A ‘Lean’ Approach to Client Records Management

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EXECUTIVE SUMMARY

INTRODUCTION

The Employment and Labour Market Services Division (ELMSD or the Division) of the BC Ministry of Social Development is responsible for administering federal and provincial employment programs and services in British Columbia. It is responsible for the management of client records, including responding to client record requests in accordance with the *Freedom of Information and Protection of Privacy Act* (FOIPPA). The Division has recently undergone significant business transformation that has resulted in an increase in the volume and complexity of requests for client records, which has created confusion, delays and inconsistencies in business processes and has increased staff workload.

The Division has identified the need to review the client records management processes to develop a better understanding about how these processes have evolved, identify resource requirements and identify areas for business efficiencies. This project addresses the research question of: *how can lean management be applied to support ELMSD in business process improvements to client records management?* Lean management, commonly referred to as lean, is a customer-centered business philosophy that focuses on creating customer value based on waste elimination and prevention and continuous improvement. Lean has been endorsed by the BC Provincial Government.

METHODOLOGY AND APPROACH

This research project uses lean management as its conceptual framework to analyze and improve the records management process in ELMSD. This includes using Deming's process improvement cycle of define-measure-analyze-implement-control or what is commonly referred to as the DMAIC approach, which is ideal for making improvements to established processes.

The analysis began with a literature review on lean management to better understand trends and criticisms of lean and how it has been applied in the public sector and specifically to records management.

Next, a mixed method approach was used to collect qualitative and quantitative data. Qualitative data was collected using group interviews with ELMSD records clerks to get a better understanding of the current state of records management and to map out processes related to requests for client records. From a lean perspective, engaging with front-line staff is essential to successfully identifying sources of waste at its root cause and implementing solutions.

Quantitative data was also collected using data from ELMSD's information management systems to help identify trends in the volume of client record requests. In addition, sampling was used to review e-mails on client record requests over the past year to observe the process flow from when the division receives a client record request, to when it responds with the necessary information. There were 194 samples of client record requests reviewed which were analyzed to provide metrics and trends on turnaround time, number of people or emails involved in responding to the request, and trends in the types of record requested.

Based on findings and analysis, a number of recommendations were put forward in collaboration with the records clerks.

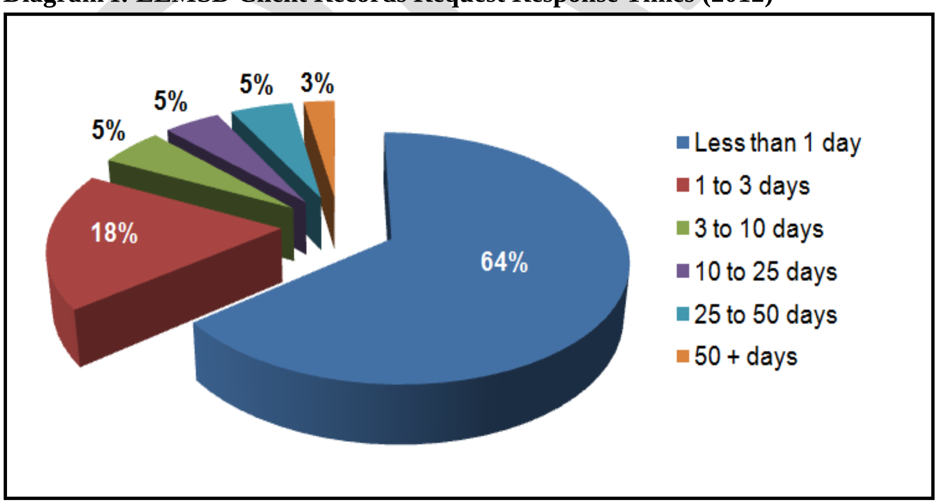
FINDINGS

Academic literature and case studies have concluded that lean management is applicable to the public sector and have demonstrated that it can generate significant cost-savings by using resources more efficiently than in the past. The most important lessons learned from other case studies include applying lean management as a long-term approach, adapting lean methods and tools to the situation, utilizing front-line staff as drivers for change, and having strong executive support for lean initiatives.

Findings on the current state show that ELMSD manages approximately 300,000 client records, which they must maintain for seven years after records move to off-site facilities, as per the *Document Disposal Act (RWSBC 1996, c. 99)*. In 2012, the number of accessions (moving semi-active records to off-site locations) has dramatically increased due to transition from ten employment programs to one, for the EPBC. There were 200 accessions completed in 2012 (as of the end of November), which is more accessions than in 2006 – 2011 combined (178 accessions). This takes up considerable amount of staff time, with estimates for previous years taking 0.25 FTEs, and in 2012, estimates from 0.8 – 1.0 FTE. Therefore, one of the key findings in the report is that ELMSD needs to find better ways to manage accessions to balance workload pressures.

Another key work function of ELMSD records staff is responding to client records requests. In accordance with the *Freedom of Information and Protection of Privacy Act,* ELMSD has 72 hours from receipt of request to the division to provide the requested information. ELMSD is on schedule to respond to over 450 client records requests in the 2012-13 fiscal year. Statistical sampling of requests in 2012 shows that ELMSD was able to comply with the three day turnaround time 82% of the time, as shown in Diagram I.

Diagram I: ELMSD Client Records Request Response Times (2012)



Findings on the response time per type of request are shown in Table I.

Table I: Average Response Times and Data on Record Request Samples in 2012

Type of Request	Number of Samples	Average Lead Time	Average Number of E-mails	Average Number of People Involved
FOI Requests	169	5.22	2.57	1.62
Regional Requests	12	3.19	6.42	2.58
Civil Litigation	11	3.54	5.82	2.91
Demand Orders	2	11.80	12.00	5.00
Total	194	5.07	3.09	1.78

The most common type of client record request is for FOI requests. On average, ELMSD responds to requests in 5.22 days; however, this average is drastically skewed by 8% of the requests that were in transition status. These transition files averaged 48.5 lead days due to files being inaccessible or challenging to locate due to the large volume of client files in boxes or in transit amongst many different service providers or to off-site facilities. Transition files are considered exceptions to the regular process since the contracts for the EPBC extend for five years, and a large transition of client records is not anticipated as part of current operations. When taking this into account, ELMSD average response time falls well within the three day expectation, as shown in Table II.

Table II: FOI Request Response Data, Segmented by Transition Files and Non-Transition Files (2012)

Program	Average Lead Time (Days)	Average Number of E-mails	Average # of People involved
Transition Files	48.51	7.50	3.64
Record Requests excluding Transition Files	1.23	2.04	1.40
Total FOI Requests	5.22	2.57	1.62

Findings on the process flow for responding to records requests follows the ideal process 64% of the time, as measured by requests that were completed in less than a day where records staff had tracked records of where to access the client file. The remaining 36% of samples shows process variability and opportunity for improvement. A key source of process variability is caused by stakeholder knowledge gaps in records management. Examples include service providers who have not followed the accession process to return semi-active records to off-site facilities; staff who do not know how to retrieve records; or records staff not knowing which field staff to contact to obtain records. These knowledge gaps slow overall response time and require additional work by the records clerk to explain processes or to do investigative work to find the client file.

Regression analysis also showed that the more people involved or e-mails generated in responding to a request, the longer the total response time. Findings show that for each additional person involved in complying with a records request, the process is delayed by three (3) days; while each additional e-mail slows the process by one (1) day. The coefficient of determination for the data sets show that the data does not fit the trend line well, meaning that this is not a very accurate predictor of future trends.

Records staff also identified some gaps in how they will manage work going forward. In particular, there was concern on how records staff will respond to client record requests with the new Integrated Case Management (ICM) system. Another challenge was that the records team was reduced from two (2) full-time employees to one (1) full-time staff member, which presents concerns about workload pressure and coverage to maintain records processes in the future. These findings have helped shape the recommendations for ELMSD on client records management.

RECOMMENDATIONS

Based on the findings, recommendations have been made in six theme areas, as shown in the Table B. These recommendations are all based on lean teachings, which are also listed in the table, along with estimated annual savings.

Table B: Recommendations and Estimated Annual Savings

Theme	Recommendations	Est. Annual Time Savings	Lean Influence
Error and Waste Reduction	a) Build stronger relationship with Information Access Operations to reduce errors and identify ongoing process improvements.	3.5 hours action time; 11 days lead time.	System integration. Reduce waste: defects.
	b) Use Team and Contact Leads as first point of contact when communicating with regional staff.	68.8 days lead time; 15.2 hours of action time.	Standardize process to reduce process variability
	c) ELMSD records staff to track electronic only.	38 hours of action time.	Reduce waste: unnecessary motion of employees and over processing
Stakeholder education	a) Educate stakeholders by communicating process through web sites and other corporate communications methods.	347 lead days 210 less e-mails 123 less people 103 hours action time	Continuous learning; investing in training. Standardization of process.
	b) Host information sessions.		
Regulate off-site process	Establish schedule to off-site records	64.5 fewer lead days; 16.1 fewer hours of action time; 97 less e-mails	Standardize process to reduce process variability
Balance workload pressure	Stagger annual accession dates for each region throughout the year.	0.4 FTE = $27,000	Establish flow/ resource leveling.
Future Planning using ICM	a) In the short-term, training required for Records Staff on how to export report data from ICM.	Future savings: 50% less action time	Reduce waste: unnecessary over processing.
	b) In the long-term, work with ICM and reporting team to develop export capabilities in ICM.	Future savings: 50% less action time	Reduce waste: unnecessary over processing.
Strengthen Records Team	a) Train other ELMSD staff on records process for business continuity and to ensure appropriate coverage for records functions.	Future savings: reduce lead time on client record requests during records clerk absences.	Continuous learning; investing in training.

Theme	Recommendations	Est. Annual Time Savings	Lean Influence
	b) Document standardized process steps on how to respond to client records requests for business continuity and to support back-ups.	Future savings: 30% time savings for back-ups for standardized set of directions.	Standardization of process.
	c) Establish regular meetings with leadership to identify and implement continuous improvement opportunities.	Future savings: continuous improvement opportunities	Executive support; front-line staff involvement in continuous improvement.
	d) Implement negative performance reporting on the total number of requests that exceeded the 3 business day turnaround time to allow ELMSD leadership to monitor performance and trends.	Future savings: continuous improvement opportunities	Continuous improvement through performance monitoring.

These recommendations are estimated to reduce the need for a second records clerk to support accession management (savings of 0.4 FTE or $27,000), and on an annual basis, reduce 176 hours of action time (26% improvement) and 491.3 lead days (21% improvement) in responding to client records requests. In addition, planning for the future to support ICM requirements and to strengthen the records team will help support ongoing continuous improvement, an important element to successful implementation of lean.

In conclusion, lean management has been an effective approach in adding value to ELMSD client records management, and can provide ongoing value as a long-term strategy with time invested in continuous learning education and activities.

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1.0 INTRODUCTION

Over the past few decades, lean management has emerged as one of the leading management practices around the world (Rich et al, 2006 , p.1). Lean management, commonly referred to as lean, is a customer-centered business philosophy that focuses on creating customer value based on waste elimination and prevention and continuous improvement. It was first pioneered in the auto-motive industry, and its concepts, tools and techniques have spread to many other industries, including the financial, health and services sectors.

As many governments continue to face increased fiscal pressures while trying to meet citizens' demands for better and higher quality services, some governments are turning to lean as a way to more effectively manage their business. Over the past decade, many public sector organizations are using lean to transform their administrative processes and services to achieve more outcomes with fewer resources. Governments in the United Kingdom, the United States, Australia and Canada have implemented lean initiatives with the goal to use resources more efficiently to improve outcomes for citizens.

In May 2012, John Dyble, Deputy Minister to the Premier and Head of the BC Public Service, challenged civil servants to embrace lean management as a way to find efficiencies in the workplace. He states:

> In these economic times, it's more important than ever that each of us keeps finding new efficiencies in our jobs and in the ways that we work together to deliver programs and services to British Columbians. That's why we are launching the Lean Initiative across government (see Appendix 1 for full e-mail).

The Lean Initiative includes provincial-wide projects in the BC public sector to increase value for taxpayers by eliminating waste and streamlining business processes (Ministry of Finance, News Release, Nov.5, 2012). Each Ministry is participating in at least two corporate initiatives, with 47 lean projects planned for the BC government in the 2012/13 fiscal year (ibid).

The Employment and Labour Market Services Division (ELMSD) in the BC Ministry of Social Development is not currently participating in one of the projects identified through the Lean Initiative; however, it recognized the opportunity to use lean management principles within its own workplace to improve client records management processes.

The purpose of this project is to perform a case study analysis to determine how lean management techniques can be used to improve client records management for the Employment and Labour Market Services Division.

1.1 PROJECT OBJECTIVES AND CLIENT

The client for this project is the Employment and Labour Market Services Division (ELMSD) of the BC Ministry of Social Development who is responsible for administering federal and provincial employment programs and services in British Columbia. The division is responsible for the management of client records for all clients that access case managed services through government sponsored employment programs. Client files may include information on interviews with the client, assessments, services and financial supports received by the client, and other relevant employment documentation such as resumes or training certificates.

The division works with its service providers for the creation, storage, retrieval and destruction of client records in accordance to the *Document Disposal Act (RWSBC 1996, c. 99).* In addition, ELMSD must comply with requests for release of client information in accordance with the *Freedom of Information and Protection of Privacy Act* (FOIPPA).

There have been a number of significant changes to ELMSD over the past four years. In 2009, federally administered employment programs were transferred to the province, which included the transfer of 200 employees and six employment programs. In the following three years, ELMSD underwent a business transformation to reorganize its organizational structure and to integrate its ten employment programs (six federal and four provincial programs) into a single program. This culminated with the launch of the Employment Program of BC in April 2012, an integrated, client-centered program that is accessible to all unemployed British Columbians.

As a result of these business changes, the volume of clients, and corresponding client records that ELMSD manages has significantly increased. In addition, the volume and complexity of requests for client records has continued to increase over the past several years, which has created confusion, delays and inconsistencies in business processes and has increased staff workload. Furthermore, internal reorganization has moved the responsibility of client records management to a new branch in the division.

To address these challenges, this project has three objectives. First, this project will conduct a business review and document the current state of client records management so that the new Executive Director will better understand the functions and responsibilities of this unit. Next, it will analyze processes and trends in how ELMSD responds to client record requests to identify opportunities to improve efficiency using lean management to align with government's broader strategic initiatives. Finally, it will identify resource requirements and future planning needs relating to client records management.

ELMSD requires a business process review of how the division manages client records to better understand the process, create consistency in the execution of client record requests, and to identify ways to find efficiencies. This project will address the research question of: how can lean management be applied to support ELMSD in business process improvements to client records management?

1.2 Problem Definition

This project is intended to address concerns by ELMSD regarding workload capacity of staff to meet client records management requirements. The division has identified several factors that have contributed to increased workload pressures.

One of the key contributors to the change in workload was the shift in the division's service delivery model in 2012 to an integrated employment program. The intent of this shift from ten programs to a one-stop model was to make it easier for clients to access services and to increased consistency and fairness in the availability of services across the province. While these changes were intended to make it easier for the end-users to access services, it has added complexity from an administrative perspective, including managing client records.

One of the complexities of a new integrated program was that volume and types of records that ELMSD manages has significantly increased. Prior to April 2012, contracted service providers that delivered the six federal employment programs retained custody and management responsibilities of client records for their own records. Now that all programs are integrated, the Ministry is required to manage all client records created through the Employment Program of BC. This dramatically increases the number of client files that ELMSD needs to manage.

In addition, the transfer to the new Employment Program of BC meant that there were large numbers of client files being transitioned from old to new service providers. This included the transition of 21,000 active client files from legacy programs to the new program. This was by far the largest transition of client records that ELMSD has had to manage, which made keeping track of the location of all client files at all times difficult. In addition, former provincial service providers were required to return their closed client files back to the province's off-site facilities. This resulted in more returns (accessions) of boxes to off-site facilities in 2012 (200 accessions) than from 2006 – 2011 combined (178 accessions), which has significantly increased workload pressures on the record clerk.

Through these changes, client records management has continued to be an important and required function of the division, which includes responding to *Freedom of Information (FOI)* requests to access client records within three business days. During the recent major transition, a back-log of FOI requests was created for the first time in ELMSD's history of requests where files were unable to be located or accessed due to transition purposes. This raised concern by ELMSD Executive to determine if there were negative trends emerging, where efficiencies could be gained, and what support was required for the records clerk to ensure ongoing compliance with legislative requirements.

The division has historically managed client records with one records clerk; however, in July 2012, ELMSD hired a second records clerk on a temporary basis to help support the increasing workload on the existing staff. One of the key concerns, however, is that ELMSD faces a 30% administrative budget reduction at the end of the 2013/14 fiscal year and must find ways to continue to maintain the work, but with fewer resources going forward. It is timely for the division to do a business review of its current state, trends, opportunities for efficiencies, and future requirements to get a better understanding of how it can reorganize its work to meet budgetary, legislative, and work requirements going forward.

1.3 Organization of Report

This report will begin with an overview of the methodologies and approach used to conduct the research for this project. It will then provide background information on lean management, which is the conceptual framework used to identify efficiencies for this project. This will be followed by a literature review on lean management, including its trends and criticisms, and application to the public sector and records management. The report will then summarize its findings from the focus groups and individual interviews on the current state of ELMSD client records management and client record request processes. Next, it will share findings from the review of client record requests over the past six months. Finally, it will provide a number of recommendations based on the findings and lean principles and practices.

DRAFT

2.0 Methodology and Deliverables

The following section describes the conceptual framework and data collection methods that will be used for this project. It also describes the scope and limitations of the project as well as ethical considerations in conducting this research.

2.1 Methodology and Data Collection Methods

This research project uses a case study approach for its methodology. A case study was considered a suitable approach because this project involves studying and documenting a unique case in depth. In this project, ELMSD client records management is the case subject, and what is being analyzed is how lean management can be used to affect business processes improvements. The case study approach allows the researcher to use multiple data collection methods to get a fulsome understanding of the situation.

This research project began with a literature review on lean management. Next, a mixed model approach was used to collect qualitative and quantitative measures. Both types of data are considered important in understanding the current state of ELMSD records management, understanding the trends, and identifying sources of waste and opportunities for improvement. Data collection methods are described below.

Literature Review

The purpose of the literature review was to better understand lean as a business philosophy, including its history, leading principles, tools, prevalence and applications, and criticisms. A review of books, journal articles and other published works was conducted using searches on Google books and scholar, journal databases such as Academic Search Elite and JSTOR, local universities and libraries, and education-based institutes that specialize in lean such as the Lean Enterprise Institute, the Lean Enterprise Research Centre, and the Global Lean Network. Findings for the literature review are detailed in Section 4.0, which includes findings on lean's applicability to the public sector and records management.

Qualitative Data: Group and Individual Interviews

As with all lean initiatives, participation and implementation from front-line staff are instrumental to the success of this project and towards building a culture of continuous improvement. This project engaged directly with the two records clerks as the primary participants for identifying sources of waste and solutions to improve current state processes. In addition, their supervisor and Executive Director were engaged to ensure leadership support and to receive additional input as needed. This included regular meetings with the Executive Director to provide project status updates, share findings and recommendations, and ensure the project was meeting the Executive's needs.

Establishing a current state baseline is an important first step in lean initiatives. To help understand the current state of records management, the two records clerk and their supervisor participated in an initial three-hour group interview to provide details on the scope of work involved in client records management for ELMSD. The following questions were addressed during the group interview:

- What type of records does ELMSD manage?
- How many client records do they manage?
- What legislative or policy requirements exist in relation to the records process?
- Where are records stored?
- How are records retrieved?
- What are the different functions performed by records clerks?
- How much time do records clerks spend on different functions?

The current state findings from this group interview are detailed in Section 5.0.

