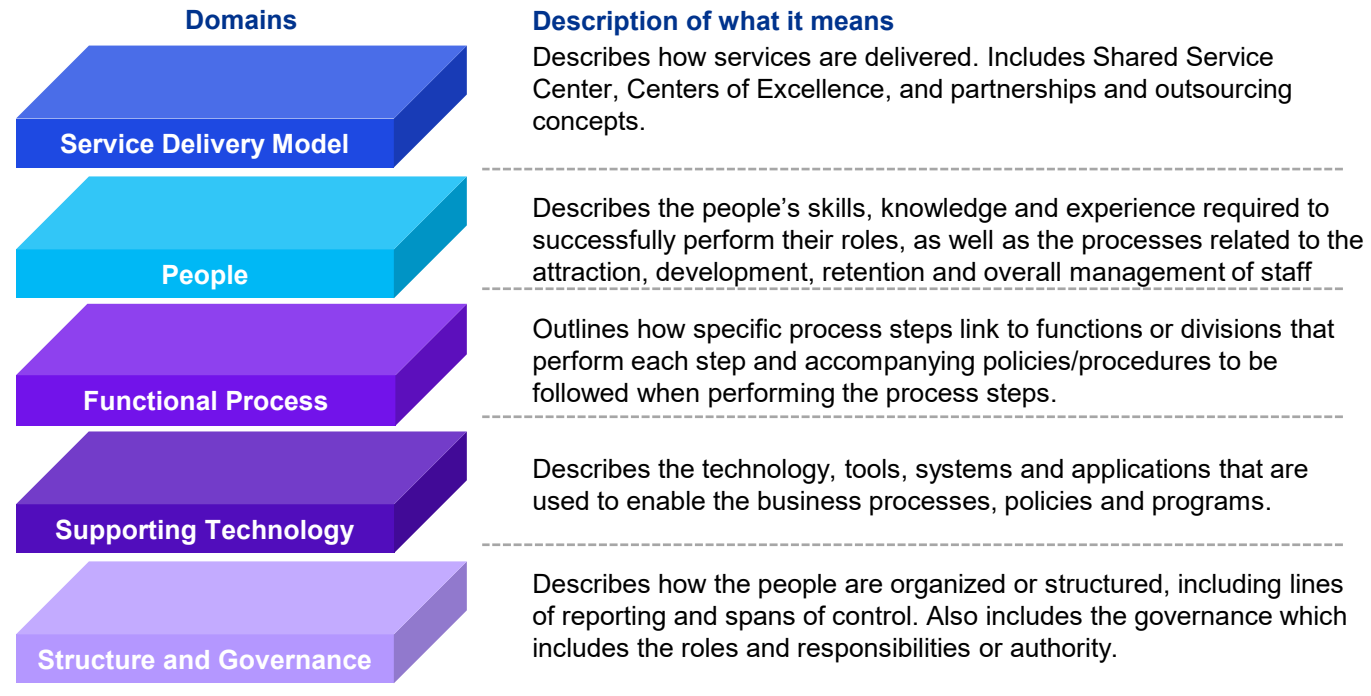
This section describes the approach to each stage of the process and presents the findings of all six stages that were completed. In other words, this section summarizes the 6 workforce models that have been designed and populated with the baseline data for the Development Review process:



Stage 1: Review Organization Strategy - Introduction

Understanding the Impact of Internal & External Factors on Workload

At the beginning of the engagement, KPMG validated the key internal and external factors that were expected to impact the workload related to the Development Review process in the next three years. The Division Leaders identified the current projects that were already underway that would also have implications for the resources required to support the Development Review activities and identified a number of other potential operating model changes that could impact workload – either positively or negatively – over the planning period.



Stage 2: Assessing Types of Available Labour

Types of Available Labour

For a comprehensive view of the total work effort related to Development Review activities, the divisions were asked to consider all the various types of labour – both internal as well as the external – who are currently involved in this activity. The infographics below outline four different types of external resources that could be leveraged to perform Development Review work.



Contractors

The external contractors are pools of subject matter experts retained by the City. The external contractors will generally take on the overflow work that the full-time staff is unable to handle due to their current workload.