After a baseline was established on the current state of ELMSD client records management, a second group interview was held with the records clerks to begin to address the problem around the increase in client record requests and whether ELMDS was consistently meeting legislative turnaround times. A second three-hour group session was used do value-stream mapping, which included step-by-step processing for client record requests. The objectives of this session were to determine:

- What does the client record request and inquiry process look like?
- How long does it take to respond to client record inquiries?

Value stream mapping is one of the most important tools in lean initiatives to help map out the process and identify sources of waste and variability from the most efficient process flow. The group also identified longer-term gaps and brainstormed short and long-term opportunities to improve the records process.

Follow-up interviews were also held with the records clerks (with both records clerks, or individually as available) as quantitative data became available to continue to evaluate opportunities to eliminate waste and add value to the process. A final group session was also held with the participants to review findings and recommendations throughout the project, and collect other feedback on recommendations.

Quantitative Data: Statistical Analysis

Quantitative data analysis was used to help understand trends and validate sources of waste in ELMSD's client record processes. Data and statistics from ELMSD's information systems were used to answer the following questions:

- How many client records does ELMSD manage?
- How many client record requests does ELMSD receive?

The study then assessed client record requests that had occurred from January 2012 to the end of November 2012 by reviewing e-mail history of record requests and responses. A total of 194 client requests were reviewed out of a total of 390 requests received to date, representing a 95% confidence level of the total population (with 5% sampling error). The sample population of e-mails was limited for some types of client record requests, since e-mails are considered transitory records and are disposed of every three to six months based on file size. As such, the sample population to draw from was limited to 212 client file requests, which skewed the sample to trends occurring in the later half of the calendar year. Appendix 4 shows the types of client file requests by program and the available number of e-mail records.

E-mail records for each type of request were pulled at random from ELMSD's hardcopy files. As there are different types of client file requests (e.g. different programs, and different requestors) the number of files from each type of request was selected based on maintaining a 95% confidence level for each program or type of request. Please refer to Appendix 4 for details on the different types of requests, number of available client records, and number of samples pulled for each.

The purpose of the e-mail sampling exercise was to validate the actual (as opposed to perceived) process flow for client record requests by following the electronic paper trail. For each e-mail trail, the following was tracked:

- type of record request (e.g. civil litigation, Freedom of Information request or regional request);
- employment program of record request;
- response time (from receiving request to providing the requested information);
- number of people involved in responding to the request; and
- number of emails generated by the request.

Note that observations on these measures were limited to what was documented in the e-mails. For example, if there was no e-mail record to indicate that another person helped resolve the client record request, it was then not included in the findings.

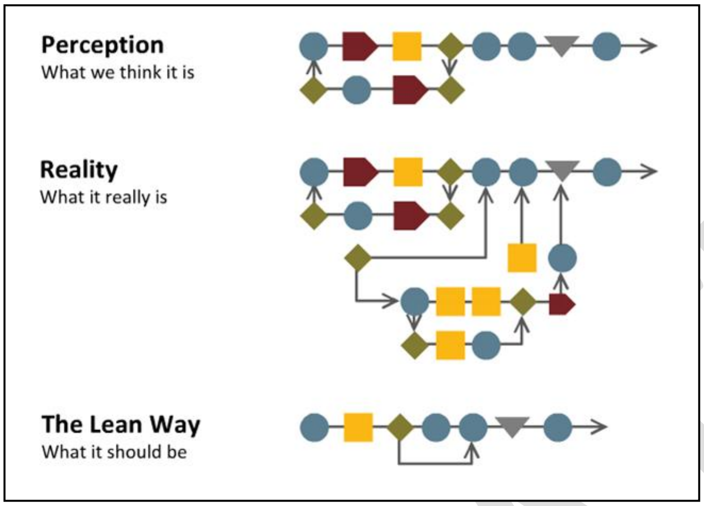
The analysis and findings on this quantitative data is detailed in Section 6.0.

2.2 Conceptual Framework

The project uses lean management as its framework to shape the research approach and to analyze and identify opportunities for business improvements. Lean management (or simply 'lean') is a customer-centered business philosophy that focuses on creating customer value based on waste elimination and prevention and continuous improvement. In the public sector, lean tools and techniques have been used in many case study scenarios to develop more seamless processes, improve flow, reduce waste and develop a better understanding of customer value (Radnor et al, 2006, p.6).

According to Teeuwen, author of *Lean for the Public Service*, an important initial step to any lean initiative is to have a good understanding of the current state (2011, p.44-45) . For business processes, this includes understanding perceptions from staff and leadership of how the current state process is perceived. Next, it is important to validate perceptions by observing what the current state processes actually look like in practice (Liker and Convis, 2012, p.74-75). Once the reality of the current state is mapped out, sources of waste can be identified and eliminated to help bridge the gap between reality and the most efficient or lean way is (Teeuwen, 2011, p.48). Figure 1 shows the approach for mapping and improving client records management processes (BC Public Service Agency, Lean 101).

Figure 1: Approach for mapping and improving client records management processes[1]



Lean encourages organizations to identify and eliminate waste by determining the root cause of the waste. Scientific business process improvements, such as Demings' define-measure-analyze-improve-control cycle, known as the DMAIC approach, are often used to support root cause analysis for existing processes. The main steps for the cycle are:

- **D**efine: problem statement and goals
- **M**easure: list of probable causes and root causes (via value stream mapping)
- **A**nalyze: select quantified cause and root causes
- **I**mprove: implement the solution
- **C**ontrol: share and maintain solutions (Arthur, 2007, p.109-110).

These phases help a team move logically from defining a problem through implementing solutions linked to underlying causes, and establishing best practices to make sure the solutions stay in place (George et al, 2005, p.1). It is best applied to make improvements to existing processes where the basic processes, product or services remain relatively stable (ibid, p.2). While it is important to follow-through with all the DMAIC steps, George et al further argue that lean also encourages that quick improvements can be implemented right away as they are identified to help build momentum towards efficiencies. For example, non-value-added process steps and sources of variation from the most efficient process flow can be eliminated to improve process time once they are identified through value stream mapping exercises (ibid, p.11). This helps balance time and effort required to implement short and longer term solutions.

[1] Diagram Reference: BC Public Service Agency, Lean 101

The lean approach to mapping out the perceived current state (through group interviews), observing actual process flows (using historical e-mail records) and implementing recommendations to get to "the lean way" will be the roadmap for this project. It will use also use the DMAIC approach to help analyze root causes for sources of waste, which will help lead to recommendations throughout the project. Lean and DMAIC are both good frameworks to use in case study scenarios, which is suitable for this project.

Further details on lean principles, tools and techniques will be described in Section 3.0.

2.3 Limitations and Delimitations

The scope of this project will be limited to business processes on client records management that are within the control of ELMSD.

This excludes all practices conducted by central government offices or other Ministries. For example, Freedom of Information (FOI) requests from clients or the public are all centrally managed by the Ministry of Citizens' Services and Open Government. This Ministry receives and triages all FOI requests and then reviews client file information and omits any confidential information that should not be released to the requestor. Ideally, lean preaches that all process flows should be integrated and streamlined to create the most value for the end-user; however, this would require more time and authority than this project has scope for. Therefore, for the purposes of this project, the 'customer' will be viewed as the agency submitting the client request to ELMSD. In the majority of cases, the client is the Ministry of Citizens' Services and Open Government), who sends in approximately 85% of the all ELMSD client requests.

Changes to information management systems and practices used by the BC provincial government (e.g. records classification systems) are out of scope for this project. These are government-wide classification systems that would take significant investment to understand how it applies to all BC government records, and take significant investment to implement any changes. As ELMSD does not have any influence into changing these systems or processes without large scale government-wide consultation with all Ministries and divisions (and significant investment of capital), it has been deemed out of scope for this project. All processes by ELMSD will therefore continue to comply with legislative requirements, government-wide standards and information management systems as established by the Office of the Chief Information Officer (OCIO) and BC Core Policy and Procedures. The process flow and analysis will therefore be limited to processes within ELMSD's control, which include directions, communication processes, and other records retrieval processes amongst ELMSD staff and service providers.

In addition, this research project was subject to staffing changes in the records team that were unrelated to this project. At the start of this project in October 2012, the records team consisted of two records clerks and their direct supervisor, who participated in initial group interviews. Partway through the research project, the supervisor and one of the records clerks moved to new positions (in Nov 2012 and Dec 2012, respectively). As there is a government-wide hiring freeze in place, the division was unable to refill these positions. These changes further emphasized the need to find more efficient ways to manage work associated with client records management. The records clerks were available for the majority of the project, with some work conducted with the one remaining records clerk in December and January. At the end of January, all original members participated in a final group interview to review all findings and confirm recommendations.

2.4 Ethical Considerations

This project was reviewed and accepted by the University of Victoria's Human Resource Ethic's Board on October 12, 2012 (Ethics Protocol Number 12-408). It has followed ethical requirements, including obtaining signed consent forms and ongoing verbal consent of all participants that provided input or feedback for the purposes of this project. All input collected from participants will pertain to the records management process and will be summarized in a way that does not identify personal comments. Participants are aware that there are limits to confidentiality due to the small number of records staff participating in this project. No personal client information from the sample exercises has been collected during the project, nor will any client information be disclosed through this report.

3.0 BACKGROUND: LEAN MANAGEMENT

This section provides a summary on the origins and development of lean management. In addition, it includes an overview of its key principles and tools and techniques. It also provides a brief description of how lean has been used in the BC government.

3.1 ORIGINS OF LEAN MANAGEMENT

Lean management is a business efficiency framework that has roots leading back to Henry Ford's integration of the production process in the early 1900's. According to Womack, Jones and Roos (1990), Ford's revolution of the manufacturing process was based on the interchangeability of parts, the assembly line, and vertical integration with suppliers (p.27). These practices led to mass production based on low product variety and high volume output to reach economies of scale. This became the standard practice for manufacturing.

Following World War II, Toyota's chief process engineer Taiichi Ohno began to re-evaluate Toyota's manufacturing approach using Ford's assembly process. The challenges, however, were that mass production was not feasible given Japan's relatively small market and the lack of capital available after the war which was necessary to purchase industrial equipment for an integrated assembly plant (ibid, p.49-50). To overcome this, Ohno identified a way to simplify product design to increase the variety of parts that could fit together and used equipment that could be interchanged in minutes rather than hours (Krafcik, 1988, p.43). This allowed Toyota to produce much smaller lot sizes, while having the flexibility to produce a number of different products and be responsive to demand without building large inventories. This process, along with the principles of continuous flow and supplier integration, was documented and named the Toyota Production System (TPS) in Ohno's 1988 book, *Toyota Production System: Beyond Large-scale Production*.

Over the following decades, similar practices to TPS were adopted in other Japanese manufacturing plants (most predominately Total Quality Management practices); however, it was not until the 1980's that a shift in traditional manufacturing began to occur in North America and Europe (Krafcik, 1988, p.44). This late adaption was due to Ohno's resistance to document TPS practices, partially to protect Toyota's competitive advantage, and in part to ensure the system wasn't 'codified' in order to maintain the continuous improvement philosophy of the organization (Womack et al., 1990, p.39). Krafcik's 1988 article, *Triumph of the Lean Production System***,** is credited with first coining the term *lean* to describe Toyota's production policy based on low inventories and streamlined processes. The article studies and compares Toyota with other auto-companies, and concludes that plants operating with a lean production policy can simultaneously achieve product variety and high quality and productivity (Krafcik, 1998, p.51).

In 1990, 'lean' gained global popularity with Womack, Jones and Woos' 1990 book, *The Machine that Changed the World*, which documents the findings of a five-year study of Toyota's manufacturing system (Rich et al, 2006 p.1). In 1996, Womack and Jones published a second book called *Lean Thinking*, which expanded the initial research findings into a set of applicable principles and techniques that could be used as a practical guide to continuous improvement. These books are considered foundational literature to the development of lean as a business practice and philosophy (Lean Enterprise Institute, n.d., A Brief History of Lean; Lean Enterprise Research Centre, n.d., What is Lean Thinking?).

3.2 Fundamentals of Lean

Lean philosophy is best described as building an organizational culture that focuses on continuous improvement towards creating value for the customer (Bicheno, 2004, p.5). It is generally associated with the identification, elimination and prevention of waste, which is an important part of creating value. It aims to simultaneously optimize costs, quality and customer service constantly, which are traditionally seen as trade-offs in traditional operations management (Bhatia and Drew, 2006, p.1)

Womack and Jones' (1996) outlined five key principles of lean in *Lean Thinking*, influenced by Ohno's 1988 book *Toyota Production System: Beyond Large-scale Production (p.10)*. These five principles are commonly recognized as the foundation of lean and are described below:

1. **Understand value from customer perspective:** at its core, lean is a customer-focused philosophy that states that businesses need to understand who their customers are and what they value in order to be successful (Womack and Jones, 1996, p.16-19).

2. **Map the value stream and identify waste**: once a business understands what their customers' value, the business needs to organize itself in a way to ensure that all activities are aligned around creating value for the customer (ibid, p.19-21). All other activities are considered waste. Ohno (1988) describes three types of waste using Japanese terminology: muda (wastefulness), muri (unevenness) and mura (overburden). The most commonly cited type of waste in lean literature is 'muda' which relates to eliminating activities that do not add value to the customer. Ohno (1988) identifies seven types of 'muda':

    1. Defects
    2. Overproduction
    3. Inventories (items awaiting further processing or consumption)
    4. Unnecessary over-processing (including inspections rather than designing the process to eliminate problems)
    5. Unnecessary motion of employees (e.g. walking between workstations)
    6. Unnecessary transport and handling of goods
    7. Waiting (e.g. between processes, for products, etc.)

    Some authors have recognized other types of waste, generally which are variations on the wastes listed above. The most commonly cited 'eighth' form of waste includes the underutilization of human potential including skills, talent and creativity (Liker, 2004, p.11; Teeuwen, 2011, p.27).

3. **Create flow in the process**: business activities, including flow between suppliers and customers, should be aligned to ensure that materials, products and/or information keep moving without delays, interruptions or a build-up of inventory at any point in the process (Womack and Jones, 1996, p.21-24). This relates to reducing muri (unevenness) and mura (overburden) types of waste and has given

rise to concepts of just-in-time production and resource leveling of the production process (Liker, 2003, p.125).

4. **Establish 'pull' from the customer:** the rate of production should be based on consumption rates, with ways to quickly identify and respond to changes in customer demand (Womack and Jones, 1996, p.24-25).

5. **Seek perfection:** organizations should strive for perfection – an unattainable state where there is no waste in the process and all customers get exactly what they want, when they want it. Achieving this state is considered unattainable due to constant changes in the environment; however, it is important for businesses to build a continuous improvement mentality with feedback mechanisms to support this process (Womack and Jones, 1996, p.25-28).

According to Liker and Convis (2012, p.4-5), other fundamental concepts to lean include having a long-term orientation, with large investments in developing human resources. This includes staff at all levels in the organization, so that all staff have the skill set necessary to support a continuous improvement culture. Lean encourages all employees, particularly front-line workers, to take an active role in eliminating waste and creating value for the customer (ibid, p.136). Respect for people, empowerment and teamwork are therefore considered essential values of organizations that are implementing a lean approach (Ohno, 1988, p.7-8 and 23-24; Womack and Jones, 1996, p.264; Liker and Convis, 2012, p.15, 20; and Sugimori et al, 2007, p.557-559).

3.3 Lean Tools and Techniques

There are a number of tools and techniques available to support the implementation of lean principles in an organization. Some of the most common lean tools and techniques are described here for each of Womack and Jones' five principles (1996).

1. **<u>Understanding Customer Value</u>**

   Defining the organization's customers and determining what the customer values (e.g. cost, quality, product specifications, durability, customer service, etc.) is an essential first step for lean organizations (Woodruff, 1997, p.140-141). There is no specific methodology for this in lean, although brainstorming sessions, stakeholder consultation and focus groups, and market research can be used to support these efforts. Ries (2011) suggests that one of the most effective ways of understanding customer value is to test an organization's value proposition by monitoring customer behavior, such as buying patterns, based on modifications or changes to the product or service (p.47-48). Ries (2011) calls this process 'validated learning' and states that it allows production methods to become more effective based on better alignment with customers' real needs (p.50-51).

   Stakeholder mapping is a way to document or graphically represent an organization's stakeholders and their interests and values. There are a number of ways to show a stakeholder map, including stakeholder diagrams, power and interest grids, and priority and influence rankings (Grossi, 2003, p.31- 34). Lean emphasizes understanding who the customers are, what they value and which stakeholders are important to pay attention to. This is particularly important for complex organizations, such as the public service, who may have many ‘customers’ with different roles, such as taxpayer, voter, client, or partner as well as political authorities and institutions (Teeuwen, 2011, p.8).

2. <u>Mapping Value Stream and Identify Waste</u>

Value Stream Mapping is a way to graphically display a process including stakeholders involved, actions of stakeholders, hand-off’s between stakeholders, time to complete each action, and lead time between actions (Womack and Jones, 1996, p.19-20; Teeuwen, 2011, p.43). It is generally used during kaizen workshops as part of understanding the current state and visually seeing where there are too many steps in the process (Womack and Jones, 1996, p.23). In general, the goal is to reduce the number actions, hand-offs, action time and lead time to reduce waste and increase efforts on value-added activity (Teeuwen, 2011, p.51-52).

Kaizen (improvement) Workshops are dedicated sessions for staff to evaluate processes to find ways to improve flow, add more value to the customer, identify waste, and make recommendations to improve a business process (Teeuwen, 2011, p.89). They are typically 3 to 5 business days, and nurture a creative environment that is facilitated by a lean expert that challenges the team to question current practices and norms (Powell, 2011, Kaizen Event Overview). It is typically used as an effective staff engagement and empowerment technique and is beneficial for quick results on selected processes (ibid).

Root-cause analysis is another common methodology used to support waste identification. A popular root-cause analysis tool that is commonly used in lean is the ***5 x Why diagram*** in which participants try to understand the causes of waste such as re-work, to eliminate it at its source. The first question is: “Why do we have the problem?” For each cause, the “Why” question is asked again until there are no sensible answers left and a potential solution is posed to eliminate the root-cause of the waste (Teeuwen, 2011, p.99).

Poka-Yoke refers to mistake-proofing where possible to avoid inadvertent errors, thereby reducing waste (Womack and Jones, 1996, p.61; Teeuwen, 2011, p.122-123). For example, if it is determined that most applications are rejected due to incomplete information or fields, one way to reduce re-work is to build in restrictions into the application process so that forms cannot be submitted unless required fields are filled out. Most forms will also highlight sections that are incomplete for the end-users when they try to submit or move forward in the form. Lean states that organizations should use *poka-yoke* techniques wherever possible to support long-term waste elimination (Harry, Mann, Hodgins, Hulbert, and Lacke, 2010, p.77).

5S is a workspace management tool to keep workspaces’ visibly and functionally organized. This is to help make it easier to identify waste and ensure time isn’t wasted in searching for items. *5S* stands for:

1. *Sort*: keep only what is needed and get rid of everything else.
2. *Straighten*: ensure there is a logical place for everything (e.g. stapler) based on accessible need.
3. *Shine*: keep work area clean and tidy.

4. *Standardize*: develop systems and procedures that support conformance to rules above, including standardizing workstations so that workstations are identical in where tools are organized.
5. *Sustain*: maintain standard processes to sort, straighten, shine and standardize (Arthur, 2007, p.34).

3. <u>Create Flow</u>

One-piece flow refers to the process of redefining how work is done, from traditional 'batch' processes to a continuous flow system where work is handed off and worked on immediately by the next person or unit (Teeuwen, 2011, pg.58-59). This technique is counter-intuitive to how traditional organizations are structured, whereby task-oriented work is saved (building inventory) to be completed in batches on a regular schedule. While this may be efficient from the perspective of the employee or department, it neglects customer value by creating longer wait times for the customer (ibid, p.57, 59-60). One-piece flow, on the other hand, encourages each new request to be processed immediately to eliminate inventory and wait times (both identified forms of waste) and increase customer value.