Co-Op Students

Some Municipalities maintain active engagement with various University programs, and hire co-op students to work full-time, often for seasonal work during peak periods.



Consultants

The consultants are external individuals or teams hired by Leadership to perform a variety of reviews and projects including efficiency reviews and resource assessment projects. The consultants will provide reports and recommendations to improve specific areas of the City that are aligned with their project's objective.



Strategic Partners

The strategic partners are the partnerships the City makes that involves the sharing of either resources or information to benefit both parties. The City can have these partnerships with other Municipalities by utilizing a shared pool of resources or sharing best practices.

Stage 3: Assess Supply – Current Headcount (1/2)

Breakdown of the Current Headcount by Work Team

The table below summarizes the current headcount of **97.6 individuals*** that were identified by the 6 in-scope divisions which are involved in the Development Review process and will serve as the baseline for the workforce analysis.

Division	Team	Current Team Headcount
Building Standards	Inspections	6
	Plans Examination	9
	Other Roles	2
	Division Total	17
Engineering Services	Development Engineering	8
	Design & Construction	8
	Engineering Infrastructure	10
	Other Roles	2
	Division Total	28
Finance	Asset Management	5
	Financial Planning	8
	Other Roles	2
	Division Total	15
Legal Services	Legal Services	3.6
	Division Total	3.6

Stage 3: Assess Supply – Current Headcount (2/2)

Breakdown of the Current Headcount by Work Team

The table below summarizes the current headcount of **97.6 individuals** that were identified by the 6 in-scope divisions which are involved in the Development Review process and will serve as the baseline for the workforce analysis.

Division	Team	Current Headcount
Planning	Planning Approvals	11
	Growth Management	7
	Other Roles	2
	Division Total	20
Transportation Services	Active and Autonomous Transportation	5
	Transportation Engineering	4
	Transportation Operations	4
	Other Roles	1
	Division Total	14
	Total	97.6

Stage 3: Assess Supply – Headcount Converted to FTE

Summary of Total Headcount and the Conversion to FTEs

The table below illustrates that 97.6 individuals across the divisions are involved in the development review process in some way. This represents **53.01 FTEs** when factoring in the time dedicated and individual overtime. The conversion from headcount to FTEs was calculated using data provided by Waterloo employees for the amount of overtime worked by each team member and the percentage of time each person dedicates to the development reviews.

Division	Current Headcount	Current FTE
Building Standards	17	15.58
Engineering Services	28	9.02
Finance	15	0.83
Legal Services	3.6	3.04
Planning	20	22.87
Transportation Services	14	1.67
Total	97.6	53.01

Stage 4: Top-Down Hypothesis - Explanation

Top-Down Hypothesis Process

The table below defines what is meant by the “low” and the “high” number that was provided by the direct reports, when asked for their hypothesis of the additional headcount required in the next three years to support the increased demand. These estimates represent the lowest and highest estimates that each division and role will require over the next three years to manage the increased workload as well as potential workforce attrition. For example, if a division believes they require at least one (1) additional FTE in 2024 to continue managing their workload, the division would place a one (1) in the sixth column titled, “One Year (2024) Low”. If the division aspires to obtain additional FTEs to further manage the workload above the one they identified as required, they would enter the desired number in the seventh column titled, “One Year (2024) High”. This process would continue for the other two years present in the graph. At the end, the model would sum the low additional FTEs and the high additional FTEs to determine the hypothesized additional FTE range for the next three years.

Division	Sub Team	Role	Current Headcount	Current FTE	Hypothesis-Based Incremental Headcount					
					One Year (2024)		Two Year		Three Year	
					Low	High	Low	High	Low	High
Example Division	Example Sub Team	Example Role	A	B	The lowest number of additional role's required in the first year to meet the City's demand.	The highest number of additional role's required in the first year to meet the City's demand.	The lowest number of additional role's required in the second year to meet the City's demand.	The highest number of additional role's required in the second year to meet the City's demand.	The lowest number of additional role's required in the third year to meet the City's demand.	The highest number of additional role's required in the third year to meet the City's demand.