Resource/production leveling or heijunka refers to the process of leveling out the workload amongst all human resources in a process so that the amount of time it takes each staff to complete their duties is equal across the full process (Ohno, 1988, p.12-13). This reduces time wasted between activities when workload is unbalanced or dependent on other activities. Resource leveling is done by evaluating the capacity of resources against the time it takes to complete tasks and assigning tasks in a way that most efficiently uses resources to complete a process or project (Womack and Jones, 1996, p.349).

Extended enterprise, also known as ***supplier integration***, is a technique of integrating all the participants that are involved with providing a product or service, through formal or informal relationships. A central part of Toyota's success was ensuring that "the assembler and the suppliers could work smoothly together to reduce costs and improve quality, whatever formal, legal relationship they might have" (Womack et al., 1991, p.58). In the absence of formal acquisitions, extended enterprise can be achieved through strong governance and communications, setting clear expectations and performance specifications, ensuring all parties are customer-focused, and engaging in a long-term relationship to facilitate information sharing and tools and techniques to support (ibid, pg.60-61).

4. <u>Establish Pull</u>

Takt time refers to the time required to complete one job at the pace of customer demand (Arthur, 2007, p.324). Takt, which means rhythm, is used to ensure a level workflow at each stage of the process. For example, if a Toyota car is sold every minute, then production should be set up in one-minute value-added intervals that move to the next value-added activity until completion. The concept is to ensure perfect synchronization of the process with the rate of demand to reduce cycle times and inventories (Liker and Convis, 2012, p.91).

Kanban (Japanese for “visible record” or “signboard”) is a visual scheduling system that supports just-in-time production by creating a signal on when to produce more. Teeuwen provides a simple example:

> A customer is very thirsty and wants to be served his favorite drink without fail, but without constantly having to order. So, he has made a delivery deal with the bartender: There shall be two full glasses on the bar. When he’s finished one, he shoves it to the back and starts on the second, which is full. The empty glass serves as a kanban signal to the bartender, who removes it, and replaces it with a full one. This way, the customer decides the rate of delivery (pouring). When the rate varies, no large stock build-ups or thirsty shortfalls result. In this bar, a pull principle has been generated to guide a simple process, using kanban. The barman does not build a large stock of drinks but delivers only when the customer gives the signal—an empty glass (Teeuwen, 2011, p.65).

Just-in-time production, as the name implies, is a technique to minimize large inventories and build based on demand only. It reduces production lead time by having “all processes produce the necessary parts at the necessary time and have on hand only the minimum stock necessary to hold the processes together" (Sugimori et al, 1977, p.555). For example, Toyota will only produce a new car when there is a sale at a dealership, which creates a kanban at the assembly plant, which in turn creates signals to parts suppliers to replenish stock at the assembly plant. In the service industry, an example includes Subway sandwiches or other places that make and assemble food only when ordered by the customer, rather than traditional methods of building inventory of product. This reduces time and waste on unused inventory and further increases value for the customer through customization and product quality (Womack and Jones, 1996, p.557-559).

5. Seek Perfection

Lean leadership and a culture of learning are considered the most important success factors in implementing and sustaining lean as a business philosophy. Radnor et al state that:

> Lean cannot be sustained unless continuous improvement becomes an integral part of an organisation’s cultural norms. The habit of continuous improvement can only be maintained through clear communication, ownership of improvement throughout the organisation and management commitment (2006, p.76).

Some core lean concepts to build a continuous improvement culture include leveraging *‘sensei’*, going to the *‘gemba’*, and implementing *‘kaizen’* or continuous improvement, as part of daily work practices.

A ***sensei*** is a master of his or her area of work and is responsible for challenging a student, providing structured opportunities, and coaching so that the student may learn by doing (Liker and Convis, 2012, pg.51). In *The Toyota Way to Lean Leadership* (2012), Liker and Convis describe the importance of Toyota’s learning and development methodology of student and *sensei*. The *sensei* uses *shu ha ri* to depicts the three levels of involvement for the teacher: *shu* means to protect, *ha* means ‘to break away’ and *ri* means ‘freedom to create’ (ibid, p.54). In using this approach, Toyota encourages the true experts to be responsible for the development of others, rather than training specialists who will not be as familiar with the job as the *sensei*. This approach also encourages the *sensei* and student to take ownership of their learning and development by actually doing the work in practice, rather than learning about it in principle.

Gemba roughly translates to "where the actual work is done". An important lean concept is that leadership and senior management need to make a regular habit of 'going to the *gemba',* (known in Japan as *genchi genbutsu*) to observe the situation first-hand as if observing your own job rather than someone else's job (ibid, pg.25). Going to the *gemba* emphasizes the importance of experiencing and observing actions first-hand, and taking time to talk to and learn from front-line workers so that lean leaders develop a better understanding of their organization and its current environment. This better informs leaders of opportunities to identify waste and implement efficiencies in the organization. It is also important for demonstrating leadership support for staff-driven continuous improvement initiatives.

Kaizen, which translates to 'improvement', is typically referenced in lean literature as an event or workshop in which a project team evaluates a process, makes recommendations to improve the process, and implements and monitors the effect of these changes (Teeuwen, 2011, p.89-116). However, Likert and Convis (2012) clarifies:

> At Toyota, *kaizen* isn't a set of projects or special events; rather, it's an integral part of leadership. It's how the company operates at the most fundamental level. It's what the majority of leaders at Toyota are doing when they are leading: supporting *daily kaizen* (p.123).

There are two types of *daily kaizen*: maintenance *kaizen* and improvement *kaizen*. Maintenance *kaizen* refers to activities that respond to disruptions, mistakes or variation in the process to restore it to order, whereas improvement *kaizen* focuses on small, incremental improvements to the process that are put forward and implemented by front-line staff (ibid, p.123-125). The importance of embracing a *kaizen* culture is to have systems in place that encourage staff participation in generating ideas for improvement, and that empowers staff to implement these changes in a supported environment (The Kaizen Teian Approach, 1995, pg.35-37). This is done through good communication channels, and can be supported by something as simple as a suggestion board or idea box that is further evaluated by the team.

3.4 Lean and the BC Government

Lean management is a relatively new approach within the BC Government. One of the first uses of lean in the BC Government was in November 2010, where the BC Ministry of Health endorsed lean methods to reduce waste in the health sector and improve patient flow in accessing health services (Ministry of Health, 2011, p.4). Seven case studies of lean initiatives were implemented by the BC Health Authorities over the following year, which concluded that:

> "Lean also works in British Columbia's publicly-funded health care system. In the case studies featured in this report, Lean has been used to improve patients' access to services, reduce costs, implement evidence-based processes, and improve the patient experience. Since the evidence suggests that Lean process

> redesign can be a powerful tool for implementing change, health authorities should continue to use Lean methods and tools to improve quality, productivity and efficiency" (p.8-9).

In May 2012, John Dyble, Deputy Head of the BC Public Service, announced that the BC Government would be engaging in lean as a corporate initiative to find ways to be more efficient and add value to government services. A new branch in the BC Public Service Agency called the Lean Program Management Office was created to support these initiatives (BC Government Directory, Lean Program Management Office). Over the 2012/13 year, 47 corporate lean initiatives will be implemented to help streamline key service delivery areas in the public service (Ministry of Finance, News Release, November 5, 2012). Each Ministry was required to put forward two initiatives, which will be supported by corporate lean resources (ibid). The details and outcomes of these initiatives are not yet publicly available.

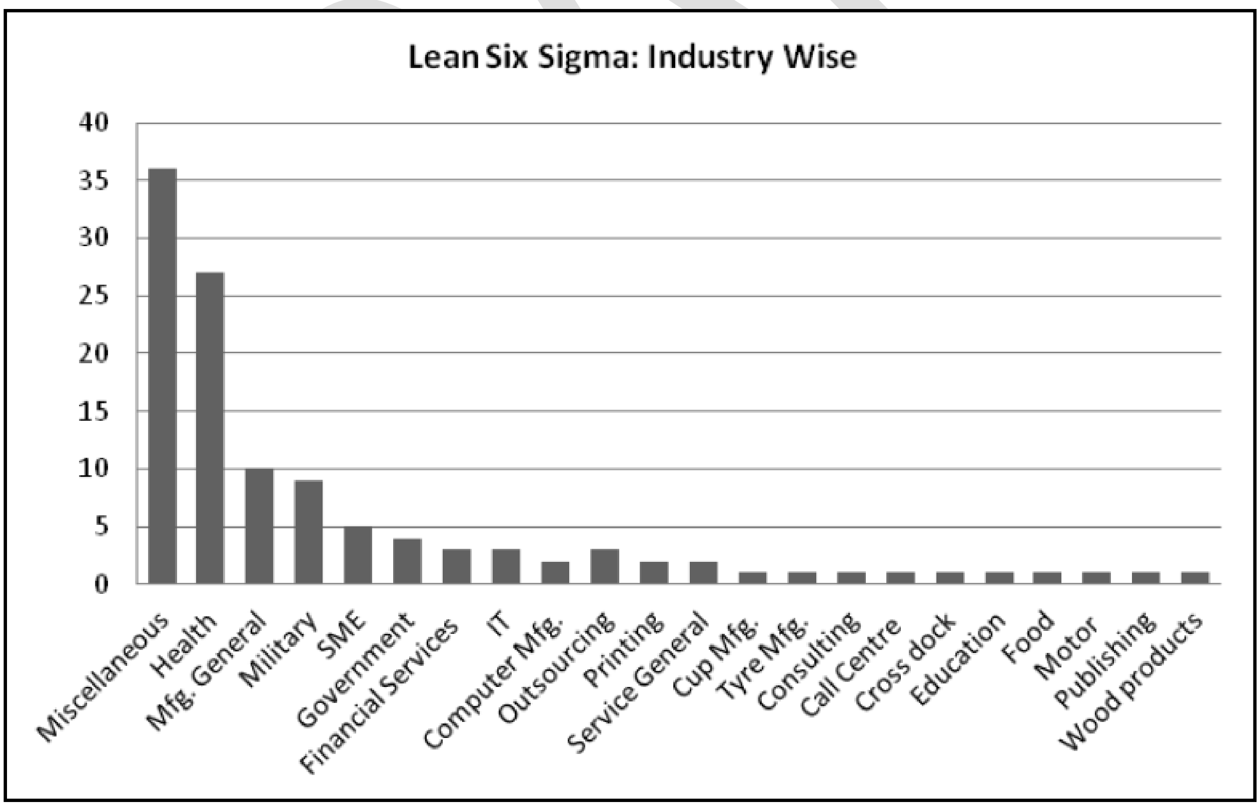
4.0 LITERATURE REVIEW

A literature review was conducted to understand the application, criticisms and trends of lean management. The findings of the literature review are detailed in this section. In addition, it provides a summary of how lean has been applied to the public sector and to records management.

4.1 LEAN MANAGEMENT: APPLICATION, CRITICISMS AND TRENDS

Hundreds of books and articles over the past few decades have served to strengthen the understanding of lean into a comprehensive business management philosophy, also referred to as the *lean enterprise*. One of the common topics in lean literature is how lean may be applicable to other industries outside of manufacturing. Womack, Jones and Roos (1990) suggested that "the fundamentals of lean production are universal – applicable anywhere by anyone" (p.9). In general, most literature acknowledges that lean is applicable to other industries, with documented case studies in information technology, construction, health, finance and accounting, the services industry, and government. A recent literature review by Zhang, Irfran, Khattak, Zhu and Hassan (2012) reviewed 116 papers on lean six sigma (a combination of lean with statistical quality measurements of six sigma) and found that lean case studies or theory was applied in the industries shown in Figure 2.

FIGURE 2: ZHANG ET AL (2012, P.602) LITERATURE REVIEW FINDINGS ON LEAN SIX SIGMA PAPERS BY INDUSTRY



Lean has been embraced and endorsed by a number of organizations from different industries such as General Electric, Intel, Boeing, Nike, Caterpillar, Kimberly-Clark and Southwest (Graban, 2007, Best Lean Companies for 2008) as well as the Obama administration (Ries, 2011, pg.68-69).

One of the early trends in the application of lean that was observed during the literature review was that lean was being applied in case study scenarios, using lean as a set of 'tools' for efficiency, rather than applying it as a comprehensive business or enterprise philosophy. As lean gained popularity through the 1990's and 2000's, more and more organizations became interested in how they could leverage such practices and were drawn to the plethora of lean tools available. Womack (2006) describes the period from the early 1990s up to the present as the 'Tool Age of the lean movement' (From Lean Tools to Lean Management). This produced measurable improvements in the short-term which provided additional credibility to lean practices.

One of the common critiques of lean management is that it has failed to provide empirical evidence on how it can be applied in a way that sustains outcomes and performance to achieve organizational excellence in the same way experienced by Toyota for over 50 years (Liker & Convis, 2012, p.3). Walker (2008) argues that social theories such as organizational management theories in general cannot truly be proved in a scientific manner, and instead "will often apply only in a one-off or inherently time-specific way…[that is] prone to dangerous half-truths" (p.67). Another common critique in the application of lean is that organizations often try to implement lean initiatives without fully embracing its full business philosophy. For example, Seddon and O'Donovan (2009) argue that application of lean to the services industry is being done in a way that undermines the true opportunity for significant performance improvement (p.1). They state that service organizations are simply applying lean tools to conventional services management, rather than using lean philosophy to step back and redesign the service paradigm by thinking of the service process as an integrated system (ibid, p.9-10).

These challenges have given rise to renewed focus of lean literature on management, leadership, organizational culture, and successful implementation of lean. In *The Toyota Way to Lean Leadership: Achieving and Sustaining Excellence through Leadership Development*, Liker and Convis (2012) explain that the most common pitfalls in the application of lean is using it as a set of tools to implement a cost-reduction program (ibid, p.240). They state that "sustaining improvements requires a combination of top leadership commitment and a culture of continuous improvement…to change the culture from one in which people simply do their own job in their own function to make their own numbers look good (a vertical focus) to one in which people are focused horizontally on the customer and on improving value streams that deliver value across functions" (ibid, p.4). This is best achieved by embracing lean's fundamental principles of respect for people and investing in long-term return on investment through staff training and development:

> If the world is unpredictable, then the company is going to need to adapt – always... Adaptability requires that everyone at all levels of the organization and in every department possess deep knowledge about departmental process and be able to sense change and respond appropriately. To do that, people need to be trained and empowered to think – all of them, all the time (p.15).

In addition to the growing literature, there are a number of organizations established to support the lean movement, including the Lean Enterprise Institutes (with international chapters), the Lean Enterprise Research Centre, the Global Lean Network, and a number of lean training organizations that certify lean experts and facilitators. Outside of Toyota, it is still early to determine the success of lean as a long-term business strategy.

Another recent application of lean has been using lean philosophy on new business ventures, which has been popularized in Ries 2011 book, the *Lean Start-Up.* This methodology supports entrepreneurs from business proposal, to proof of concept, and implementation using lean philosophy. It emphasizes using "validated learning" based on scientific experimentation rather than market research to build proof of concept, to shorten product development cycles and to better predict how customers perceive value (Ries, 2011, pg. 58). Some of these methodologies are being applied in government settings to support the testing and launching of new programs and services (ibid, pg.68-69). In addition, local networks such as the lean-startup, are taking shape, with local chapters in 17 countries and 97 cities (Ries, 2012, Meetups) which are helping to popularize lean amongst entrepreneurs.

Finally, lean has gained credibility in the public sector and has recently been endorsed by several governments around the world. This trend is described in the following section.

4.2 Lean and the Public Sector

Over the past decade, governments around the world have been turning to lean to respond to growing fiscal pressure and public demand for better services. Lean has been seen as an attractive private sector approach to increase productivity and create value in a time when most governments are experiencing diminishing human and financial resources.

As with other industries, there is debate on the applicability of lean in a public sector environment. Scorsone (2008) and Radnor and Walley (2008) state that governments have barriers in applying lean to the public sector. Most notably, they state that governments inherently lack a clear customer focus, competition and profit margin which are all important drivers in the private sector (Scorsone, 2008, p.62-63; Radnor & Walley, 2008, p.13). Because governments are responsible for serving all people on a number of services, it is difficult to measure the value stream or articulate tangible outputs to the end users, particularly when efficiency and speed may conflict with other social values such as fairness, equitable provision of service and due process (Scorsone, 2008, p.62). Bagley and Lewis (2008) further argue that governments are generally mandated to provide essential services, and without competition have little incentive to change established procedures to improve service quality and productivity (p.10).

Teeuwen (2012) on the other hand, states that although governments do not have a focused client base, that citizens as a whole can be segmented into seven different groups (customers; user; subjects; voter; taxpayer; partner; administrator) which can help government focus on value-add from these different perspectives (p.8). For example, as a taxpayer, a citizen is not a "customer" in the traditional definition since they have no choice to opt out; however, understanding that taxpayers value fair, transparent and efficient processes can help government shape value-added administrative processes (ibid, p.17).

Another argument identified by Bhatia and Drew (2006) against lean in the public sector is that bureaucratic organizations should prioritize its resources on policy rather than operations (p.1). This viewpoint stems from new public management principles, which gained popularity through the 1980's and 1990's which encouraged governments to 'steer rather than row' the boat (Osborne & Gaeble, 1992, p.30-31). As a result, many public operational services are outsourced to contracted service providers. Arms-length policy and competitive procurement policies present barriers to integrating the value stream for long-term working relationships between government and suppliers, which is an important component to building a lean enterprise. In addition, operational services that are performed by government agencies are often performed in silos due to the size and complexity of services to clients, which typically ignores holistic experiences to clients at the expense of department-driven targets (Bhatia and Drew, 2006, p.4).

Another argument, according to Carter et al. (2011), is that lean has a detrimental effect on employees, their working lives, and the service that is provided to the public (p.115). Bhatia and Drew, (2006) state that labour relations and union regulations can slow progress for lean initiatives by limiting innovative changes, restructuring of roles or organizational structure and downsizing (p.2). In addition, illness, absenteeism, and increased grievances caused by increased workloads can diminish value and create additional waste for citizens (Scorsone, 2008, p.121). For example, a 2008-09 study in the UK analyzed the effect on employees at the HM Revenue and Customs where lean techniques had been implemented on their processing departments and concluded that lean had a detrimental effect on employee morale, engagement and work satisfaction (Carter et al., 2011, p.119, 121). This was largely associated with the standardization of processes and emphasis on individual and team performance targets which reduced employee control and discretion, and diminished manager-employee relationships because of perceived micro-management (ibid, p.120-121). These opinions contrast with authors such as Teeuwen (2011) who argue that lean culture better empowers, engages and motivates front-line staff, particularly when staff are provided with appropriate training, are challenged to apply their analytical thinking skills, and are supported by leadership to follow-through on improvement initiatives (p.78-84).

According to Bhatia and Drew (2006), another barrier to applying lean to the public sector is transforming the organization culture since "most public organizations do not have the agility or frontline empowerment to respond to the changing demands of their customers" (p.3). This can be attributed to the deeply entrenched bureaucratic culture and hierarchal processes of the public sector that makes change slow and driven from the top-down. In addition, a comprehensive study in the UK concluded that one of the significant barriers to lean and conditions for success was the 'general belief that staff are overworked and underpaid' (Radnor and Whalley, 2008, p.14), making staff buy-in for improvement and efficiency gains more difficult.

Despite the challenges and barriers, there is ample literature and practical evidence to show that lean is transferable to the public sector and can be used to develop more seamless processes, improve flow, reduce waste and develop an understanding of customer value (Radnor et al, 2006, p.6). A number of governments have endorsed lean management and engaged in lean initiatives at the local, state or provincial, and federal level by governments in the United Kingdom, United States, Canada, Australia and Sweden (Zhang et al, 2012, p.600). This has resulted in positive outcomes such as reduced customer wait times, double-digit productivity gains, reduced backlogs, and a reduction in processing errors (Bhatia and Drew, 2006, p 2). This evidence has mainly been reported in case study evaluations. For example, eight case studies in the Scottish government concluded that all sites reported that "Lean improvement had been worthwhile and had produced significant measureable benefits to productivity, speed and quality (Radnor and Walley, 2008, p.19).

To date, the most prominent application use of lean in the public sector is in the health sector, where there is considerable literature, including text books, on best approaches and results of lean in this industry. For example, in 2010 the BC Ministry of Health, in cooperation with the Health Authorities, implemented a number of lean projects that resulted in positive client outcomes and waste reduction in all seven case studies, including reducing wait times from 66 to 8.5 days for eating disorder programs for children (BC Ministry of Health, 2011, p.78). The study concluded:

> Lean has been used to improve patients' access to services, reduce costs, implement evidence-based processes, and improve the patient experience. Since the evidence suggests that Lean process redesign can be a powerful tool for implementing change, health authorities should continue to use Lean methods and tools to improve quality, productivity and efficiency (ibid, p.78-9).

Lean has also been applied to other sectors of government, including citizen services areas. A 2006 study of all public sector lean initiatives and literature to date concluded that "lean is most suited to organisations with high volume, repeatable tasks that allow greater standardisation and integration, supported by a less hierarchical management structure that allows empowerment and engagement of the workforce" (Radnor et el, 2006, p.6).

The most commonly cited keys to success in applying lean to the public sector include:

- Executive support;
- Adaptation of lean to the situation (rather than adopting);
- Organizational readiness and capacity for change and education;
- Communicating a clear link from each lean initiative to an organization's strategic goals
- Engagement and 'buy-in' of frontline staff; and
- Long-term investment in the lean philosophy, including staff development and education to reinforce the lean transformation and build a culture of continuous improvement (BC Ministry of Health, p.78-79; Radnor et al, 2006, p.6; Radmore et al, 2006; Bhatia and Drew, 2006; Radnor and Walley, 2008; Radnore and Boaden, 2008, p.5).

As with other industries, it is too early to measure the success of lean in the public sector as a long-term business strategy, however, early indication shows it can have positive results when implemented in case study scenarios. Findings on lean tools and techniques and implementation lessons have been applied to this project to determine sources of waste, and ways to improve current records management practices.

4.3 Lean Management and Information Management

Records and information management is acknowledged as an important component of effective business management, including public sector organizations. Over the past decade, concepts of records management has expanded from physical storage of documents to a more comprehensive process that considers the full records life-cycle of records. The records management life cycle typically considers five different stages of record management: create, classify, use, retain and dispose (Hoke, 2011).

There is significant literature on records management standards and best practices. In 2001, the International Standards Organization (ISO) introduced standards and best practices for records management in *ISO 15489: Information and Documentation-Records Management*, and has made several publications since on records and information management. In addition, the Association of Records Managers & Administrators (ARMA) International has established a significant amount of literature on records management best practices, including releasing Generally Accepted Recordkeeping Principles (GARP) in 2009.

Most of this literature pertains to corporate level record management processes. Within government organizations, there is generally an oversight body that provides additional protocols around records management. In the BC Government, these standards are set by the Office of the Chief Information Officer, which ELMSD is required to comply with.

There is not a lot of research on the applicability of lean to records management. One article *called Streamlining Enterprise Records Management with Lean Six Sigma* by Brett and Queen (2005) concluded that:

> "Like manufacturing processes, document and records management processes consume resources and require the management of changes and additions. Improvements to document and records and information management processes can provide quantifiable benefits similar to those of manufacturing process improvements, that is, greater efficiency, faster response, enhanced customer service, reduced costs and increased quality" (p.60).

They argue that DMAIC is a suitable methodology to streamline records management processes and to improve the ways information flows into, through and out of the organization (ibid, p.60). Beyond these authors, there were not many articles to validate or discredit the use of lean with records management.

5.0 Findings: ELMSD Records Management – Current State

As described earlier, an important initial step to implementing a lean initiative is to establish a good understanding of the current state (Teeuwen, 2011, p.44-45). Documentation of the current state is also one of the objectives of this research project. Group interviews were held with the two records clerks and their supervisor to describe the current state of ELMSD records management. The findings from the group interview are described in this section.

5.1 Types of Records

The Employment and Labour Market Services Division is responsible for the management of two types of records:

- *Operational Records*, which include client records; and
- *Administrative Records*, which includes documentation relating to projects, policy, program files, human resources, strategies, financial information, briefing notes and other reports.

The records team provides support in the appropriate storage, retrieval and destruction of records. At present, approximately 80% of the workload is spent on operational records management, which is considered the higher priority, with the remaining 20% of time supporting administrative records management.

Administrative records management is out of scope for the purposes of this project, as there are other divisional projects in place to review administrative records. Therefore, the remaining ELMSD records summary focuses on operational (client) records management.

5.2 Employment Programs and Client Records

As per core government policy, ELMSD is responsible for managing client records throughout the four stages of the record life cycle, as shown in Figure 3.

FIGURE 3: RECORD LIFE CYCLE

Creation →	**Active** →	**Semi-active** →	**Final Disposition**
	In filing system in office or workspace	Sent to offsite storage, but still accessible	Now that it is inactive, will it be physically destroyed or transferred to the government archives

Client records are generally created for each client that uses government-funded employment programs, which includes programs funded by the provincial government as well as federally funded programs through the Labour Market Development Agreement (LMDA) that were transferred to the province in 2009. Table 1 below provides a list of employment programs and estimated client volumes served. Based on estimated clients served, ELMSD is currently responsible for approximately 300,000 client files that are in an active or semi-active (off-site location) state. This is considered a conservative estimate of client records since additional client records may be created for clients that may be referred to employment programs but may not have been accepted into the program. These clients have records that document rationale for why a client may not have been accepted to participate (e.g. non-compliance, did not meet eligibility criteria, no shows, etc.).

TABLE 1: EMPLOYMENT PROGRAMS AND CLIENTS SERVED

Provincial Legacy Programs	Years of Program	Estimated Clients
• BC Employment Program (BCEP)	2006 - 2012	81,895
• Community Assistance Program (CAP)	2006 – 2012	15,356
• Employment Program for Persons with Disabilities (EPPD)	2002 - 2012	28,705
• Bridging Employment Program (BEP)	2003 – 2012	5,563
• Training for Jobs (TJ)	2002 – 2008	7,500
• Job Placement (JP) Program	2000 - 2006	68,000
Ministry Delivered LMDA Programs[2]		
• Self- Employment Program	2009-2012	2,734
• Skills Development and Employment Benefit	2009-2012	4,970
• Job Creation Partnerships	2009-2012	1,002
• Apprentices	2009-2012	19,505
Employment Program of BC (EPBC)		
• Transitioned Clients	Apr 2012 to end of Nov 2012	21,000
• New Clients	Apr 2012 to end of Nov 2012	39,326

5.3 Legislative and Policy Requirements

In accordance with the *Document Disposal Act (RWSBC 1996, c. 99)*, ELMSD is required to retain client records for seven years after they are archived at an off-site storage facility. Employment contracts state that records should be moved to off-site facilities when the client record is closed, however, recent findings has shown that this practice has not been strictly followed in ELMSD history. Part of the challenge in following this practice is that client records are typically managed by third party service providers, which means that it is up to service providers to alert the ministry when there are client records that are ready to be moved off-site. Historically, records are moved off-site during program closures or transitions to new service providers. Delays in moving records off-site mean that the client retention period is also delayed.

[2] Client records that were created by LMDA programs delivered by service providers remain the property and management responsibility of service providers, unless the client record was active on April 1 2012, in which case it transferred to the Province.

The division is also required to comply with the *Freedom of Information and Protection of Privacy Act* (RSBC1996.c.165) in responding to inquiries for client records within 72 hours of request to the division. There are established government-wide protocols on how a client or third party may request a client record, and ELMSD must respond by providing all relevant information to the Office of the Chief Information Officer (OCIO), who then determines what information is appropriate to release.

5.4 Records Storage

Presently, active files with the EPBC are stored in the Ministry's Integrated Case Management (ICM) system, with any related physical files stored on-site at EPBC service provider locations. The ICM system is a new electronic storage system that was launched in April 2012 alongside the EPBC. It is a new information system shared between the Ministry of Social Development and the Ministry of Children and Family Development that replaces a number of outdated information systems to better support safe storage and retrieval client information for social programs.

As of the end of November 2012, there were 47,000 clients actively being served by the EPBC[3]. In general, clients access any active records directly from their service providers which limits Ministry involvement in accessing these files.

The majority of client records are semi-active records, which generates the majority of client record requests. After a client record is closed, it is required to be sent to the closest off-site facility from where the record was created. ELMSD has four off-site storage facilities:

- Cube (Vancouver Island)
- Iron Mountain (Kelowna, Burnaby)
- Access (Vancouver Island)
- Securit (Lower Mainland)

These facilities are managed by third party vendors which go through a competitive bid process every three years, as per corporate government policy.

At present, ELMSD has approximately 4,000 boxes of client records in off-site storage facilities. The process for labeling and boxing up hardcopy files to be transferred to off-site locations is consistent for all client records, as per the directions from the BC Government's record management guidelines (Ministry of Citizens' Services and Open Government, Government Records Services, n.d.). Once boxes are ready to move off-site, the first step is to contact the ELMSD records clerk to get an accession number for the boxes. An accession number is a six digit number that tracks files in offsite storage.

Supporting service providers and Ministry staff in moving records off-site, including providing and tracking accessions, takes up a considerable amount of time for records staff. Since 2006, ELMSD has monitored 378 accessions to off-site facilities. The number of accessions in the past year has dramatically increased due to transition from ten employment programs to one, for the EPBC. Of the 378 total accessions, 200 accessions have been completed in the 2012 year (as of end of November), with 67 other

[3] Data provided from ELMSD internal management reports.

active accessions. According to the records clerks, this large increase in accessions shows that service providers generally do not return client records to off-site facilities throughout the year, as client records are closed. This shows that there is a compliance and monitoring gap in the process to move client records to off-site locations.

Records staff and executives of ELMSD are the only ones that have permission to request ELMSD client records from off-site facilities. The records clerks are responsible for requesting files, which may be requested and sent to regional ELMSD staff, who have 'check-out' privileges. Ministry policy states that any archived client record that is requested for an ELMSD staff must return back to the off-site facility within two (2) business days.

5.5 The Cost of Records Retention

The cost for archive records storage is approximately $7.50 per box for one month. At present, ELMSD currently has 4,000 client record boxes which equates to $360,000 per year or $2.52 million over the seven year retention period.

Box files are scheduled for destruction after the seven year period, however, if there are any client records that are 'checked-out' or not returned, the box cannot be destroyed. The box will remain in storage until the contents are returned, which can increase the cost of storage. This has not been an issue of ELMSD to date.

One identified challenge to the cost of records retention is that delays to off-site storage delays the start of the seven year retention period. For example, when files are stored in local offices, the seven year retention period is not in effect until it is moved off-site, regardless if the client file is open or closed. While the costs of off-site storage would be the same, there may be local office costs to storing these files. More importantly, untimely archiving of records creates inefficiencies in responding to client record requests, which will be described further below.

5.6 Client Record Requests

The ELMSD records staff supports the retrieval of client records information to respond to requests for client records. There are three sources for client record requests:

- **Information Access Operations (IAO) Branch, Government Records Services**: responsible for triaging Freedom of Information (FOI) requests from clients and other third parties;
- **Ministry of Justice and Attorney General**: send requests for client record information for civil litigation purposes or for demand orders (e.g. Family Maintenance Orders); and
- **ELMSD Regional Requests**: routine requests from former or active clients and service providers to access client files that have been moved to off-site facilities.

The volume of client record requests is summarized in the Table 2. Note that civil litigation requests and regional requests did not start until 2009-10 due to the merging of federal employment programming with the province in 2009 which dramatically increased the volume of ELMSD clients and records.

TABLE 2: CLIENT RECORD REQUESTS BY FISCAL YEAR AND TYPE

Type	2006-07*	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13**	Total
FOI	99	133	122	221	418	341	267	1601
Civil Lit/ Demand Orders	0	0	0	4	14	6	14	38
Regional	0	0	0	33	58	83	24	198
Total	99	133	122	258	490	430	305	1837

* 2006-07 reporting from Sept to March only. Annual pro-rated estimate for 2006-07 is170.
**2012-13 statistics to end of Nov 2012. Annual pro-rated estimate for 2012-13 is 457.

All FOI requests or routine regional requests follow the 72 hour turnaround time. Litigation related inquiries may have different timelines (shorter or longer) based on the court date that the information is requested for. In general, litigation requests are considered to be the highest priority, followed by FOI requests and then regional requests.

To date, client records requests have all been for semi-active records from legacy employment programs. In general, these files should be located in the Ministry's off-site facilities, however, some files may still be in the possession of legacy service providers, or may be at EPBC service provider locations as part of the transition process. Because of this, some investigative work by the records clerks may be required to track down client files. Appendix 2 shows the general process flow for records clerks in responding to client file requests.

One gap that the records team has identified is how the division will respond to client record requests for the EPBC. The challenge identified is that client records information stored electronically in ICM is not easy to export. In addition, service providers are still adapting to the new system and there may be missing information that has not been entered in the system. As the EPBC is a new program, no client record requests have been made to date on EPBC client records, since active clients generally can access this information from their service provider. The records team does anticipate that EPBC client record requests will start in the next fiscal year, and have identified the need for future planning.

5.7 Present Staffing Requirements

Historically, ELMSD has had one full time employee (FTE) to perform the records clerk duties; however, due to increased workload during program transition, an additional full-time records clerk was hired in July 2012 to help manage accessions and client record requests. Table 3 shows staffing requirements based on current ELMSD records functions.

TABLE 3: ELMSD CURRENT STAFFING REQUIREMENTS

FTE Est.	Records Function	Notes
0.20 FTE	Administrative Records Mgmt	
0.40 FTE	Responding to Client record Requests	450 requests x 1.5 hr action time (average)
0.25 – 1.00 FTE	Managing Accessions	Managing 200 – 250 accessions/year
0.10 FTE	Responding to Stakeholder Inquiries	15 inquiries/ week x 15 min action time (avg)
0.10 FTE	Reporting and Regular Meetings	15 hours/ month
0.10 FTE	Misc. Activities (supporting launch of EPBC, training and development, corporate meetings/initiatives, etc)	15 hours/ month.
1.25 – 2.00 FTEs		

Note that in previous years, managing accessions typically takes up 0.25 FTEs per year; however, this has dramatically increased in the last year, with peak periods of time taking up 1.00 FTE's time.

During the course of this research project, one of the two full-time records clerks moved into another position (Dec 2012). In light of the provincial government hiring freeze and other administrative budget pressures, it is unlikely that ELMSD will be able to hire for the secondary records clerk position. This increases the urgency for ELMSD to find more efficient ways to perform client records management functions.

5.8 SUMMARY OF FINDINGS

In summary, current state findings on ELMSD client records management indicate that ELMSD needs to address workload capacity by:

- finding more efficient ways to manage accessions;
- reduce investigate time and efforts in the client records request process; and
- conduct future planning for responding to client record requests using ICM.

These findings help inform recommendations for ELMSD. Further quantitative analysis was also conducted on client records requests to determine how efficient the current process is, and to identify areas for further improvement. These findings are detailed in section 6.0.

6.0 FINDINGS: CLIENT RECORD REQUEST PROCESS FLOW

This section uses the first three phases of the DMAIC approach (Define, Measure and Analyze) to described findings on the ELMSD client record request process. It identifies the key problems with the current request process, provides qualitative root cause analysis, and uses quantitative data to better understand trends and sources of waste.

6.1 DEFINE: PROBLEM STATEMENT

Initial interviews with the Records Clerks, supervisors and Executive identified three challenges associated with the client record request process:

- Increasing number of client record requests;
- Increased variability and complexity in locating client records; and,
- Lack of stakeholder knowledge in archiving and retrieving client record records.

As a result, the records team has experienced an increase in the amount of time spent tracking down client records and educating stakeholders. The problem statement is that ELMSD may not be able to sustain their obligation to respond to client record requests in a timely manner, particularly due to resource pressures in the division.

6.2 MEASURE: PROBABLE CAUSES AND ROOT CAUSES

A focus group session was held to do some value stream mapping of the client record request process. Appendix 2 shows the 'happy path' process flow for FOI, civil litigation, and regional requests. The 'happy path' is defined as a sequence of activities that is executed as if everything goes as expected without exceptions (Bollen, 2010, p.3). It also has the estimated action and lead times (as provided by the focus group participants) for all events. *Action time* is the estimated amount of time one action takes, while *lead time* describes the amount of time for set of acts including lag time between activities (Teeuwen, 2010, p.46). Table 4 summarizes the happy path time for each process flow. The first two columns show the total action and lead time to get the requestor the client information, whereas the next two columns show the total action and lead time for total process, including tracking, filing and returning records to off-site facilities.

TABLE 4: HAPPY PATH PROCESS MAP TIME ESTIMATES FOR CLIENT RECORD REQUESTS

	Responding to Request		Complete Process	
	Action Time	Lead Time	Action Time	Lead Time
FOI Requests	7 mins	7 mins to 1 day	13 mins	13 mins to 1 day
Civil Lit Requests*	44 mins to 1 day	145 mins to 4 days	61 mins to 1 day	81 mins to 6 days
Regional Requests*	29 mins to 1 day	140 mins to 4 days	41 mins to 1 day	270 mins to 6 days

*Time span depends on courier distance to receive files.

The records team estimated that 60% of client record requests follow the happy path. They stated that this was a decline from the previous year, estimated at 75% following the happy path.

The records clerks were asked to identify sources of waste and variability in the process that creates additional work in the process. A summary of these sources of waste and estimated time delays are listed in Table 5.

TABLE 5: KEY SOURCES OF WASTE IN THE CLIENT RECORD REQUEST PROCESS

Key Sources of Waste	Estimated Time Delays
Lack of understanding on records management processes from field staff. Examples: • Some field staff have sent requests directly for client records to off-site facilities records directly and in doing so creates delays when the off-site facility does not approve the request. • For regional requests, some staff do not send complete information to comply with the requisition (e.g. client record and accession number) This creates additional work for field staff, their supervisors, the off-site facilities and records office to correctly re-route the request and educate staff on the correct process.	2 hours to 1 day
When records clerks need information from the field, it is not always clear who to contact creating unnecessary e-mail chains to get to the right person.	2 hours to 1 day
Some service providers or Ministry staff may not have archived client records, meaning files are not on off-site facilities and are not easy to track down. This may be due to a lack of understanding of client records management protocols. This can create significant delays and investigative work by the records clerk, other Ministry staff, and service providers.	1 to 10 days
Duplication in the tracking process: tracking electronically and in paper is redundant, and while it only takes 5 minutes more, with a forecast of 457 requests, it adds to over 38 hours of time.	5 mins per request
Transition to the new EPBC meant many files were in transit between service providers, or boxed up and in-process to be returned to off-site locations. As a result, some files were not accessible creating a back-log of FOI requests received during the transition period in April and May.	2 to 3 months

In addition to challenges in the existing process for retrieving semi-active records from legacy programs, the records clerks identified that accessing records for the new EPBC has added complexity. The EPBC uses a new Integrated Case Management system (ICM) which stores client records electronically. The introduction of this system has increased complexity due to client information being stored electronically. This has the potential to make it easier to access information; however, this is a relatively new system that does not currently have the ability to export a comprehensive client record report. It therefore begs the question of how to extract and provide necessary data, and roles and responsibilities in the organization to respond to client records that are stored in ICM.