Stage 5: Driver-Based Estimate – Explanation

Driver-Based Estimate Calculation

The table below summarizes the equations used to determine the current driver-based estimates. KPMG conducted this estimate alongside the division direct reports through a series of interviews. For each role, the direct reports identified the drivers that affect workload (e.g., volume of applications). The direct reports then identified the relative weighting of each driver for every employee – which collectively add up to 100%. In addition, they estimated the impact each driver was expected to have on the person’s workload over the three-year planning period. The impact could be either an increase or a decrease in the overall workload.

For example, if a role’s workload is evenly impacted by both the number of applications and the complexity related to legislative changes, the direct reports would identify those two driver’s and weigh them both 50% for that role. If that role’s workload is impacted by application volume, and volume is expected to double over the next three years, the direct report would enter 100% into the Impact of Driver column. To better understand the potential impacts, it is helpful to think of the percentages in hours or days (e.g., a 20% impact represents an additional day of work per week, a 10% impact represents an extra 3.5 hours or half a day of work per week).

After identifying the driver weighting and impact, the model uses these inputs to generate the combined impact of drivers by multiplying each driver weighting with the associated impact – which is used to calculate the total headcount that will be required for each role by the end of the three-year period. As a last step, this model-based total headcount is adjusted in the last column to show only the incremental or additional headcount (over and above the current FTEs) that the City will require to manage the increased workload.

Division	Team	Role	Current FTE	Driver or Factor	Driver Weighting	Impact of Driver (e.g., increase or reduction in headcount)	Combined Impact of Drivers	Model-Based Total Headcount	Model-Based Incremental Headcount
Example Division	Example Team	Example Role	A	Driver B	B1	B2	$E = (B1*B2) + (C1*C2) + (D1*D2)$	$F = A * (1 + E)$	$G = F - A$
				Driver C	C1	C2			
				Driver D	D1	D2			

Stage 6: Defining the Demand Requirements

The table below compares the two different demand estimates that were developed for all 6 divisions. The driver-based estimate that suggests an additional **18.0 FTEs** and hypothesis-based estimate that suggests an additional **20.79 to 29.76 FTEs**.

Division	Team	Current FTE	Model-Based Incremental FTE	Hypothesized Incremental FTE Range	Key Rationale
Building Standards	Inspections	5.95	1.11	1 to 1.5	The hypothesized incremental range is based on the increasing number of complaints and the option to delegate work.
	Plans Examination	8.93	1.39	0 to 0	
	Other Roles	0.7	0.13	0 to 0.8	
	Division Total	15.58	2.63	1 to 2.3	
Engineering Services	Development Engineering	7.33	1.65	1.5 to 1.5	The hypothesized incremental range is based on the potential incremental workload from the downloading of responsibilities.
	Design & Construction	0.48	0.1	0.33 to 1	
	Engineering Infrastructure	0.43	0.1	0 to 0	
	Other Roles	0.79	0.18	0 to 0	
	Division Total	9.02	2.04	1.83 to 2.5	
Finance	Asset Management	0.05	0.01	0 to 0	The hypothesized incremental range is based on continuing the current operations and directing the work to a dedicated role.
	Financial Planning	0.66	0.14	0.5 to 1	
	Other Roles	0.11	0.02	0 to 0	
	Division Total	0.83	0.17	0.5 to 1	
Legal Services	Legal Services	3.04	2.07	3 to 5	The hypothesized incremental range is based on trends associated with increasing legal outsourcing costs and to address current backlogs.
	Division Total	3.04	2.07	3 to 5	