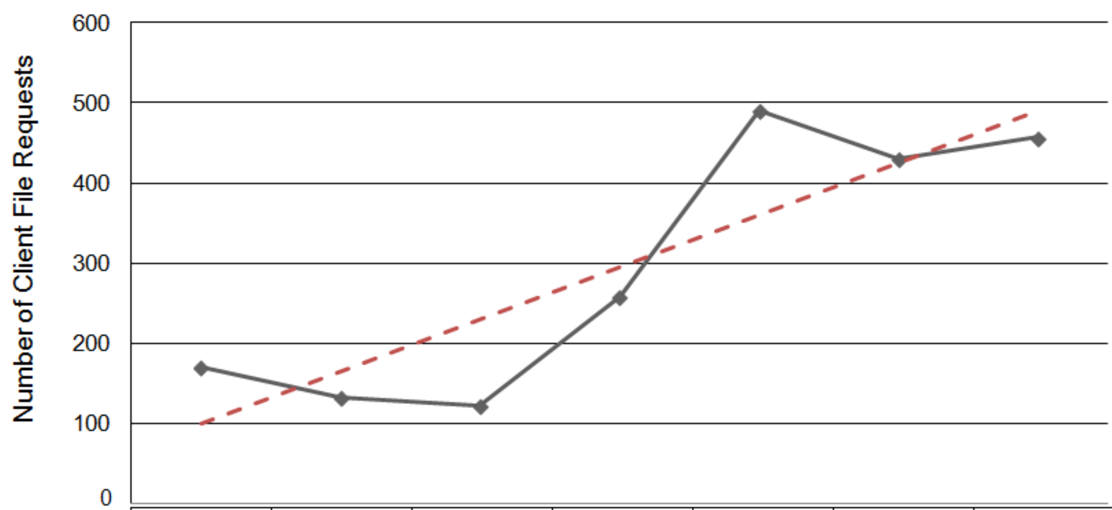
6.3 Analysis: Quantified Cause and Root Causes

Trend analysis and statistical sampling exercises were used to validate and provide additional context to the problem statement and probable root causes. The findings are described below.

6.3.1 Volume of Client record Requests

Since ELMSD began tracking statistics in September 2006, there has been an increasing trend in the number of client record requests, with the number of requests nearly doubling in 2009-10 and 2010-11 in compared to the previous year. Figure 4 shows the trend line of the volume of client record requests by fiscal year. It indicates that volumes of records requests have been relatively stable over the past few years.

FIGURE 4: FISCAL YEAR TREND IN VOLUME OF CLIENT RECORD REQUESTS



Fiscal Year	2006-07*	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13*
Requests	170	133	122	258	490	430	457
Trend-line	n/a	-28%	-8%	+111%	+90%	-12%	+6%

*2006-07 and 2012-13 stats pro-rated for the year based on available statistics.

Analysis was also done to determine if there are any cyclical trends in the volume of client record requests per month, however, no cyclical pattern was evident as shown in Table 6. The yellow highlights in Table 6 indicate the top three highest volumes of requests for each fiscal year. February had the highest number of high volume requests; however, there was no clear pattern to indicate that this is an ongoing trend.

TABLE 6: MONTHLY VOLUME OF CLIENT VOLUME REQUESTS

	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	Monthly Avg (Mean)
April		14	10	26	23	33	29	22.5
May		15	10	16	33	50	33	26.2
June		8	7	17	54	38	32	26.0
July		9	6	13	48	51	37	27.3
August		17	13	13	23	46	41	25.5
September	20	12	8	17	48	36	42	26.1
October	15	14	12	7	22	21	48	19.9
November	9	6	9	32	49	31	43	25.6
December	11	5	9	25	31	39		20.0
January	16	5	11	31	40	33		22.7
February	18	11	15	36	51	24		25.8
March	10	17	12	25	68	28		26.7
Total	99	133	122	258	490	430	305	24.5

In general, records staff stated that there are more client record requests when a program or service provider is transitioning or closing. In many cases, many of the requests to access semi-active files are from clients or new service providers who are trying to access previous employment service documentation such as medical assessments or service history.

6.3.2 Client Record Requests – Process Efficiency

Samples of e-mail correspondence for client record requests in 2012 were analyzed to quantitatively measure how efficient ELMSD is at responding to requests. Samples were pulled from available records on client record requests available up to November 2012; however, some e-mail correspondence was limited to data from July forward (see Appendix 4 for sample sizes per program and detailed findings). Three factors were evaluated based on available information: lead time from request for client information to response; number of e-mail correspondence related to responding to a request; and number of people involved in responding to the request.

Table 7 shows the average findings for each type of request.

TABLE 7: ELMSD RESPONSE DATA FOR CLIENT RECORD REQUESTS

	Number of Samples	Average Lead Time	Average Number of E-mails	Average Number of People Involved
FOI Requests	169	5.22	2.57	1.62
Regional Requests	12	3.19	6.42	2.58
Civil Litigation	11	3.54	5.82	2.91
Demand Orders	2	11.80	12.00	5.00
Total	194	5.07	3.09	1.78

The findings show that the average (mean) lead time to respond to client record requests is five (5) days, which exceeds the three day turnaround time; however, the median and mode for all request types is 0.36 days and 0.05 days respectively, showing that the average is positively skewed. The most frequent types of client record requests was FOI requests, which averaged 5.22 lead days. The FOI response time average was affected by program transition to the EPBC in April 2012, in which client records were in various stages of being boxed up and transitioned between service providers and to the Ministry's off-site facilities. Of the 169 FOI samples, there were fourteen (14) client records that could not be immediately accessed due to transition reasons, which averaged 48.51 days for response, as shown in Table 8.

TABLE 8: FOI REQUEST RESPONSE AVERAGES FOR CLIENT RECORDS IN TRANSITION

Program	Average Lead Time (Days)	Average Number of E-mails	Average of People involved	Samples
BCEP	54.60	9.17	4.67	6
CAP	36.56	4.00	2.25	4
EPPD	51.31	8.50	3.50	4
Total	**48.51**	**7.50**	**3.64**	**14**

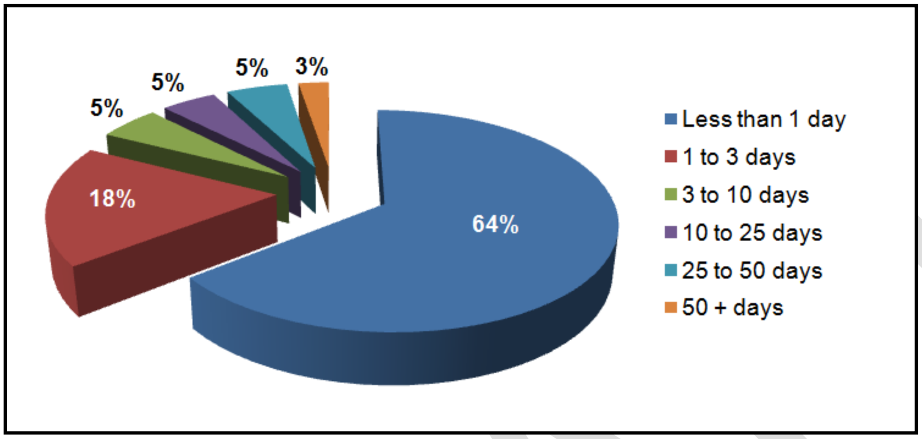
Despite transition challenges, ELMSD successfully met the expected three (3) day turnaround time 82% of the time for all client record requests. Table 9 shows the range of response times for client record requests, which is graphically represented in Figure 5. This data also validate that the happy path is generally followed 64% of the time, which represents responses completed within one business day.

TABLE 9: RANGE OF RESPONSE TIMES FOR CLIENT RECORD REQUESTS

	FOI Requests	Regional Requests	Civil Litigation Requests	Demand Orders	Total
Less than 1 day	116	4	5		125
1 to 3 days	27	5	3		35

3 to 10 days	7	1	1	1	10
10 to 25 days	4	2	2	1	9
25 to 50 days	10				10
50 + days	5				5
Total	169	12	11	2	194

FIGURE 5: PERCENTAGE BREAKDOWN OF CLIENT RECORD REQUEST RESPONSE TIMES



For FOI requests, further analysis was also done to determine if there were any trends associated with FOI requests for different employment programs. Averages are shown in Table 10 for each program showing all 169 samples, as well as samples less transition files, which are seen as exceptions to the regular process. The Bridging Employment Program (BEP), Community Assistance Program (CAP), and Training for Jobs (TFJ) programs were requests that are responded to the quickest, at just over half a day when excluding client records in transition; however there is no significance between the shortest (0.53 days) and longest response times (1.58 day) for different programs (excluding the transition files).

The LMDA requests are associated with more e-mails and individuals which is associated with tracking down files from federally funded service providers. LMDA service providers were transitioned from the federal to provincial government in 2009 and extra e-mails are generally to help explain process. Despite additional direction for these types of requests, responses were completed in just over a day.

TABLE 10: FOI REQUESTS RESPONSE AVERAGES BY EMPLOYMENT PROGRAM

	All Samples			Samples Less Transition Files		
Program	Average Lead Time (Days)	Average Number of E-mails	Average # of People involved	Average Lead Time (Days)	Average Number of E-mails	Average # of People involved
BCEP	7.71	3.37	1.90	1.32	2.27	1.41
BEP	0.67	2.22	1.78	0.67	2.38	1.88
CAP	9.01	2.94	2.00	0.53	2.62	1.92

EPPD	5.16	2.35	1.40	1.31	1.83	1.23
JP	1.58	1.47	1.07	1.58	1.47	1.07
LMDA	1.05	5.67	4.67	1.05	5.67	4.67
TFJ	0.66	1.29	1.00	0.66	1.33	1.00
Total	**5.22**	**2.57**	**1.62**	**1.23**	**2.04**	**1.40**

Regional requests, on average, had the lowest average lead time at 3.19 days, however, had higher e-mail traffic (6.42 average e-mails) due to confusion from Ministry staff or service providers on the process or information required to access off-site records. Note that where there was no confirmation e-mail of when a staff member received the file, the date that the records clerk ordered the records was used as a best proxy. This means the average lead time is conservative, as it may not include courier time and time for operations staff to scan and provide documentation to the service provider and/or client.

Civil litigation requests had an average lead time of 3.54 and generated 5.82 e-mails, which involved an average of 2.91 individuals. Demand orders, on the other hand, had the highest averages in all categories, with 11.80 days to respond, 12 e-mails, and 5 people. An important consideration is that demand orders from the Ministry of Justice and Attorney General are extremely rare – so rare that the two requests this year were the first and only requests to ELMSD. Therefore, there was confusion on what process to follow and what consent forms were needed in order to share client information. It took 19 days for the ELMSD to respond to the initial demand order since policy and executive support was required to understand the request and information sharing protocols. The second demand order request was met in less than 5 days which shows a considerable improvement.

There is a correlation between the complexity of the request and the time to respond to the request, where the more complex (or variety from the happy path), the longer it takes to respond. For example, when client records requests are located in Ministry off-site facilities, records clerks are required to do investigative work and contact additional staff or service providers. As a proxy for measuring the complexity of requests, the number of e-mails and number of people involved were measured and assessed against lead time.

Simple linear regression analysis was also done to determine the correlation between lead time and the number of people involved in responding to the client records requests, as well as lead time versus the number of e-mails generated by the request. As expected, there is some positive correlation between an increase in people or e-mails and lead time. The regression line shows that for each additional person involved, lead time increases by three days; and that for each additional e-mail, lead time increases by 1.23 days. However, the co-efficient of determination (R^2) for the data sets is relatively low at 0.1599 and 0.173 respectively, which indicates the data does not fit the regression trend line well. This means that the trend line is not a very accurate predictor of lead time when looking at people involved or e-mails as independent variables. The regression analysis is shown in Figures 6 and 7 below.

FIGURE 6: CORRELATION BETWEEN PEOPLE INVOLVED AND LEAD TIME FOR CLIENT RECORD REQUESTS

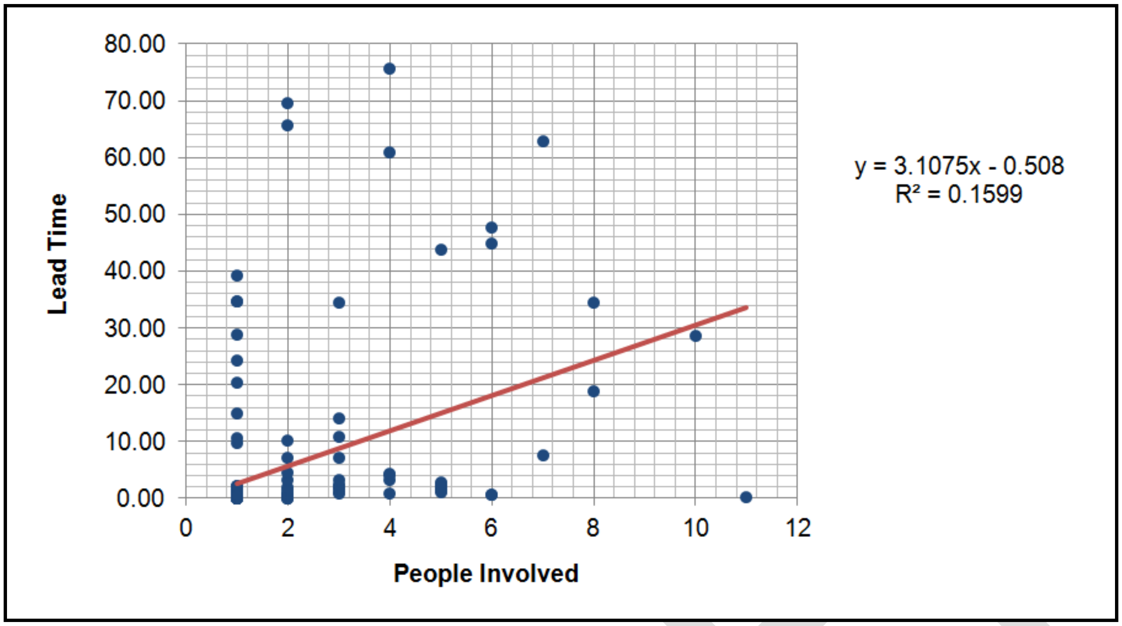
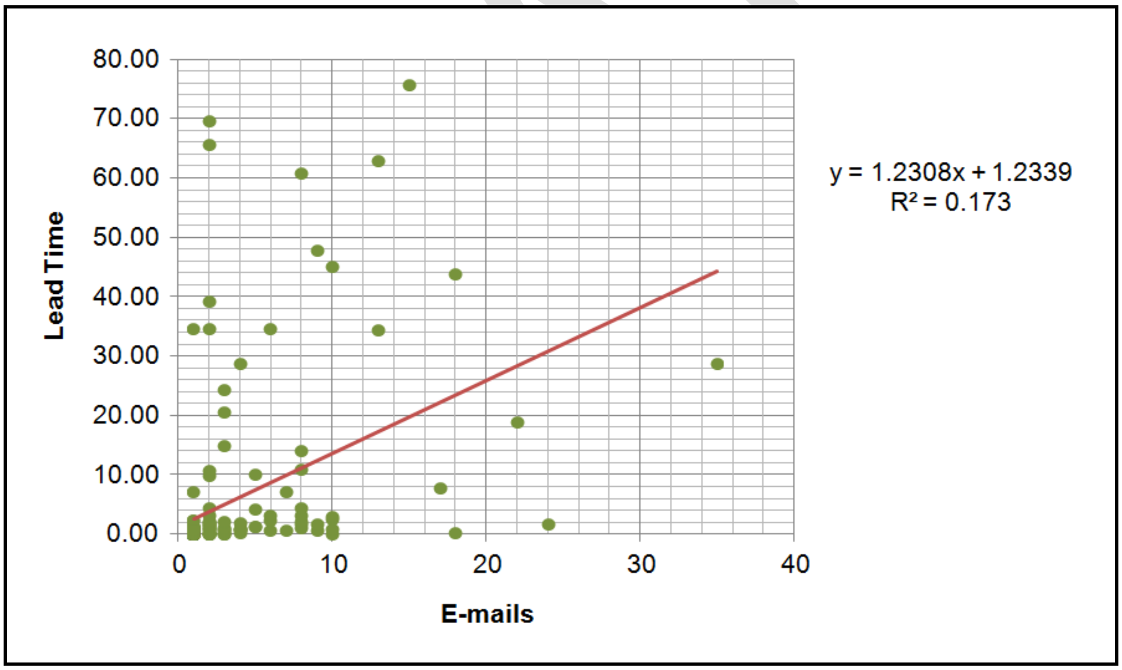


FIGURE 7: CORRELATION BETWEEN NUMBER OF E-MAILS AND LEAD TIME FOR CLIENT RECORD REQUESTS



6.4 SUMMARY OF FINDINGS

In summary, findings on the client records request process indicate that ELMSD has room for improvement, but that the majority of the time (82%) has been successful in complying with the three day turnaround time. The remaining 18% of requests can take anywhere from 4 to 50 days, and take the most amount of action time from the records clerk and other ministry staff. This in part is attributed to client files in transition (8% of samples), which averaged 48.5 business days to complete. In general, the more hand-offs involved (as measured by number of e-mails and individuals involved in responding to the request), the longer it takes to respond to requests. These findings help inform recommendations for improvement for ELMSD.

7.0 RECOMMENDATIONS

Based on the business process review for ELMSD client record records management and retrieval processes, recommendations have been made based on the following six categories:

1. Error and waste reduction
2. Stakeholder education
3. Regulate off-site process
4. Balance workload pressure
5. Future planning for ICM inquiries
6. Ongoing support for the ELMSD records team

These recommendations are based on lean thinking, which aims to reduce waste in the process and balance workload pressures to maximize resources. Some recommendations have been implemented as they were identified throughout the process. The recommendations and the issues they aim to address are listed below.

7.1 ERROR AND WASTE REDUCTION

Three sources of errors or redundancies were identified as adding waste to the client records request process. First, incoming FOI requests from the IAO branch may accidently be mislabeled or sent in error, which subsequently wastes time for ELMSD staff in searching for files in the wrong place. Another error source is that ELMSD records staff may not know which regional operations staff member (with over 150 staff) to contact to help respond to a request, which creates delays in the process and may unnecessarily waste time of staff in redirecting requests or searching in error. Third, duplication of effort for all client record requests was identified in the ELMSD tracking process, which used both electronic and paper filing methods.

Table 11 lists recommendations to address these sources of waste. These recommendations are influenced by lean techniques to integrate the value system, standardize processes to reduce variability and reduce waste by eliminating errors and unnecessary movement and redundant actions in the process.

TABLE 11 RECOMMENDATIONS – ERROR AND WASTE REDUCTION

Recommendations	Estimated Time and Cost Saving
7.1 a) Establish monthly meetings with the Information Access Operations to discuss communications and process protocols, touch base on any outstanding issues or requests, and jointly identify challenges and solutions, and build stronger working relationships.	10 mins action time, 0.5 days lead time saved on errors. 5% FOI requests affected (430 annually) Annual savings: 3.5 hours action time; 11 days lead time.

Recommendations	Estimated Time and Cost Saving
7.1 b) Use Team and Contract Leads as the first point of contact when needing to connect with ELMSD regional staff.	10% of the samples required multiple Operations Staff to respond. Estimated reduction in lead time = 1.5 days This equates to 68.6 reduced lead days per year (1.5 days x 457 x 10% = 68.6)
7.1 c) Use electronic filing only. This will save time as well as resources (printer use, paper, ink, folders, and shelf space)	• 5 minutes of action time per request which equals 38 hours saved • Reduced resources (printer use, paper, ink, folders and shelf space)

6.2 Increase Awareness of Records Participants

In general, there are knowledge gaps from ELMSD staff and service providers on client records storage and retrieval processes for off-site locations. The following recommendations, listed in Table 12, are intended to build stronger awareness of records requirements to ELMSD staff and service providers. While it may take additional time to educate stakeholders, taking time and effort to raise awareness, and to have a reference point for written, standardized procedures will reduce future inquiries and duplicate work created by errors.

TABLE 12: RECOMMENDATIONS - STAKEHOLDER EDUCATION

<table>
<tr><th>Recommendations</th><th>Estimated Time and Cost Saving</th></tr>
<tr><td>7.2 a) Educate stakeholders by posting information on records, including guidelines, forms, process guides, due dates and communications relating to records management on the Ministry’s internal Intranet site (the Loop) and the Service Provider external Extranet site for easy, one-stop reference. In addition, communicate records requirements through corporate e-mail messages and utilizing Contract Management Committee (CMC) meetings with Service Providers.</td><td rowspan="2">15% efficiency improvement in the records process

Lead time: 0.76 days saved per request = 347 lead days annually

E-mails: 0.46 emails less per request = 210 less emails annually

People: 0.27 people less per request = 123 less people annually

Action time: 13.5 mins less per request = 103 hrs annually</td></tr>
<tr><td>7.2 b) Host Live Meeting session (or video recording) to provide brief overview of the role of the records team, records requirements, and records processes. Include an opportunity for questions and answers.</td></tr>
</table>

7.3 ESTABLISH PROCESS TO OFF-SITE RECORDS

One of the main challenges in delaying the 'happy path' route to retrieving client record requests is when closed files have not been moved to off-site facilities. Files that have been properly moved into off-site facilities can be responded to in as little as ten (10) minutes; however, when these files are at service provider locations, regional staff and service providers must get involved in the process which can create unnecessary delays.

Root cause analysis has identified that the problem stems from having no set schedule for ELMSD service provider's to off-site closed client record records, or for staff to actively monitor this process. Closed client records should be moved to off-site facilities on a regular basis, as per their contracts; however, historically, this has not been done consistently across the province or in a timely manner. Generally, moving files to off-site facilities only occurs when a program ends or transitions to a new service provider. Given that the EPBC contracts are five years in duration, with potential for an additional two years renewal, it is important to ensure that regular off-site occurs to support efficient responses to client record requests, as recommended in Table 13. This recommendation is influenced by lean through establishing standardized procedures to reduce process variability and reduce down-stream work and effort.

TABLE 13: RECOMMENDATIONS – ESTABLISH SCHEDULE TO OFF-SITE RECORDS

Recommendations	Estimated Time and Cost Saving
7.3 Establish an annual schedule in which Ministry staff direct service providers to off-site all closed client records to support FOI processes and reduce the administrative burden and back-logs at program end/service provider transition.	Improvement of 1 lead days, 15 mins action time, 1.5 less e-mails Affects 15% FOI requests Annual savings: • 64.5 fewer lead days • 16.1 fewer hours of action time • 97 less e-mails

7.4 BALANCE WORKLOAD PRESSURE

Lean management encourages establishing flow in the process and resource leveling to ensure consistent workload balances amongst resources to ensure there is no delays in work and that resources are consistently maximized throughout the year. One of the challenges in client records management is that there are typically lows and highs in terms of workload pressure. In general, when there is a high number of accessions (which typically occurs when programs are closing or in transition) there is much higher amount of work associated with supporting archiving efforts and responding to inquiries.

As there is only one FTE resource, it is important to ensure workload is distributed throughout the year. Establishing an annual archiving process (as per recommendation 6.3) will help with more efficient responses to client record requests; however, these returns should be staggered through the year to level workload pressures, as recommended in Table 14. This will eliminate the need to bring on addition resources, which was done during the large EPBC transition.

TABLE 14: RECOMMENDATIONS - BALANCE WORKLOAD PRESSURES

Recommendations	Estimated Time and Cost Saving
7.4 Level workload pressures throughout the year by staggering annual accession dates for each region.	0.4 FTE (auxiliary or Temporary Assignments to support workload) = $27,000

7.5 FUTURE PLANNING FOR CLIENT RECORD REQUESTS USING ICM

At present, there is a gap in understanding how the division will respond to FOI requests based on electronic-files in ICM. The IAO branch does not have access to ICM, nor are there plans for access in the future. While ICM will reduce off-site storage costs and make information more accessible to respond to FOI requests, there is currently no way to pull a comprehensive client report that includes the various fields and tabs of an ICM Case File. In consulting on practices used by other divisions using ICM, it was determined that others are currently responding to FOI requests using various screenshots which are difficult to read and time consuming and impractical to produce.

Records staff can plan and prepare by leveraging available data extract reports that are being developed for ELMSD, and can consult with the reporting and ICM team on future needs for future enhancements to ICM. Recommendations to prepare for ICM related client records requests are listed in Table 15.

TABLE 15: RECOMMENDATIONS - FUTURE PLANNING

Recommendations	Estimated Time and Cost Saving
7.5 a) In the short term, ELMSD records staff should be trained on how to use ICM for data extracts or identify other divisional resources (e.g. RBSAs, reporting staff) that can assist in data extracts. In responding to requests, ELMDS can leverage available reports on key elements of the ICM case file such as: benefits plan, service plan, service plan goals, service plan outcomes, and employment history. In addition, relevant attachments (e.g. resumes, assessments) can be collected to form the documentation that would typically be found and requested in an FOI.	Future savings: 50% less action time required to export data in compared to using screen shots
7.5 b) For long term planning, ELMSD records staff should consult with records team and ICM experts to develop a full ICM case file report that pulls all information from the various screens into one comprehensive report by running a single report request (rather that running multiple reports).	Future savings: 50% less action time required from one export versus multiple reports.

7.6 STRENGTHEN RECORDS TEAM

The records team has undergone several changes in the past year, including two changes in supervision and reporting to a new branch within ELMSD. With only 1 FTE (with no present option to hire additional staff) it is important to strengthen the capacity of the records team to ensure sufficient functional knowledge of records activities to provide adequate coverage for the records clerk. In addition, stronger functional knowledge at the staff and leadership level can support continuous improvement in ELMSD records management.

Recommendations to strengthen the records team are listed in Table 16. These recommendations are influenced by lean thinking in terms of building staff capacity to maintain workflow, documenting and standardizing processes, and building a culture of continuous improvement. This includes a recommendation on negative performance reporting to better allow ELMSD to monitor trends and issues associated with non-compliance for the three (3) day business turnaround time.

TABLE 16: RECOMMENDATIONS - STRENGTHEN RECORDS TEAM

Recommendations	Estimated Time and Cost Saving
7.6 a) Train others (supervisor, administrative assistants) to ensure adequate back-up can be provided for business continuity and to cover when the records clerk is away.	Future savings: reduce lead time on client record requests during records clerk absences. Annual lead time by 40 days based on estimated absences of records clerk from the office (flex days or holidays)
7.6 b) Establish standardized procedures on steps to responding to FOI request so it is clear for back-ups and for succession planning. This also allows more opportunity to review process for continuous improvement.	Future savings: 30% time savings for back-ups for standardized set of directions.
7.6 c) Establish regular meetings (i.e. weekly) with supervisors and executive to have regular check-ins on activities, progress, and challenges.	Future savings: continuous improvement opportunities
7.6 d) Enhance monthly reports on volume of client file requests by providing negative reporting on the total number of requests that exceeded the 3 business day turnaround time to allow ELMSD leadership to monitor performance and trends.	Continuous improvement through performance measurement.

7.7 Implementation Considerations

It is important that front-line staff endorse and take an active role in implementing recommended solutions. Front-line staff have been key drivers of error identification and recommendations throughout the research project. As described by George et al (2005, p.11), lean encourages that quick improvements, such as eliminating non-value-added process steps, should be implemented right away. This approach was taken, and as such, some recommendations have been implemented or are in process of being implemented. The table below identifies the following for each recommendation:

- **Priority**: as determined by the long-term value added to records management processes
- **Timing**: describes implementation timing as measured by short-term (immediate implementation), medium-term (within 1 to 3 months) and long-term (within 3 to 6 months)
- **Effort**: describes how much implementation effort is required for the recommendation.

The table also lists the current status (as of February 2013) of each recommendation.

Some of the recommendations were identified as quick improvement opportunities where the source of the waste was easy to identify and resolve. The following recommendations have already been implemented:

Theme	Recommendations	Priority	Timing	Effort	Status
Error and Waste Reduction	a) Build stronger relationship with IAO to reduce errors and identify ongoing process improvements.	Medium	Short-term	Medium	**Implementation underway** Notes: updated descriptions of records managed by ELMSD provided to IAO staff to reduce errors; ad hoc meetings to occur as needed
	b) Use Team and Contact Leads as first point of contact when communicating with regional staff.	Low	Short-term	Low	**Implementation complete** Notes from the records clerks: time saved in knowing who to contact and taking the shortest path to get the request to the right person
	c) ELMSD records staff to track electronic only.	Low	Short-term	Low	**Implementation complete**
Stakeholder education	a) Educate stakeholders by communicating process through web sites and other corporate communications methods.	High	Short-term	High	**Implementation underway** Notes: Communications sent to staff and service providers on archiving procedures and expectations. Web-based reference materials and client record requirements under development.

Theme	Recommendations	Priority	Timing	Effort	Status
	b) Host information sessions.	Medium	Medium-term	Medium	**Implementation not started** Staff to host sessions in April/May in preparation
Regulate off-site process	Establish schedule to off-site records	High	Medium-term	Medium	**Implementation underway** Return of legacy files underway, and due by end of March 2013. Communications sent to service providers and staff on annual schedule; tentative schedule established pending Executive approval.
Balance workload pressure	Stagger annual accession dates for each region throughout the year.	High	Medium-term	Medium	**Implementation underway** Tentative schedule established, with anticipated new accession schedule to begin in May or June 2013
Future Planning using ICM	a) In the short-term, training required for Records Staff on how to export report data from ICM.	Medium	Medium-term	Medium	**Implementation not started** Records team to meet with reporting team in April 2013
	b) In the long-term, work with ICM and reporting team to develop export capabilities in ICM.	Medium	Long-term	Medium	**Implementation not started**
Strengthen Records Team	a) Train other ELMSD staff on records process for business continuity and to ensure appropriate coverage for records functions.	High	Medium-term	Medium	**Implementation underway** Other resources from the division supporting records process; supervisor to take records management training.
	b) Document standardized process steps on how to respond to client records requests for business continuity and to support back-ups.	High	Medium-term	Medium	**Implementation underway** Documented records process steps being updated

Theme	Recommendations	Priority	Timing	Effort	Status
	c) Establish regular meetings with leadership to identify and implement continuous improvement opportunities.	High	Short-term	Low	**Implementation complete** Regular meetings with supervisor and Executive Director established
	d) Implement negative performance reporting on the total number of requests that exceeded the 3 business day turnaround time to allow ELMSD leadership to monitor performance and trends.	Medium	Short-term	Low	**Implementation underway**

The majority of recommendations can be implemented with no financial implications besides the initial investment in time by the records staff to implement the solutions. The exception is to the long-term recommendations relating to the ICM system in which there may be financial implications to change reporting capabilities. This would need to be discussed with the reporting and ICM team to determine cost implications (if any), and then to do a cost-benefit analysis to determine if changes should be implemented.

These recommendations will help ELMSD utilize resources more efficiently to perform records management functions. This will allow ELMSD to continue to meet its legislative obligations relating records management, despite a reduction in staffing.

7.0 Conclusion

This case study has concluded that lean is applicable to the public sector, and its tools, techniques and philosophies can be used to identify waste and utilize resources more efficiently. Lean techniques, such as value stream mapping, root cause analysis and kaizen workshops, were used to help identify waste in the ELMSD client records management processes, as well as opportunities for improvement.

The key challenges identified include:

- A reduced records team from two full time employees (FTE) to 1 FTE;
- An increased number of accessions, that creates imbalanced workload pressures throughout the year;
- 18% of client records requests exceeded the three (3) day response requirement;
- 36% of client records requests did not follow the happy path (lean process) due to knowledge or process gaps, or files not being returned properly to off-site facilities; and,
- Lack of planning for client record requests using the new Integrated Case Management (ICM) system.

Based on these challenges, recommendations were made based on error and waste reduction, stakeholder education, standardization of off-site processes and leveling workload pressure throughout the year. These recommendations are estimated to reduce the need for a second records clerk to support accession management (savings of 0.4 FTE or $27,000), and on an annual basis, reduce 176 hours of action time (26% improvement) and 491.3 lead days (21% improvement) in responding to client records requests.

In addition, recommendations were made to support future needs for ELMSD client records management. This includes leveraging existing ICM reports to respond to client record requests for the EPBC and working with the ICM team to develop an export on a single client record to expedite the process in the future. In addition, recommendations to train other ELMSD staff, such as supervisors or administrative assistants, in client records processes will help ensure business continuity and adequate coverage for the records clerk. Introducing more staff to the processes will also help educate staff who may have fresh perspectives to make processes flow more efficiently. Finally, ongoing leadership support and regular meetings are recommended to identify and implement continuous improvement opportunities – a key element to long-term implementation of lean.

In conclusion, lean has been an effective approach in adding value to ELMSD client records management, and can provide ongoing value as a long-term strategy with time invested in continuous learning education and activities.

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APPENDIX 1: LETTER TO BC PUBLIC SERVANTS RE: LEAN INITIATIVE

To: BC Public Service Employees
Subject: Launching a Lean Approach
Date: May 1, 2012

The BC Public Service has earned a place as one of Canada's best places to work because of the collective efforts of this highly engaged and talented team. I'm proud of your creativity, dedication to service excellence and enthusiasm for innovative thinking. You don't have to look far to find examples of how that innovative thinking is improving our service to British Columbians. Whether it's simplifying how citizens access our services through projects like FrontCounter BC and Justice Access Centres or providing easy electronic access to thousands of government data sets, or purchasing services online like camping reservations and fishing licences. That's a small sample of the multitude of things we do everyday to be more efficient and forward thinking.

In these economic times, it's more important than ever that each of us keeps finding new efficiencies in our jobs and in the ways that we work together to deliver programs and services to British Columbians. That's why we are launching the Lean initiative across government.

Lean is a process improvement approach that will look at how we use resources for our business processes, putting value on those steps that benefit citizens. You might already be familiar with it – the approach originated over 50 years ago in the Toyota Production System. It's considered by many to be the leading process improvement method in the private and public sectors.

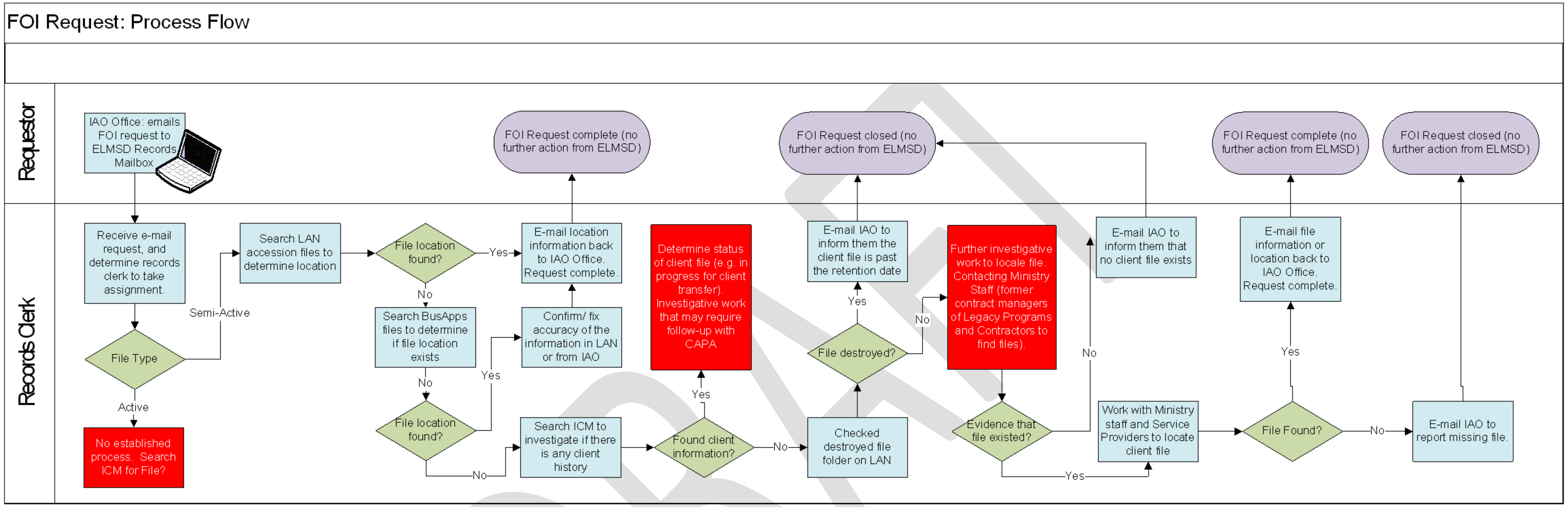
The results experienced by ministries and agencies in B.C. that have used Lean and other continuous improvement approaches include improved quality and savings of both cost and time. In the coming weeks, you'll hear more about how Lean will be used to help improve processes in government. I want to be clear that this is not about reducing our workforce, it's about working smarter. Any staffing changes resulting from process improvements will be managed through natural attrition.

Stay tuned for more information and training on Lean on MyHR and @Work in the coming weeks. I hope that as you learn about Lean in the public service you are as encouraged by the opportunities it presents as I am.

Sincerely,

John Dyble
Deputy Minister to the Premier and Head of the BC Public Service

APPENDIX 2: FOI REQUEST PROCESS FLOW



APPENDIX 3: HAPPY PATH VALUE STREAM MAPPING (VSM)

FIGURE 8: VSM HAPPY PATH FOR FOI REQUESTS FOR SEMI-ACTIVE RECORDS

	Activities				
Information Access Operations (IAO)	Start Send FOI Request Email to ELMSD Generic Records Mailbox		Complete Receive client file location info to complete request.		
Records Clerk	Recieve Email	Search in LAN files for client file number.	E-mail IAO with location of client file.	Save and sort email for tracking purposes.	Waste Print copy for tracking purposes, pick up from printer, and file.
Active Time	2 mins	3 mins	2 mins	1 min	5 mins
Lead Time	10 mins to 1 day				