Stage 6: Defining the Demand Requirements

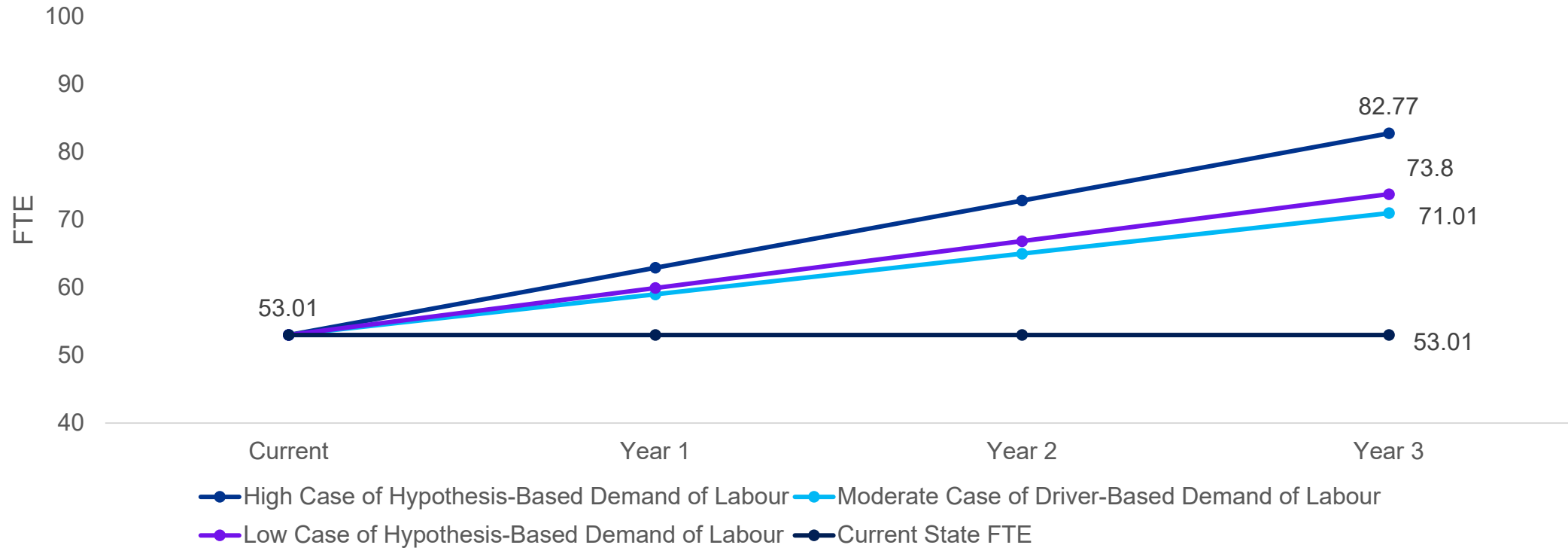
The table below compares the two different demand estimates that were developed for all 6 divisions. The driver-based estimate that suggests an additional **18.0 FTEs** and hypothesis-based estimate that suggests an additional **20.79 to 29.76 FTEs**.

Division	Team	Current FTE	Model-Based Incremental FTE	Hypothesized Incremental FTE Range	Key Rationale
Planning	Planning Approvals	13.51	4.91	7 to 10	The hypothesized incremental range is based on reduced cycle times and service level increases as they are expected to have a considerable impact on workload. Additional staff will also be used to reduce current staff overtime.
	Growth Management	7.52	4.84	7 to 8	
	Other Roles	1.85	1	0 to 0	
	Division Total	22.87	10.74	14 to 18	
Transportation	Active and Autonomous Transportation	0.48	0.11	0.15 to 0.15	The hypothesized incremental range is based on the expected increase in workload.
	Transportation Engineering	1.09	0.22	0.3 to 0.8	
	Transportation Operations	0.06	0.01	0.01 to 0.01	
	Other Roles	0.05	0.01	0 to 0	
	Division Total	1.67	0.35	0.46 to 0.96	
Total		53.01	18.0	20.79 to 29.76	

Stage 6: Defining the Demand Requirements

Graph of Future Demand

The graph below illustrates that the divisions estimated that the range of FTEs they would require to support the growing demand is between **73.8 and 82.77 FTEs** – as illustrated by the low case (in purple) and high case (in black) generated using the hypothesis-based approach. The driver-based approach suggests that an estimated **71.01 FTEs** are required, which falls just below the hypothesized range.



Scenario – Legislated Reduction of Cycle Time Triples Workload in 3 Years (from 9 months to 3 months)

To illustrate the impact of the scenario that legislative changes will triple the workload related to that driver in the next three years, this complexity driver was increased to 200% in Step 3 of the workforce models. When the workforce models were developed, complexity due to legislative changes were assumed to increase workload by about 20%. By increasing this assumption to 200%, the incremental FTEs that are needed increased from **18.0 FTEs to 21.46 FTEs** in this scenario – an increase of about **3.46 FTEs** over the original estimate.