FIGURE 9: VSM HAPPY PATH FOR REGIONAL REQUESTS FOR CLIENT RECORDS

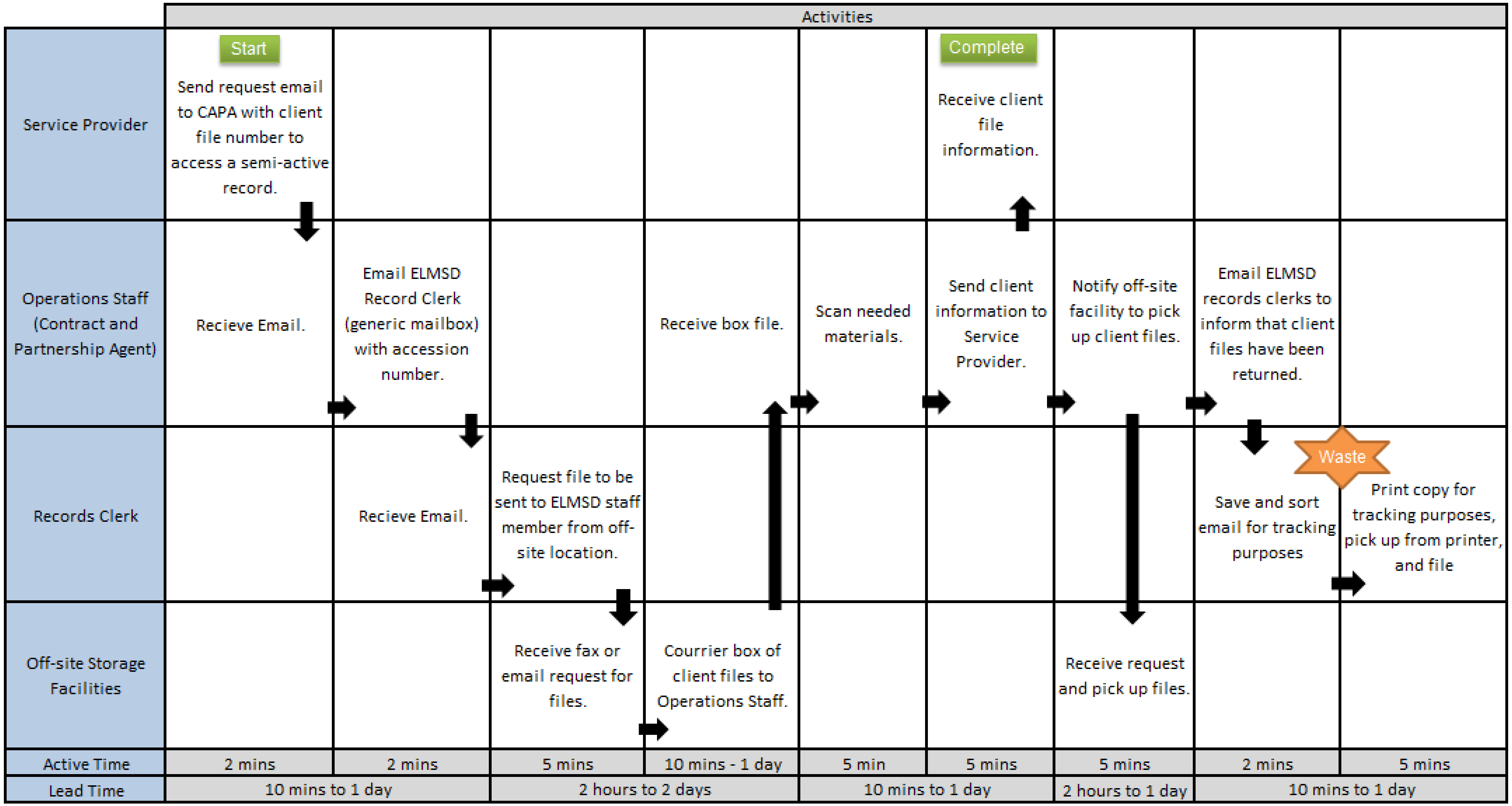
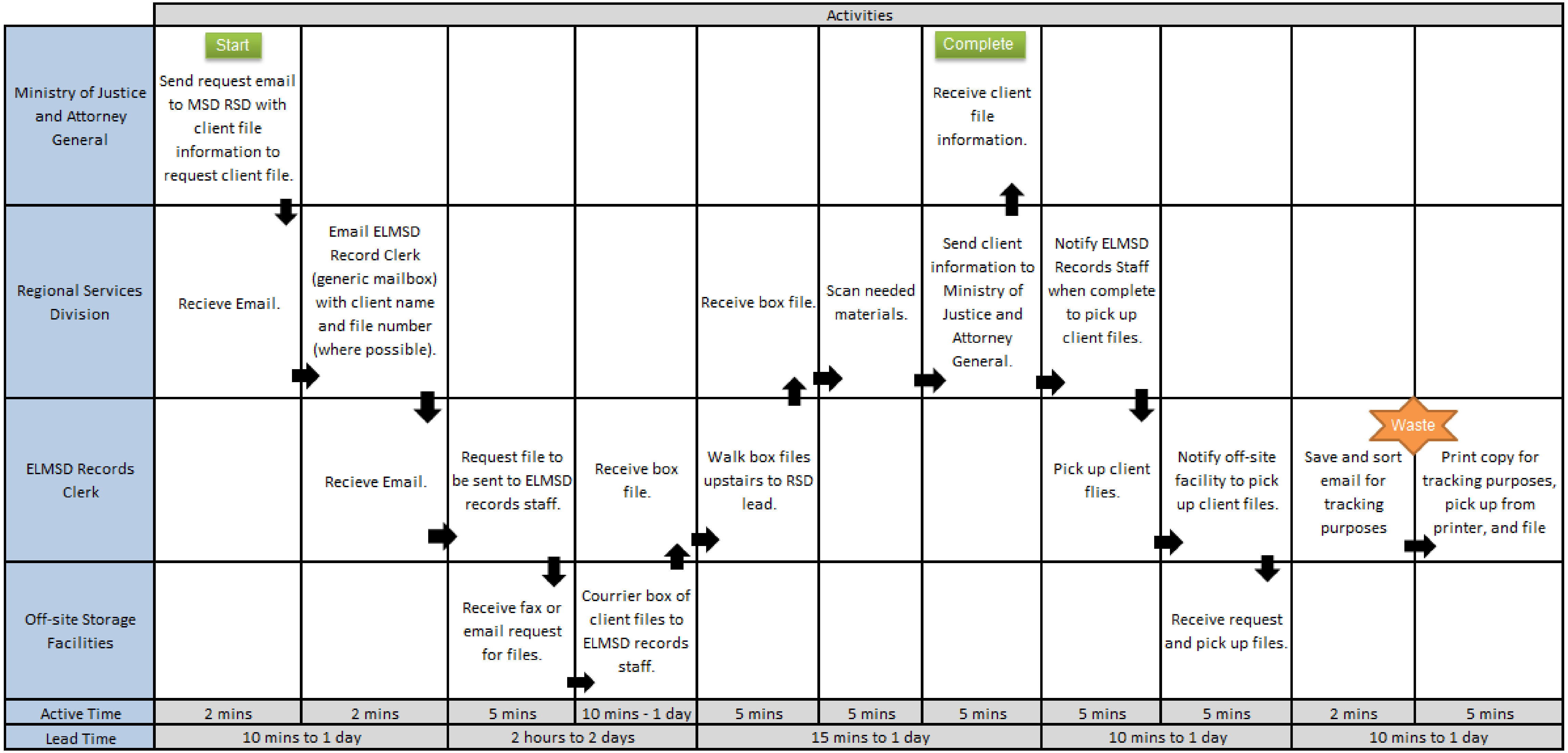


FIGURE 10: VSM HAPPY PATH FOR CIVIL LITIGATION CLIENT RECORD REQUESTS



APPENDIX 4: DETAILED SAMPLE INFORMATION

Samples were pulled from available records on client record requests available up to November 2012. It is important to note that ELMSD tracks requests in the month that files are returned (e.g. back to off-site facilities) rather than when the client information reaches the requestor. Because of this, some samples were only records of a returned file and therefore were not valid for this sample exercise since there was no data on the request or response date. The available records to draw from and sample sizes for different requests are listed in Table 17 below, which also explains any exceptions.

TABLE 17: SAMPLE QUANTITIES

	MJAG Requests		FOI Requests							Regional Requests
	Civil Lit	Demand	TFJ	JP	BEP	BCEP	CAP	EPPD	LMDA	
Dates Range of Available E-mail/Paper Records on Requests	Jan 1 to Nov 30	Jan 1 to Nov 30	Jan 1 to Nov 30	Jul 1 to Nov 30	Jun 1 to Nov 30	Jul 1 to Nov 30	Jul 1 to Nov 30	Jul 1 to Nov 30	May 1 to Nov 30	Aug 1 to Nov 30
Population Size (of Available Records) based on Records Tracking Stats	12	2	7	32	9	58	17	60	8	12
Sample Size Required*	12	2	7	30	9	51	16	52	8	12
Actual Number of Samples	11**	2	7	30	9	51	17	52	3***	12

*Sample sizes based on 95% confidence level, with 5% sampling error for the population.

**One Civil Litigation Request was just a record of a returned file, and therefore could not be used for the sample exercise.

***Only 3 LMDA paper records were available.

A total of 194 samples of records requests were pulled, and are summarized in Table 18. The table shows the request type, program (for FOI requests), date of request and response, lead time, e-mails and people involved. Notes were used to indicate how many records clerks (RC) or operations staff (Ops) were involved in responding to the request as well as other pertinent information, such as if the response was delayed due to a file being in transition.

TABLE 18: ELMSD CLIENT RECORDS REQUESTS SAMPLE DETAIL

Sample Ref #	Request Type	Program	Date of Request	Date Request Completed	Lead Time (Days)	E-mails	People involved	Notes
1	Civil Lit		11/04/2012 9:36	12/04/2012 9:48	1	10	4	2 Records Clerks, 2 Contractors
2	Civil Lit		19/06/2012 14:42	20/06/2012 9:46	0.4	18	11	2 Records Clerks, 1 Records Supervisor, 8 Operations/PM Staff. File requested from off-site location on Jun 20.
3	Civil Lit		30/06/2012 16:00	04/07/2012 10:23	2.2	2	1	1 RC, Hardcopy requested
4	Civil Lit		07/08/2012 8:34	07/08/2012 15:14	0.8	4	2	2 Records Clerks. However, one RC did not have access to retrieve files, some delay in getting physical files.
5	Civil Lit		23/08/2012 11:50	2012-09-21 9:50	20.6	3	1	Records Clerk. Sent to wrong person caused delay. Only a few hours with ELMSD
6	Civil Lit		20/09/2012 17:36	21/09/2012 13:52	0.7	2	1	Records Clerk. Not our client.
7	Civil Lit		25/09/2012 12:41	2012-09-25 1:58 PM	0.2	2	1	1 RC, Hardcopy requested
8	Civil Lit		25/09/2012 15:45	27/09/2012 13:51	1.8	2	1	1 RC, Hardcopy delivered
9	Civil Lit		01/10/2012 7:52	10/10/2012 9:23	7.2	7	3	All Records staff. physical file en route as of Oct 10
10	Civil Lit		18/10/2012 14:41	2012-10-19 3:00 PM	1	4	2	2 records clerks, Hardcopy requested on 19th.
11	Civil Lit		2012-06-28 1:46 PM	2012-06-28 2:50 PM 2012-06-29 3:11 PM 2012-07-03 2:02:00 PM	3	10	5	2 RCs and 2 Ops Staff, and 1 Contractor. 3 files from different programs.

Sample Ref #	Request Type	Program	Date of Request	Date Request Completed	Lead Time (Days)	E-mails	People involved	Notes
12	Demand		21/06/2012 0:00	mid-July	19	22	8	Demand Order. 4 Ops, 1 RC, 2 Supervisors/Mgrs, 1 Policy Advisor. Demand order sent to SP. SP checked with CAPA to confirm if info could be released without a consent form.
13	Demand		2012-08-16 2:54 PM	2012-08-23 12:24 PM	4.6	2	2	Demand Order. 1 supervisor, 1 RC.
14	FOI	TFJ	13/01/2012 11:20	16/01/2012	1.00	1	1	1 RC
15	FOI	TFJ	05/03/2012 10:57	2012-03-05 (time unknown)	0.33	1	1	1 RC
16	FOI	TFJ	05/03/2012 13:48	2012-03-07 (time unknown)	1.33	1	1	1 RC, no client record
17	FOI	BCEP	02/04/2012 9:37	09/07/2012 15:56	69.8	2	2	2 RC (BF'd from transition)
18	FOI	BCEP	13/04/2012 14:15	31/07/2012 10:46	75.8	15	4	2 RC, 2 SPs (BF'd from transition)
19	FOI	EPPD	16/04/2012 9:13	18/07/2012 15:32	65.78	2	2	2 RC (BF'd from transition)
20	FOI	BCEP	25/04/2012 12:11	13/07/2012 12:11	63	13	7	2 RC, 2 Ops, 2 PM, 1 SP (BF'd from transition)
21	FOI	EPPD	25/04/2012 14:48	02/08/2012 0:00	61	8	4	1 RC, 2 Ops, 1 SP (trying to locate file and BF during transition. No case made - no file could be found.
22	FOI	EPPD	10/05/2012 11:11	12/07/2012 9:55	43.85	18	5	2 RCs, 2 Ops, 1 SP, transition
23	FOI	BCEP	16/05/2012 13:31	16/07/2012 14:23	45.1	10	6	2 RC, 2 Ops, 1 PM, 1 SP, transition
24	FOI	LMDA	16/05/2012 14:51	17/05/2012 14:59	1.02	3	3	1 RC, 2 Ops - no file owned by MSD (client needs to go to SP)
25	FOI	BCEP	18/05/2012 10:58	12/07/2012 14:05	39.38	2	1	1 RC (BF'd from transition) - no case file found
26	FOI	CAP	24/05/2012 8:56	11/07/2012 14:56	34.75	2	1	1 RC (BF'd from transition)

Sample Ref #	Request Type	Program	Date of Request	Date Request Completed	Lead Time (Days)	E-mails	People involved	Notes
27	FOI	CAP	24/05/2012 8:56	11/07/2012 14:56	34.75	1	1	Unable to locate file during transition. Located in July
28	FOI	TFJ	24/05/2012 9:17	24/05/2012 14:38	0.67	1	1	1 RC, no client record
29	FOI	EPPD	28/05/2012 9:19	13/07/2012 14:07	34.6	6	3	2 RCs, 1 SP (BF'd from transition)
30	FOI	BCEP	30/05/2012 12:33	17/07/2012 16:46	34.53	13	8	2 RCs, 4 Ops, 2 PM (BF'd from transition)
31	FOI	LMDA	30/05/2012 14:57	31/05/2012 12:17	0.79	9	6	1 RC, 2 Supervisor, 5 Ops
32	FOI	CAP	05/06/2012 10:55	13/07/2012 10:06	28.90	4	1	1 RC (BF'd)
33	FOI	EPPD	05/06/2012 11:03	07/06/2012 14:06	2.38	1	1	1 RC
34	FOI	BCEP	25/06/2012 10:48	02/08/2012 9:04	28.78	35	10	2 RCs, 5 Ops, 1 PM, 2 SP
35	FOI	BEP	29/06/2012 10:18	29/06/2012 15:40	0.67	1	1	1 RC
36	FOI	JP	04/07/2012 14:16	04/07/2012 14:30	0.03	1	1	1 RC
37	FOI	TFJ	04/07/2012 14:16	2012-07-04 2:30:00 PM 2012-07-04 2:37 PM	0.04	2	1	1 RC, 2 files for 1 client
38	FOI	EPPD	04/07/2012 15:37	05/07/2012 8:55	0.16	1	1	1 RC
39	FOI	BCEP	04/07/2012 15:37	05/07/2012 8:55	0.23	1	1	1 RC
40	FOI	BCEP	09/07/2012 13:45	09/07/2012 14:02	0.04	1	1	1 RC
41	FOI	JP	09/07/2012 13:45	09/07/2012 14:02	0.04	1	1	1 RC
42	FOI	EPPD	09/07/2012 15:05	11/07/2012 9:31	1.30	1	1	1 RC
43	FOI	BCEP	11/07/2012 9:43	11/07/2012 11:52	0.27	1	1	1 RC
44	FOI	EPPD	11/07/2012 9:43	2012-07-11 11:52 AM	0.27	1	1	1 RC
45	FOI	EPPD	12/07/2012 13:17	13/07/2012 14:58	1.21	2	1	1 RC
46	FOI	EPPD	12/07/2012 13:49	2012-07-12 2:54 PM	0.14	1	1	1 RC
47	FOI	BCEP	12/07/2012 13:55	16/07/2012 9:52	1.62	1	1	1 RC
48	FOI	BCEP	16/07/2012 15:53	17/07/2012 11:47	0.49	1	1	1 RC

Sample Ref #	Request Type	Program	Date of Request	Date Request Completed	Lead Time (Days)	E-mails	People involved	Notes
49	FOI	EPPD	18/07/2012 15:20	18/07/2012 16:03	0.09	1	1	1 RC
50	FOI	BEP	26/07/2012 9:27	26/07/2012 10:04	0.08	1	1	1 RC
51	FOI	BCEP	26/07/2012 14:38	26/07/2012 16:18	0.21	1	1	1 RC
52	FOI	JP	01/08/2012 14:10	02/08/2012 8:48	0.33	1	1	1 RC (2 files, 1 BCEP, 1 JP)
53	FOI	BCEP	02/08/2012 14:39	02/08/2012 14:59	0.04	1	1	1 RC, no case made
54	FOI	CAP	02/08/2012 14:58	18/10/2012 13:50	47.85	9	6	1 RC, 1 Supervisor, 1 SP, 3 Ops (2 files, 1 EPPD (destroyed), 1 CAP - in transition, delayed return from SP)
55	FOI	EPPD	08/08/2012 12:06	08/08/2012 16:01	0.49	1	1	1 RC
56	FOI	BCEP	09/08/2012 14:49	13/08/2012 9:49	2.38	1	1	1 RC
57	FOI	JP	09/08/2012 15:38	13/08/2012 10:08	1.29	1	1	1 RC
58	FOI	JP	09/08/2012 15:38	13/09/2012 10:45	24.37	3	1	1 RC - typo in responding to box file, corrected.
59	FOI	BCEP	09/08/2012 15:55	09/08/2012 16:19	0.05	1	1	1 RC
60	FOI	BCEP	09/08/2012 16:05	13/08/2012 9:50	1.22	1	1	1 RC
61	FOI	CAP	09/08/2012 16:05	13/08/2012 9:50	1.22	1	1	1 RC (2 files, 1 BCEP, 1 CAP)
62	FOI	EPPD	23/08/2012 8:53	23/08/2012 14:51	0.75	6	1	1 RC (e-mailing back and forth to clarify with OCIO)
63	FOI	JP	23/08/2012 13:39	23/08/2012 15:00	0.17	1	1	1 RC
64	FOI	BCEP	23/08/2012 15:02	23/08/2012 15:26	0.05	1	1	1 RC
65	FOI	BCEP	23/08/2012 15:02	23/08/2012 15:26	0.05	1	1	1 RC
66	FOI	EPPD	24/08/2012 15:15	24/08/2012 16:08	0.11	1	1	1 RC
67	FOI	JP	24/08/2012 15:15	24/08/2012 16:08	0.11	1	1	1 RC (2 files, 1 EPPD, 1 JP (no case made))

Sample Ref #	Request Type	Program	Date of Request	Date Request Completed	Lead Time (Days)	E-mails	People involved	Notes
68	FOI	BCEP	27/08/2012 12:26	07/09/2012 10:40	7.78	17	7	As of Sept 13 still outstanding. Escalated up - outstanding with LPSP. 2 RCs, 3 Ops, 2 LPSP staff
69	FOI	EPPD	27/08/2012 12:29	27/08/2012 12:54	0.05	1	1	1 RC
70	FOI	BCEP	27/08/2012 12:57	27/08/2012 13:12	0.03	1	1	1 RC
71	FOI	BEP	27/08/2012 13:10	2012-08-30 15:36	3.3	6	4	1 RC, 2 Ops, 1 SP. 2 files for 1 client. One returned, and one file not found
72	FOI	EPPD	27/08/2012 13:13	27/08/2012 13:32	0.04	1	1	1 RC
73	FOI	EPPD	27/08/2012 13:17	27/08/2012 13:30	0.03	1	1	1 RC
74	FOI	BCEP	28/08/2012 11:55	28/08/2012 13:17	0.17	1	1	1 RC
75	FOI	BEP	29/08/2012 8:14	29/08/2012 9:03	0.10	1	1	1 RC
76	FOI	CAP	29/08/2012 8:14	29/08/2012 8:56	0.09	1	1	1 RC (3 files: 1 for TFJ, 1 BEP, 1 CAP)
77	FOI	TFJ	29/08/2012 8:14	29/08/2012 8:56	0.09	1	1	1 RC (3 files: 1 for TFJ, 1 BEP, 1 CAP)
78	FOI	EPPD	29/08/2012 13:56	29/08/2012 16:29	0.32	1	1	2 Files, 1 JP, 1 EPPD
79	FOI	JP	29/08/2012 15:09	29/08/2012 16:07	0.12	1	1	1 RC (3 files, 1 BP, 1 BCEP, 1 JP)
80	FOI	BEP	29/08/2012 15:09	29/08/2012 16:07	0.12	1	1	1 RC, 3 files for 1 client (all found at same time).
81	FOI	BCEP	29/08/2012 15:09	29/08/2012 16:07	0.12	1	1	1 RC, 3 files requested (1 BCEP, 1 JP, 1 BP)
82	FOI	EPPD	04/09/2012 11:25	05/09/2012 8:20	0.64	1	1	1 RC
83	FOI	EPPD	06/09/2012 15:15	06/09/2012 16:13	0.12	1	1	1 RC
84	FOI	CAP	07/09/2012 12:42	07/09/2012 15:33	0.36	1	1	1 RC
85	FOI	JP	07/09/2012 15:09	07/09/2012 15:38	0.06	1	1	1 RC
86	FOI	BCEP	11/09/2012 13:21	24/09/2012 15:16	10.25	5	2	2 RCs - original box # provided to OCIO incorrect (ELMSD error).