Division	Team	Current FTE	Current State Incremental Model-Based FTE	Legislative Changes Incremental Model-Based FTE
Building Standards	Inspections	5.95	1.11	1.11
	Plans Examination	8.93	1.39	1.39
	Other Roles	0.7	0.13	0.13
	Division Total	15.58	2.63	2.63
Engineering Services	Development Engineering	7.33	1.65	2.17
	Design & Construction	0.48	0.1	0.1
	Engineering Infrastructure	0.43	0.1	0.1
	Other Roles	0.79	0.18	0.42
	Division Total	9.02	2.04	2.81
Finance	Asset Management	0.05	0.01	0.04
	Financial Planning	0.66	0.14	0.4
	Other Roles	0.11	0.02	0.09
	Division Total	0.83	0.17	0.44

Scenario – Legislated Reduction of Cycle Time Triples Workload in 3 Years (from 9 months to 3 months)

To illustrate the impact of the scenario that legislative changes will triple the workload related to that driver in the next three years, this complexity driver was increased to 200% in Step 3 of the workforce models. When the workforce models were developed, complexity due to legislative changes were assumed to increase workload by about 20%. By increasing this assumption to 200%, the incremental FTEs that are needed increased from **18.0 FTEs to 21.46 FTEs** in this scenario – an increase of about **3.46 FTEs** over the original estimate.

Division	Team	Current FTE	Current State Incremental Model-Based FTE	Legislative Changes Incremental Model-Based FTE
Legal Services	Legal Services	3.38	2.07	3.19
	Division Total	3.04	2.07	3.19
Planning	Planning Approvals	13.51	4.91	5.34
	Growth Management	7.52	4.84	4.84
	Other Roles	1.85	1	1.16
	Division Total	22.87	10.74	11.35
Transportation	Active and Autonomous Transportation	0.48	0.11	0.32
	Transportation Engineering	1.09	0.22	0.65
	Transportation Operations	0.06	0.01	0.05
	Other Roles	0.05	0.01	0.01
	Division Total	1.67	0.35	1.04
Total	53.01	18.0	21.46	

Strategies for Addressing Capacity Requirements

When reviewing the workload of each position, each division should ensure that their staff perform tasks that align with the City and their division's overall priorities and goals. To ensure this alignment between the work performed by each individual and the division's goals, the City should consider identifying processes that may be:

01

Dumped

The divisions should consider dumping any work that is both non-value add and not legislatively mandated.

02

Diminished

The divisions should consider conducting a process review to identify any processes that could be streamlined for greater efficiency.

03

Delegated

The divisions should consider reviewing the individuals that perform each task to identify any work that could be cascaded down. This would empower other staff members and allow more senior staff to focus on more complex and higher-value activities.

04

Directed

The divisions should reviewing all work performed to ensure it aligns with the divisions mandate. If they find the division is performing out-of-scope work, they should consider directing it to another division or function.

Strategies for Addressing Capacity Requirements

During the interviews, a number of suggestions were identified for identifying capacity and better matching the work that employees were doing to the mandates of their division and their skillsets. While there were no examples of “Dump”, an ability to leverage the other strategies was raised:

- **Diminish:** Automation will achieve the goal of streamlining some processes which is impacted to have an efficiency over time, despite the fact that digitization projects will require additional resources or capacity to design and implement them
- **Delegate:** A number of situations exist whereby managers are hands-on ‘working’ managers, with little time for forward planning and handling escalated issues. In the future, when additional resources are recruited, there will be an increasing need to delegate down work away from the managers – freeing them up to do more coaching of new resources as well as handle the anticipated increase of escalated issues, given the increasing complex, political and litigious environment
- **Direct Away:** Examples of ‘scope creep’ were identified whereby some divisions have been taking on work that is outside of their mandate, which was possible when a little excess capacity existed – for the sake of strengthening the relationship. Given the anticipated increase in workload, every division took a close look at the activities of their team members and identified instances where work needs to be directed away from one division – and directed towards another, to better match the work to the mandates of the respective divisions. The most significant example in terms of headcount involves directing legal work away from the divisions and to the Legal division, assuming that they can secure the additional resources required to adequately support the business.

City of Waterloo | Planning & Building Services Workforce Review

Future Considerations

To ensure the effective utilization of the model moving forward, the City should incorporate the following leading practices:



Workforce Model Owners

The City should consider assigning an owner to each division's workforce model. The owner of each workforce model would assume all the responsibilities associated with the model including the updates and any scenario analysis. The single owner allows for version control, remains accountable for the file, and ensures that any sensitive information (e.g., retirement information) is not broadly available.



Regular Updates

The workforce model owners should consider updating their division's workforce models on a scheduled basis such as a quarterly frequency, rather than relying on ad hoc updates. The rationale for this suggested frequency is based on the timing of changes triggered by Bills 109 and 23, such as work that will be downloaded from the Region and expected turnaround time for processing applications. This ensures the models remain up-to-date and limits the workload at year-end when preparing the model for the budget process.



Alignment to the Budget Process

The City should consider integrating workforce planning into its annual strategic planning and / or budgeting refresh processes. Some organizations have adopted a leading practice of using the workforce model to anticipate the resources required to deliver the strategic priorities – and use this capacity estimate when completing the staffing portion of their annual budgets. A disciplined cadence of regular workforce model updates will ensure that the City has deeper insights in its current supply and cost of labour, upon which to base future labour estimates.

Appendix

Appendix A: Scope of Review

City of Waterloo | Planning & Building Services Workforce Review

Project Approach

KPMG’s approach to this project was divided into five (5) phases. Each phase was focused on the accomplishment of specific tangible objectives and activities. Below is an outline of KPMG’s approach for each phase.

Phase 1: Project Initiation Jan.	Phase 2: Strategic Direction & Planning Assumptions Jan. – Feb.	Phase 3: Supply & Demand Analysis Feb. – Mar.	Phase 4: Gap & Solution Analysis Mar.	Phase 5: Final Report April.
Met with the Project Team to clarify expectations, clarify lines of inquiry, and refine proposed stakeholder engagement plan.	Performed a Documentation review, conducted working session #1 to validate strategic direction and planning assumptions, and developed workforce templates.	Completed supply and demand analysis and developed the workforce models. The supply analysis identified the current state and inputs for each division’s workforce models. In the demand analysis we identified the workload drivers and developed staffing level projections for the planning horizon.	Identified the workforce gaps, considered potential solutions, and aligned the recommendations. In this phase, KPMG finalized the workforce models and conducted a final working session to validate the models with division leadership.	Completed the final packaging of the workforce models, developed final report, and guide for refreshing models.

Documents Reviewed

Throughout the project KPMG reviewed documentation provided by the Project Team and documentation discovered during desktop research to support the analysis. Below is a listing of the documentation reviewed over the course of this project.

Document Title	Document Title
Building Permits – 10 year permit stats 2012 – 2022	2023-01-23_IPPW-Engineering Services – Workforce Review_FINAL
Planning – Applications 2012 to 2022	Turnover (2018 – 2022)
City of Waterloo – Planning and Building Workforce Review – Coop Students	FC – 023 – Development Charge Interest Policy
CO21 – Traffic Technician Co-Op Fall 2021	Summary of Bills
Waterloo Org. Charts January 2023	Job Descriptions

City of Waterloo | Planning & Building Services Workforce Review

Stakeholders Engaged

Throughout the project KPMG engaged stakeholders to gain an understanding of the current operating environment and obtain their perspectives regarding the desired future state. Below is a listing of all the stakeholders engaged over the course of this project.

Stakeholders Engaged	Stakeholders Engaged	Stakeholders Engaged	Stakeholders Engaged	Stakeholders Engaged	Stakeholders Engaged
Senior Director IPPW, Director Planning & City Planner Manager, Planning Approvals Manager, Growth Management	Commissioner, Corporate Services Director, Financial Planning & Asset Management Senior Financial Analyst	City Solicitor Assistant City Solicitor	Director, Engineering Services Manager, Development Engineering Manager, Design & Construction Manager, Engineering Infrastructure	Director, Transportation Services Manager, Transportation Project Manager, Active Transportation	Director, Building Standards & Chief Building Official Manager, Inspectors Manager, Plans Examination



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