Sample Ref #	Request Type	Program	Date of Request	Date Request Completed	Lead Time (Days)	E-mails	People involved	Notes
87	FOI	CAP	11/09/2012 13:56	2012-09-11 2:05 PM	0.02	1	1	1 RC
88	FOI	EPPD	11/09/2012 15:02	11/09/2012 16:25	0.17	1	1	1 RC
89	FOI	EPPD	11/09/2012 15:06	11/09/2012 16:21	0.16	1	1	1 RC
90	FOI	EPPD	11/09/2012 15:11	11/09/2012 16:27	0.16	1	1	1 RC
91	FOI	BCEP	11/09/2012 15:15	11/09/2012 16:32	0.16	1	1	1 RC
92	FOI	BCEP	17/09/2012 8:01	17/09/2012 10:56	0.36	1	1	1 RC
93	FOI	CAP	17/09/2012 8:07	17/09/2012 10:27	0.29	1	1	1 RC (1 CAP, 1 EPPD)
94	FOI	EPPD	17/09/2012 8:07	17/09/2012 10:27	0.29	1	1	1 RC (2 files, 1 CAP, 1 EPPD)
95	FOI	BCEP	17/09/2012 8:16	17/09/2012 10:46	0.31	1	1	1 RC - 2 files requested (1 BCEP, 1 JP)
96	FOI	JP	17/09/2012 11:28	17/09/2012 12:17	0.10	1	1	1 RC
97	FOI	JP	18/09/2012 13:03	18/09/2012 15:48	0.34	1	1	1 RC
98	FOI	JP	19/09/2012 10:07	19/09/2012 11:38:00 AM 2012-09-19 12:23 PM	0.28	1	1	1 RC (2 files, 1 JP, 1 CAP)
99	FOI	CAP	19/09/2012 10:07	19/09/2012 12:23	0.28	1	2	1 RC, 1 Ops (Ops to coordinate with SP to get file)
100	FOI	EPPD	19/09/2012 12:48	21/09/2012 10:14	1.32	1	1	1 RC
101	FOI	JP	19/09/2012 15:04	20/09/2012 14:04	0.875	1	1	1 RC
102	FOI	JP	19/09/2012 15:04	03/10/2012 14:20	9.9	2	1	1 RC (file destroyed) original e-mail Sept 20, but box could not be found. Second e-mail confirmed that file was destroyed.
103	FOI	EPPD	20/09/2012 15:41	04/10/2012 13:51	10.74	2	1	1 RC - previous response in Sept but requested follow-up for missing information. New info sent.
104	FOI	BCEP	21/09/2012 8:56	21/09/2012 10:18	0.17	1	1	1 RC - 2 files requested (1 BCEP, 1 JP)

Sample Ref #	Request Type	Program	Date of Request	Date Request Completed	Lead Time (Days)	E-mails	People involved	Notes
105	FOI	JP	21/09/2012 8:56	21/09/2012 10:18	0.17	1	1	1 RC (2 files, 1 JP, 1 BCEP)
106	FOI	EPPD	21/09/2012 9:55	21/09/2012 10:20	0.05	1	1	1 RC
107	FOI	CAP	21/09/2012 10:04	21/09/2012 10:22	0.04	1	1	1 RC
108	FOI	EPPD	24/09/2012 8:12	03/10/2012 11:08	7.31	1	2	2 RCs. Requested twice - info provided.
109	FOI	JP	25/09/2012 10:14	26/09/2012 14:18	1.51	2	1	1 RC
110	FOI	EPPD	25/09/2012 14:49	27/09/2012 14:55	2.01	4	3	1 RC, 1 Ops, 1 SP
111	FOI	EPPD	25/09/2012 14:49	02/10/2012 10:52	4.56	8	4	2 RC, 1 Ops, 1 SP
112	FOI	EPPD	26/09/2012 10:39	26/09/2012 14:24	0.47	1	1	1 RC
113	FOI	JP	27/09/2012 8:01	2012-09-27 10:56 AM 2012-09-28 8:12 AM	1.02	4	1	1 RC (2 files, 1 JP - no case made; 1 EPPD - few e-mails back and forth to locate file)
114	FOI	EPPD	27/09/2012 8:01	17/10/2012 16:11	15	3	1	1 RC, BF from Sept.
115	FOI	EPPD	27/09/2012 8:01	28/09/2012 8:12	1.02	4	1	1 RC, some confusion in finding the box file
116	FOI	EPPD	27/09/2012 11:51	27/09/2012 12:44	0.11	1	1	1 RC
117	FOI	EPPD	27/09/2012 11:51	27/09/2012 12:44	0.11	2	1	1 RC
118	FOI	BCEP	02/10/2012 8:50	02/10/2012 9:01	0.02	1	1	1 RC
119	FOI	BCEP	03/10/2012 8:13	03/10/2012 11:30 2012-10-03 11:29	0.36	2	1	1 RC - 2 files requested (1 BCEP, 1 JP)
120	FOI	JP	03/10/2012 8:13	03/10/2012 11:29	0.41	1	1	1 RC (2 files - 1 JP, 1 BCEP)
121	FOI	BCEP	03/10/2012 12:34	03/10/2012 13:21	0.09	1	1	1 RC
122	FOI	BCEP	03/10/2012 12:34	03/10/2012 13:21	0.10	1	1	1 RC
123	FOI	EPPD	03/10/2012 15:07	03/10/2012 15:55	0.10	1	1	1 RC
124	FOI	BCEP	09/10/2012 13:28	2012-10-09 2:30 PM 2012-10-09 3:22 PM	0.03	3	1	1 RC - 2 BCEP files requested. One file # was incorrect from OICO and resent.

Sample Ref #	Request Type	Program	Date of Request	Date Request Completed	Lead Time (Days)	E-mails	People involved	Notes
125	FOI	BEP	09/10/2012 13:28	2012-10-09 2:30 PM 2012-10-09 3:22 PM	0.24	3	1	1 RC, 2 files for 1 client. Incorrect # provided for one.
126	FOI	EPPD	15/10/2012 9:22	15/10/2012 16:47	0.93	2	1	1 RC
127	FOI	BCEP	15/10/2012 9:41	2012-10-15 2:02 PM 2012-10-15 11:55 AM	0.28	1	1	1 RC - 2 files requested (1 BCEP, 1 JP)
128	FOI	JP	15/10/2012 9:41	15/10/2012 11:55 2012-10-15 2:02 PM	0.54	1	1	1 RC (2 files, 1 JP - destroyed, 1 BCEP)
129	FOI	CAP	15/10/2012 9:41	15/10/2012 10:46 AM 2012-10-15 2:02 PM 2012-10-15 11:55 AM	0.28	1	1	1 RC, 3 files (1 CAP, 1 BCEP, 1 JP)
130	FOI	BCEP	15/10/2012 12:01	15/10/2012 12:30	0.06	1	1	1 RC
131	FOI	BCEP	15/10/2012 14:04	16/10/2012 9:40	0.38	4	1	1 RC - first time file pulled, info not correct. Updated file number provided.
132	FOI	EPPD	15/10/2012 14:21	15/10/2012 15:04	0.09	1	1	1 RC
133	FOI	EPPD	16/10/2012 9:47	16/10/2012 10:01	0.03	1	1	1 RC
134	FOI	EPPD	16/10/2012 9:47	16/10/2012 10:01	0.03	1	1	1 RC
135	FOI	BCEP	16/10/2012 15:11	18/10/2012 17:12	2.25	3	5	1 RC, 2 Ops Staff.
136	FOI	CAP	16/10/2012 15:17	16/10/2012 15:41	0.05	1	1	1 RC, 3 files (1 JP, 1 CAP, 1 BCEP)
137	FOI	JP	16/10/2012 15:17	16/10/2012 15:41	0.05	1	1	1 RC, 3 files (1 JP, 1 CAP, 1 BCEP)
138	FOI	BCEP	16/10/2012 15:17	16/10/2012 15:41	0.05	1	1	1 RC, 3 files requested (1 BCEP, 1 JP, 1 CAP)
139	FOI	BCEP	18/10/2012 9:22	19/10/2012 10:53	1.19	1	1	1 RC
140	FOI	BCEP	23/10/2012 13:33	23/10/2012 16:18	0.36	1	1	1 RC
141	FOI	JP	24/10/2012 11:01	24/10/2012 11:43	0.09	1	1	1 RC, 2 files (1 BCEP, 1 JP)
142	FOI	JP	24/10/2012 11:05	24/10/2012 11:30	0.05	1	1	1 RC, 2 files (1 BCEP, 1 JP)

Sample Ref #	Request Type	Program	Date of Request	Date Request Completed	Lead Time (Days)	E-mails	People involved	Notes
143	FOI	BCEP	24/10/2012 11:05	24/10/2012 11:30	0.05	1	1	1 RC, 2 files requested (1 BCEP, 1 JP)
144	FOI	EPPD	25/10/2012 11:52	26/10/2012 11:10	0.91	1	1	1 RC
145	FOI	TFJ	25/10/2012 13:01	26/10/2012 14:15	1.15	2	1	1 RC, No case made
146	FOI	JP	25/10/2012 13:01	26/10/2012 11:12 AM 2012-10-26 2:15 PM	1.15	1	1	1 RC. 2 files - 1 JP (no case made), 1 TJ (no case made)
147	FOI	BCEP	25/10/2012 13:08	29/10/2012 14:14	2.1	2	1	1 RC, request sent twice; file not found the first time.
148	FOI	BCEP	25/10/2012 14:56	25/10/2012 16:52	0.25	1	1	1 RC
149	FOI	EPPD	29/10/2012 13:22	29/10/2012 14:14	0.11	1	1	1 RC
150	FOI	BEP	29/10/2012 15:36	29/10/2012 16:04	0.06	1	1	1 RC
151	FOI	JP	01/11/2012 13:35	01/11/2012 14:45	0.15	1	1	1 RC, no file found
152	FOI	EPPD	06/11/2012 14:22	06/11/2012 15:12	0.10	1	1	1 RC
153	FOI	EPPD	06/11/2012 14:22	07/11/2012 15:55	1.07	3	1	1 RC, more files requested and sent
154	FOI	BCEP	08/11/2012 10:32	08/11/2012 11:01	0.06	1	1	1 RC
155	FOI	BCEP	08/11/2012 10:56	13/11/2012 8:29	2.7	10	5	1 RC, 4 Ops Staff. Complete date is date file requested to be sent from SP to OCIO
156	FOI	BEP	08/11/2012 10:59	08/11/2012 12:07	0.14	1	1	1 RC, no info found
157	FOI	BEP	08/11/2012 10:59	09/11/2012 13:36	1.3	5	5	2 RC, 2 Ops, 1 SP. Not enough info sent the first time. 2 files for 1 client (1 SDEB, 1 Bridging)
158	FOI	LMDA	08/11/2012 10:59	09/11/2012 13:36	1.33	5	5	2 RC, 2 Ops, 1 SP. Not enough info sent the first time. 2 files for 1 client (1 SDEB, 1 Bridging)
159	FOI	BCEP	08/11/2012 15:18	08/11/2012 16:07	0.1	1	1	1 RC

Sample Ref #	Request Type	Program	Date of Request	Date Request Completed	Lead Time (Days)	E-mails	People involved	Notes
160	FOI	CAP	16/11/2012 9:31	16/11/2012 14:57	0.68	7	6	2 RCs, 4 Ops (3 files - 1 CAP (needed to get from Contractor), 1 EPBC, 1 JP)
161	FOI	BCEP	16/11/2012 10:07	16/11/2012 10:47	0.09	1	1	1 RC
162	FOI	EPPD	19/11/2012 13:42	19/11/2012 16:48	0.38	1	1	1 RC
163	FOI	BCEP	19/11/2012 13:45	19/11/2012 14:19	0.07	1	1	1 RC
164	FOI	JP	19/11/2012 13:47	20/11/2012 9:18	0.44	1	1	1 RC (2 files - one JP, 1 EPPD)
165	FOI	EPPD	19/11/2012 13:47	20/11/2012 9:18	0.44	1	1	1 RC (2 files, 1 EPPD, 1 JP (no case made))
166	FOI	EPPD	19/11/2012 13:48	19/11/2012 15:10	0.17	1	1	1 RC
167	FOI	CAP	20/11/2012 9:18	23/11/2012 11:35 AM 2012-11-21 3:58 PM	1.83	8	3	1 RC, 1 Ops, 1 SP, (3 files - 1 CAP + 1 JP (no file), 1 EPPD)
168	FOI	EPPD	20/11/2012 9:18	23/11/2012 11:35 AM 2012-11-21 3:58 PM	2.29	8	3	1 RC, 1 Ops, 1 SP, (3 files - 1 CAP + 1 JP (no file), 1 EPPD)
169	FOI	JP	20/11/2012 9:18	23/11/2012 11:35 AM 2012-11-21 3:58 PM	3.29	8	3	1 RC, 1 Ops, 1 SP, (3 files - 1 CAP + 1 JP (no file), 1 EPPD)
170	FOI	EPPD	20/11/2012 13:59	20/11/2012 14:42	0.09	3	1	1 RC
171	FOI	BCEP	21/11/2012 13:28	21/11/2012 16:07	0.3	1	1	1 RC
172	FOI	EPPD	21/11/2012 13:33	28/11/2012 9:59	4.25	5	4	1 RC, 2 Ops, 1 SP
173	FOI	EPPD	21/11/2012 14:03	21/11/2012 16:17	0.28	2	1	1 RC
174	FOI	JP	21/11/2012 15:25	21/11/2012 16:13	0.10	1	1	1 RC
175	FOI	JP	22/11/2012 13:57	22/11/2012 14:17	0.04	1	1	1 RC (2 files - one JP, 1 EPPD)
176	FOI	BCEP	22/11/2012 13:57	22/11/2012 14:17	0.04	1	1	1 RC, 2 files requested (1 BCEP, 1 JP)
177	FOI	JP	27/11/2012 8:58	27/11/2012 9:22	0.05	1	1	1 RC, destroyed file
178	FOI	JP	27/11/2012 15:47	28/11/2012 10:49	0.38	1	1	1 RC, 2 files - 1 CAP, 1 JP (no case made)

Sample Ref #	Request Type	Program	Date of Request	Date Request Completed	Lead Time (Days)	E-mails	People involved	Notes
179	FOI	CAP	28/11/2012 10:38	29/11/2012 16:34	1.75	9	5	1 RC, 4 Ops Staff (get from Contractor)
180	FOI	EPPD	28/11/2012 10:47	28/11/2012 10:59	0.03	1	1	1 RC
181	FOI	CAP	29/11/2012 13:08	29/11/2012 13:28	0.04	1	1	1 RC
182	FOI	BCEP	29/11/2012 13:12	29/11/2012 13:30	0.04	1	1	1 RC
183	RR		01/08/2012 14:11	2012-08-21 4:13 PM	14.25	8	3	Request from Contractor, 1 Ops Staff, 1 RC Some confusion on policy and privacy practices, and needing accession numbers
184	RR		07/08/2012 8:29	2012-08-21 4:13 PM	10.97	8	3	Request from Contractor, 1 Ops Staff, 1 RC Some confusion on policy and privacy practices, and needing accession numbers
185	RR		30/08/2012 7:50	Fri 2012-08-31 8:51 AM	1.13	8	3	2 Ops, 1 RC Rush requested for hardcopy file.
186	RR		04/10/2012 14:11	04/10/2012 14:33	0.05	2	2	1 Ops, 1 RC - delay in returning files within 2 day timeframe.
187	RR		18/10/2012 13:42	2012-10-18 2:08 PM	0.05	10	2	1 Ops, 1 RC - Staff request for box, requested from RC (staff confused about what info to provide)
188	RR		19/10/2012 8:25	22/10/2012 14:03	1.58	2	2	1 Ops, 2 RC , 6 records requested.
189	RR		31/10/2012 16:02	2012-11-02 1:50:00 PM/ Incomplete	1.73	24	5	2 Records Clerks, 3 Ops Staff; 2 boxes ordered. One received on Nov 2 - the other was not sent. A new box was sent, but it was the wrong number. Another request was sent but request was not fullfilled. Sent to wrong Ops person.

Sample Ref #	Request Type	Program	Date of Request	Date Request Completed	Lead Time (Days)	E-mails	People involved	Notes
190	RR		07/11/2012 15:16	13/11/2012 9:40	3.30	2	2	1 Ops, 1 RC. (complete date for return)
191	RR		21/11/2012 15:03	23/11/2012 15:39	2.08	2	2	1 Ops, 1 RC - request sent directly to off-site facility - 2 day delay.
192	RR		11/12/2012 9:42	11/12/2012 15:03	0.67	3	2	1 RC, 1 Ops; staff was not aware of process so originally sent request directly.
193	RR		2012-11-26 9:38 AM	2012-11-26 10:01 AM	0.05	2	2	2 boxes requested, 1 Ops, 1 RC
194	RR		Mon 2012-08-13 4:08 PM	16/08/2012 11:39	2.44	6	3	1 PM, 1 Ops, 1 RC

Appendix 5: Response time Ranges for ELMSD Client record Requests

FIGURE 11: FOI REQUEST RESPONSE TIMES

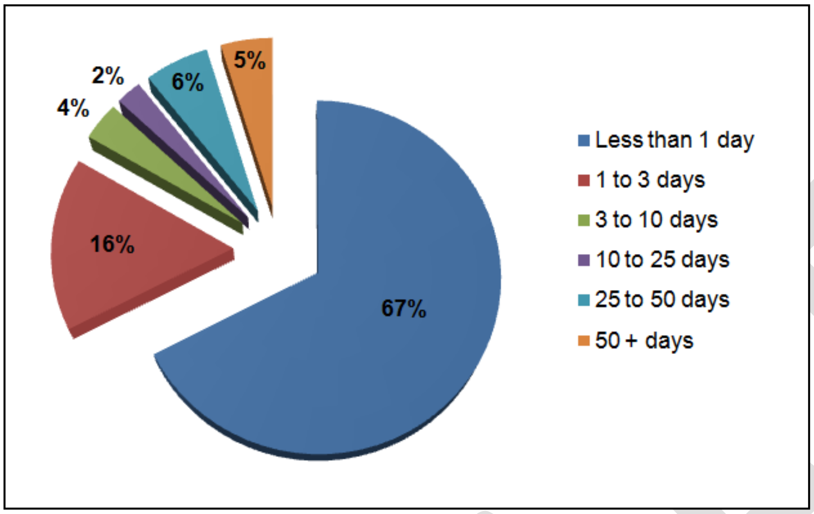


FIGURE 12: REGIONAL REQUESTS RESPONSE TIMES

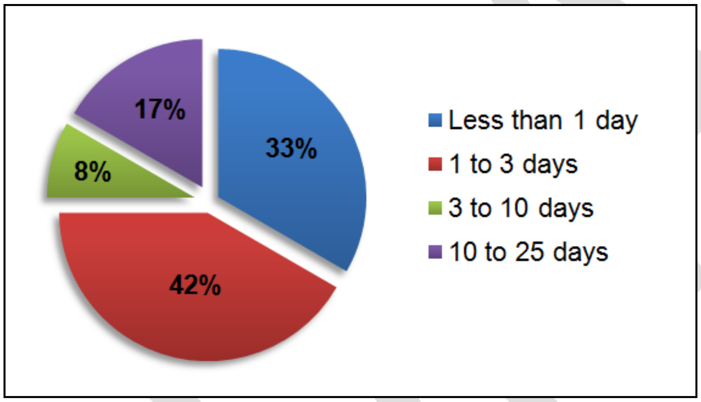


FIGURE 13: CIVIL LITIGATION REQUEST AND DEMAND ORDER RESPONSE TIMES